

# **Mobicom Telematics Products Protocol V2.14**

## **Applicable Models:**

**G101/G102/G103/G105/G106/G107/G108**

**G200/G500/G500B/W500**

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Shenzhen Mobicom Telematics Co.,Ltd  
Room 401,Building 2,Anxu Bussiness Park,No.35-1,  
Xiangyin Road,Longgang District,Shenzhen,China

Tel: + 86 755 8450 9394  
sales@mobicomtracking.com  
<http://www.mobicomtracking.com>

# Version History

| Version | Update Date | What's new                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| V2.03   | 05/20 2017  | Organize and publish the new protocol framework                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| V2.04   | 10/16 2017  | Add skip bucket lifting alarm –section:6.3.1<br>Add ‘school bus active RFID tag’ and ‘load sensor AD value’-section:6.2.2.1<br>Add dumper RFID driver– section: 7.7.2<br>Add ‘set white list of dumper RFID reader’-section: 7.7.7                                                                                                                                                                                                                                                                                                                                                                                                          |
| V2.05   | 11/28 2017  | Add ‘Low voltage’ and ‘Tracker detach’ –section:6.3.1<br>Add ‘Battery level’ and ‘Base station info.’-section:6.2.2.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| V2.06   | 03/06 2018  | Fixed type error,and fixed 4.3 Tracker ID conversion Instruction errors.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| V2.07   | 06/05 2018  | Fixed type error                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| V2.08   | 11/21 2018  | Add ‘CT’Transparent transmission command-section:7.4.12<br>Add harsh Acceleration/Braking/Cornering, fatigue driving,idling alarm status– section:6.3.1<br>Add ST3 BIT5 Over time parking – section:6.3.1<br>Add G500 supported peripheral.fuel meter and Ultrasonic oil level sensor- Section: 7.7.2 Set the Serial Port Driver G500<br>Add engine/fuel pump cut Working logic description-section: 7.6.1 Remote Immobilize<br>Add Set fuel level for full tank and empty tank- section 7.7.8 Set fuel level for full tank and empty tank- section-G500<br>Add fuel meter data- Peripheral Type ID 0x28 – section 6.2.2.1 Peripherals List |
| V2.09   | 12/06 2018  | Add 0xDB command set Over speed alarm’-section:7.5.1<br>Add ‘Forklift time statistics’-section:6.2.2.1<br>Add 0x8E cellular network blind zone data -section:6.2.4<br>Correct load sensor 0x1A data description -section:6.2.2.1 Peripherals List                                                                                                                                                                                                                                                                                                                                                                                           |
| V2.10   | 1/2 2019    | Update Position data -vehicle status -section 6.2.1.1<br>Update alarm data and its wire connection difinition<br>Correct section 4.1 Message Interaction Diagram<br>Add 0x18 voltage input fuel level data-section 6.2.2.1                                                                                                                                                                                                                                                                                                                                                                                                                  |
| V2.11   | 1/25 2019   | Correct ‘CT’Transparent transmission command-section:7.4.12<br>Add 0x42 0x47 0x48 0x92 OBD and CANBUS data and trouble code data<br>Add CANBUS for G500 device- Section 7.7.2 Set the Serial Port Driver G500<br>Add Set CANBUS communication protocol for G500 command – Section 7.7.10<br>Add Battery level for G103 Asset tracker .using 0x80 Position data V4 Status item. Section 6.2.1                                                                                                                                                                                                                                                |
| V2.12   | 03/30 2019  | Add 0x21 external power supply voltage. Section 6.2.2.1<br>Add Power saving mode setting command. Section 7.4.13<br>Add heartbeat packet upload time interval setting command. Section 7.4.14<br>Add Set AD input sampling mode 2ommand .Section 7.6.3<br>Add Set the load sensor AD detection command.Section 7.7.11                                                                                                                                                                                                                                                                                                                       |

|       |            |     |                                          |
|-------|------------|-----|------------------------------------------|
| V2.13 | 06/18 2019 | Add | Some status in 0xA3. Section 6.2.1.1     |
|       |            | Add | Some alarm Status in 0x82. Section 6.3.1 |
| V2.14 | 08/11 2020 | Add | Some status in 0xA3. Section 6.2.1.1     |
|       |            | Add | Some alarm Status in 0x82. Section 6.3.1 |

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# 1 Preface

This document is mainly for the introduction of Shenzhen Mobicom Telematics Co., Ltd. products, G101/G102/G103/G105/G106/G108/G200/G500/G500B/W500/SpeedLimiter (hereafter called Tracker) and server monitoring platform (hereafter called platform) communication protocol and Data Formatat, including terms and definition, protocol basis, integration guidance instructions, tracker upload Data Formatat, paltform send command etc.

## 2 Terms and Abbreviations

**Platform:** Server monitoring platform software, hereafter called platform.

**Tracker:** GPS Tracker, acts as client.

**IMEI:** International Mobile Equipment Identity, each GSM module has its unique IMEI.

**Tracker ID:** Tracker ID analysis in this document, it needs to be converted in the specified method, usually it's the last 8 numbers of the IMEI number.

**GPRS:** General Packet Radio Service

**TCP:** Transmission Control Protocol

**UDP:** User Datagram Protocol

**APN:** Access Point Name

## 3 Protocol Basis

### 3.1 Communication Mode

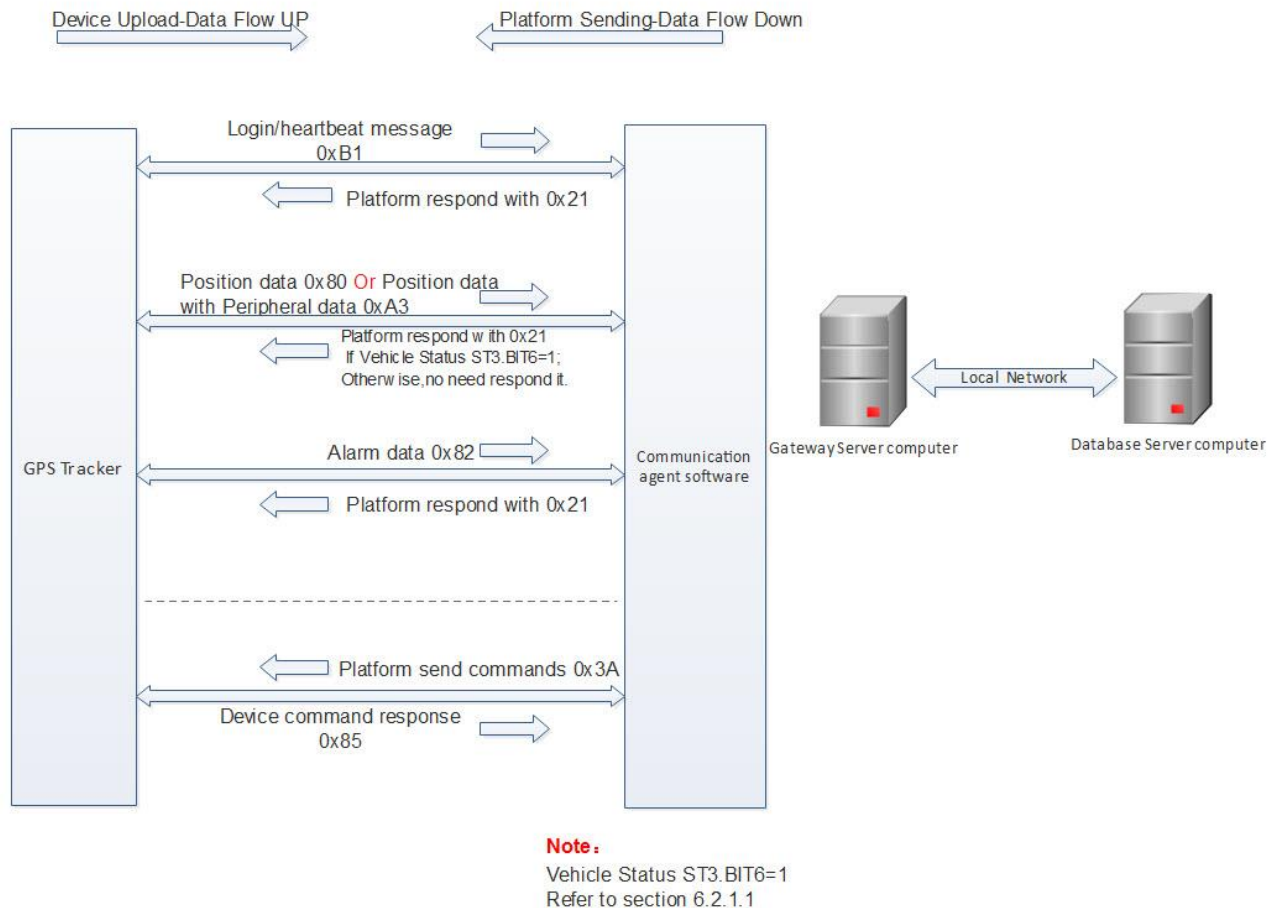
This communication protocol adopts TCP or UDP, platform acts as server; tracker acts as client. Usually use TCP protocol as the main communication link.

### 3.2 Transmission Rules

Protocol adopts Big-endian network byte sequence to transmit word and double word. The total length of the single package data should be no more than 512bytes.

## 4 Integration Guidance Instructions

### 4.1 Message Interaction Diagram



### 4.2 Message Interaction Diagram Instructions

#### 4.2.1 Establish the First Connection

- The default connection between tracker and platform is TCP, after the communication connection is established, a login request will be sent to the platform immediately (**Handshake Data**)  
Refer to [6.1 Login/heartbeat package 0xB1](#)
- The platform response the handshake data with universal response command 0x21  
Refer to [7.1 Universal Response Command 0x21](#)
- After tracker receive the universal response command, it will upload its [0x80 Position Data](#) or [0xA3 Position Data and Peripheral Data](#)

**Note:**

If the tracker has loaded the peripheral, tracker will not upload the position data 0x80, but will upload the Position Data and Peripheral Data 0xA3.

## 4.2.2 Maintain the Connection

After connection is established, tracker will upload its heartbeat message to the platform periodically (Handshake Data 0xB1), platform will send Universal Response 0x21 after receiving it.

## 4.2.3 Disconnect the Connection

The methods to determine TCP connection is disconnected:

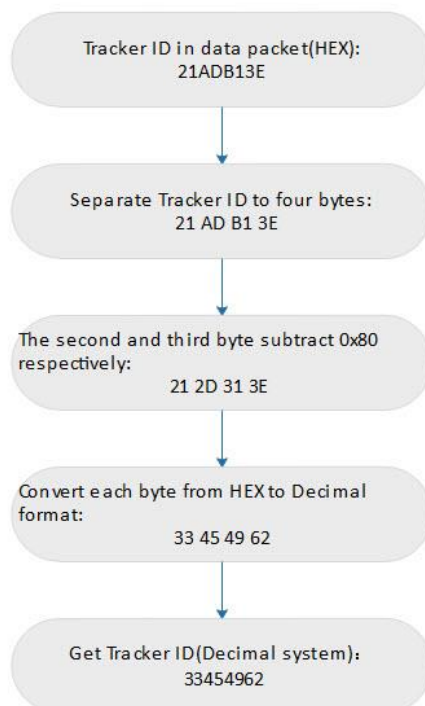
- According to the TCP protocol to determine the tracker disconnect actively;
- The same identity tracker establish a new connection under the communication gateway (or communication agent software), indicates that the original connection has been disconnected;
- In a certain period of time, platform did not receive any message from the tracker, like tracker heartbeat message.

## 4.2.4 Send Dispatch Command

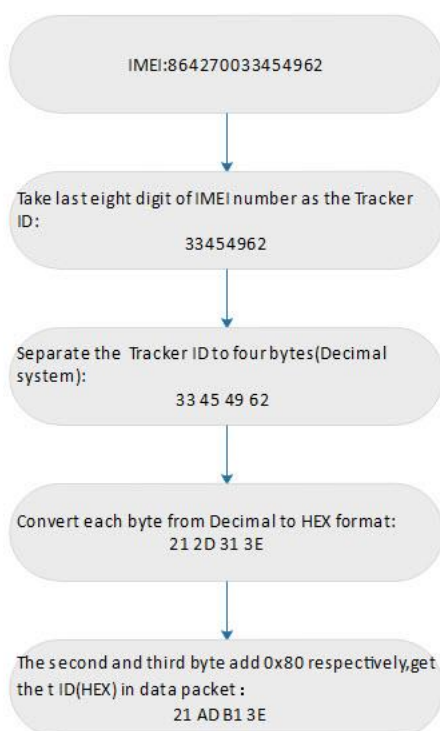
- Through the command issued by dispatch command, tracker will not only reply '[Universal Command Response 0x85](#)', but also reply '[Dispatch Command Response 0x84](#)' data.
- In order to better compatible and retain the command frame system of the old tracker, while optimizing the upgrade, new command will be sent by [Dispatch Command 0x3A](#), in order to realize the contents of the command in the GPRS dispatch command are consistent with the serial port and SMS channel, thus simplifying the whole command system.

## 4.3 Tracker ID Conversion Instructions

- The process of converting tracker ID in data packet to the actual ID



- The process of converting the actual tracker ID to the tracker ID when platform send command(it is required when platform send command)



## 4.4 Checksum Calculation

The data uploaded by tracker and the commands sent by the platform; all contain checksum field. To get the checksum, need to XOR each byte from header to the byte before 'checksum'. Refer to [5 Data Format](#)

For example:

Raw Data Package (HEX): 29 29 B1 00 07 0A 9F 95 38 0C **82** 0D

Checksum 0x**82** was got by below method:

**29 XOR 29 XOR B1 XOR 00 XOR 07 XOR 0A XOR 9F XOR 95 XOR 38 XOR 0C=0x82**

## 5 Data Format

### 5.1 Tracker Upload Message Format

From tracker to platform:

2929<Command Word><Data Length><Tracker ID><Data Content><Checksum>0D

**Note:**

1. There's no need to add "<" and ">" when writing command, it's only separator for easy understanding.
2. All multibyte data must conform to the rules: high byte precedes; low byte brings up the rear (Big-endian communication).
3. Adopts HEX encode by default, the total length of the single package data should no more than 512 bytes.

| Field Name     | Length (byte) | Description                                                                                                                                                                                                                                                      |
|----------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Header         | 2             | Fixed value. 0x29 0x29                                                                                                                                                                                                                                           |
| Command Word   | 1             | Evaluate 0x00-0xFF                                                                                                                                                                                                                                               |
| Data Length    | 2             | Represents the length from "Tracker ID" to 'Packet Tail'                                                                                                                                                                                                         |
| Tracker ID     | 4             | By a specified method, converting the product factory number into a unique ID that server can identify the tracker. Refer to <a href="#">4.3 Tracker ID Conversion Instructions</a>                                                                              |
| Data Content   | 0-N           | The data that matches the command word                                                                                                                                                                                                                           |
| Checksum       | 1             | From 'header' to before 'Check Sum' every byte XOR<br>For example:<br>Raw Data Package: 29 29 B1 00 07 0A 9F 95 38 0C <b>82</b> 0D<br>Checksum 0x <b>82</b> access method is as below:<br>29 xor 29 xor B1 xor 00 xor 07 xor 0A xor 9F xor 95 xor 38 xor 0C=0x82 |
| Tail Character | 1             | 1 byte, fixed value 0x0D                                                                                                                                                                                                                                         |

## 5.2 Platform Send Message Format

From platform to the tracker:

2929<Command Word><Data Length><Tracker ID><Parameter><Checksum >0D

| Field Name     | Length (byte) | Description                                                                                                                                                                       |
|----------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Header         | 2             | Fixed value 0x29 0x29                                                                                                                                                             |
| Command Word   | 1             | Evaluate 0x00-0xFF                                                                                                                                                                |
| Data Length    | 2             | Represents the length from“Tracker ID”to ‘Packet Tail’                                                                                                                            |
| Tracker ID     | 4             | By a specified method,converting the product factory number into a unique ID that server can identify the tracker.Refer to <a href="#">4.3 Tracker ID Conversion Instructions</a> |
| Parameter      | 0-N           | The data that matches the command word                                                                                                                                            |
| Checksum       | 1             | From ‘header’ to before ‘Check Sum’every byte XOR                                                                                                                                 |
| Tail Character | 1             | 1 byte,fixed value 0x0D                                                                                                                                                           |

## 5.3 Platform Send Dispatch Command Format 0x3A

From platform to tracker:

29293A<Data Length><Tracker ID>< Command Content><Cheskum>0D

**Note:**

- Dispatch Command,command word fixed value is 0x3A
- Through the command issued by dispatch command,tracker will not only reply ‘[Universal Command Response 0x85](#)’,but also reply ‘[Dispatch Command Response 0x84](#)’ data.
- In order to better compatible and retain the command frame system of the old tracker, while optimizing the upgrade,new command will be sent by Dispatch Command,in order to realize the contents of the command in the GPRS dispatch command are consistent with the serial port and SMS channel, thus simplifying the whole command system.

## 6 Tracker Upload Data to Platform

### 6.1 Login/heartbeat package 0xB1

|                       |                                                                                                                                                                                                                                                       |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data Format (HEX):    | 2929<0xB1><Data Length><Tracker ID><Data content><Checksum>0D                                                                                                                                                                                         |
| Function Description: | After the tracker is installed properly, it will send this login data to the platform. <b>The tracker will send other data after getting correct ACK from the platform</b> , else, the tracker will keep sending this login data in every 30 seconds. |
| Data Example:         | 29 29 B1 00 07 0A 9F 95 38 0C 82 0D                                                                                                                                                                                                                   |
| Note:                 | Tracker ID: 0A 9F 95 38 Convert to the actual tracker ID is: 10312156<br>Data content: 0x0C fixed value, no specific meanings                                                                                                                         |
| Universal Response    | The platform requires confirmation of the login data. Refer to <a href="#">7.1 Universal Response Command 0x21</a>                                                                                                                                    |

### 6.2 Position Data

#### 6.2.1 Position Data 0x80

|                       |                                                                                                                                                                                                                |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data Format (HEX):    | 2929<0x80><Data Length><Tracker ID><Position Data><Checksum>0D                                                                                                                                                 |
| Function Description: | The tracker will upload the location data to the platform with the preset upload interval. The data content mainly includes GPS time, latitude and longitude, speed, direction, mileage, equipment status etc. |
| Data Example:         | 29 29 80 L 0A 9F 95 38 <Position Data> <Checksum> 0D                                                                                                                                                           |
| Note:                 | Tracker ID: 0A 9F 95 38 Convert to the actual tracker ID is: 10312156<br><b>Position Data:</b> Data analysis is shown in the below table: 'Position Data'                                                      |
| Universal Response    | The platform requires confirmation of the 0x80 data. Refer to <a href="#">7.1 Universal Response Command 0x21</a>                                                                                              |

#### Raw data example (HEX)

292980002824D3CD55170510173408003329791031941701200149FB00B1C9FFFF4A00001E000000000000910D

For easy reading, separate the fields with underscores.

2929\_80\_0028\_24D3CD55\_170510173408\_00332979\_10319417\_0120\_0149\_FB\_00B1C9\_FFFF4A00\_001E\_00\_00000000\_00\_91\_0D

#### Note:

**Position Data:** All fields from 'Date Time' to 'State V8'

Data analysis is shown in the following table:

| Field Name   | Length (Byte) | Data Example (HEX) | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------|---------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Header       | 2             | 2929               | Data header, fixed value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Command Word | 1             | 80                 | Means position data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Data Length  | 2             | 0028               | 0x28 means 40 bytes data<br>Means the length from the 'Tracker ID' until the end of the 'data frame 0x0D'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Tracker ID   | 4             | 24D3CD55           | 36837785 Refer to <a href="#">4.3 Tracker ID Conversion Instruction</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Date Time    | 6             | 170510173408       | GMT Time<br>Date time format: year/month/day hour:min:sec<br>YY/MM/DD HH:MM:SS 17/05/10 17:34:08                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Latitude     | 4             | 00332979           | BCD code, format is: DDDMM.MMM<br>Latitude range: 00°00.000' — 89°59.999';<br>The first three digits represent degrees, and also means the sign bit;<br>The last five digits represent minutes. That is, 3 degrees 32.979 minutes<br><b>Converted to latitude in degree: <math>3^{\circ} + 32.979' / 60 = 3.54965^{\circ}</math></b><br><b>The method of judging the latitude value as "North Latitude" (ie, positive value) and "South Latitude" (ie, negative value) is as below::</b><br>DDD ≤ 800, that is North Latitude<br>DDD > 800, that is South Latitude<br>For example: 83 03 79 01<br>830 > 800, it is South Latitude<br>800 - 830 = -30 that is, -30 degree<br>37901 that is, 37.901 minutes<br>-30°37.901'<br><b>Converted to latitude in degree: <math>-(30^{\circ} + 37.901' / 60) = -30.631683^{\circ}</math></b>               |
| Longitude    | 4             | 10319417           | BCD code, format is: DDDMM.MMM<br>Longitude range: 000°00.000' — 179°59.999';<br>The first three digits represent degrees, and also means the sign bit;<br>The last five digits represent minutes. That is,<br>103 degrees 19.417 minutes<br><b>Converted to longitude in degree: <math>103^{\circ} + 19.417' / 60 = 103.323617^{\circ}</math></b><br><b>The method of judging the longitude as "East Longitude" (ie, positive value) and "West Longitude" (ie, negative value) is as below:</b><br>DDD ≤ 800, that is East Longitude<br>DDD > 800, that is West Longitude<br>For example: 93 04 56 08<br>930 > 800, it is West Longitude<br>800 - 930 = -130 that is, -130 degree<br>45608 that is, 45.608 minutes<br>-130°45.608'<br><b>Converted to longitude in degree: <math>-(130^{\circ} + 45.608' / 60) = -130.760133^{\circ}</math></b> |
| Speed        | 2             | 0120               | 120 KM/Hour<br>BCD code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

|                                                                             |         |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
|-----------------------------------------------------------------------------|---------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------|------|----------------------------------------------|------|----------------------------------------------------------------------|------|-----------------------------------------------------------------------|------|------------------------------------------------------------------|------|--------------------------------------------------|------|---------|------|---------|------|---------|
|                                                                             |         |             | e.g. 00 80 means 80KM/hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
| Direction                                                                   | 2       | 0149        | 149 degree<br>BCD code,North is 0 degree,Clockwise counting<br>The unit is: degree. range:000—359 degree                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
| Positioning,<br>antenna, power<br>status and mileage<br>unit indication bit | 1       | FB          | 0xFB convert to binary format is: 11111011<br>From left to right, BIT7 - BIT0<br>In this example, BIT2=0, others are 1<br>mean GPS locates, GPS antenna works, main power normal, mileage unit is KM                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
|                                                                             |         |             | <table><tr><td>Bit Indication</td><td>Explain</td></tr><tr><td>BIT7</td><td>1 means GPS locate<br/>0 means GPS not locate</td></tr><tr><td>BIT6</td><td>1 1 means GPS antenna works;<br/>1 0 means GPS antenna short circuit;</td></tr><tr><td>BIT5</td><td>0 1 means GPS antenna open circuit<br/>0 0 means GPS antenna breakdown</td></tr><tr><td>BIT4</td><td>1 1 means main power normal;<br/>1 0 means main power disconnect;</td></tr><tr><td>BIT3</td><td>0 1 means main power abnormal(too high/too low).</td></tr><tr><td>BIT2</td><td>Reserve</td></tr><tr><td>BIT1</td><td>Reserve</td></tr><tr><td>BIT0</td><td>Reserve</td></tr></table> | Bit Indication                                                        | Explain | BIT7 | 1 means GPS locate<br>0 means GPS not locate | BIT6 | 1 1 means GPS antenna works;<br>1 0 means GPS antenna short circuit; | BIT5 | 0 1 means GPS antenna open circuit<br>0 0 means GPS antenna breakdown | BIT4 | 1 1 means main power normal;<br>1 0 means main power disconnect; | BIT3 | 0 1 means main power abnormal(too high/too low). | BIT2 | Reserve | BIT1 | Reserve | BIT0 | Reserve |
|                                                                             |         |             | Bit Indication                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Explain                                                               |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
|                                                                             |         |             | BIT7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1 means GPS locate<br>0 means GPS not locate                          |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
|                                                                             |         |             | BIT6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1 1 means GPS antenna works;<br>1 0 means GPS antenna short circuit;  |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
|                                                                             |         |             | BIT5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0 1 means GPS antenna open circuit<br>0 0 means GPS antenna breakdown |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
|                                                                             |         |             | BIT4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1 1 means main power normal;<br>1 0 means main power disconnect;      |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
|                                                                             |         |             | BIT3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0 1 means main power abnormal(too high/too low).                      |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
|                                                                             |         |             | BIT2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Reserve                                                               |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
|                                                                             |         |             | BIT1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Reserve                                                               |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
| BIT0                                                                        | Reserve |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
| Mileage                                                                     | 3       | 00B1C9      | Convert 0x00 0xB1 0xC9 to decimal system: 45513 KM<br>Mileage range:0x00-0xFFFFFFFF that is ,<br>0 – 16777215KM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
| Vehicle Status                                                              | 4       | FFFF4A00    | Refer to <a href="#">section 6.2.1.1 Vehicle Status</a> as below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
| State V1_V2                                                                 | 2       | 001E        | Reserve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
| State V3                                                                    | 1       | 00          | Number of satellites (only G102 and G103-4G supported now)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
| State V4                                                                    | 1       | 00          | Battery level percentage 0x00 to 0x64 means 0% to 100%. (only G103-4G Asset tracker supports)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
| State V5-V7                                                                 | 4       | 00 00 00 00 | Reserve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
| State V8                                                                    | 1       | 00          | When the platform sends a command to the tracker, the tracker records the command's command word and returns it to the platform.<br>e.g.:<br>The platform sends One Time Track on Demand 0x30 command to the tracker, once the tracker receives this command, it will reply this command.<br>In the command response data 0x85 state is V8, it is 0x30                                                                                                                                                                                                                                                                                                |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
| Checksum                                                                    | 1       | 91          | From ‘header’ to before ‘Checksum’<br>every byte XOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |
| Tail character                                                              | 1       | 0D          | Tail character, fixed value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                       |         |      |                                              |      |                                                                      |      |                                                                       |      |                                                                  |      |                                                  |      |         |      |         |      |         |

Table-Position Data

### 6.2.1.1 Vehicle Status

From left to right are ST1, ST2, ST3, ST4

0xFF 0xFF 0x4A 0x00

Likewise, when each byte is converted to binary, BIT7 to BIT0, from left to right, from high bit to low bit.

Means ACC off, oil circuit normal, the platform needs to confirm this data.

| ST  | BIT  | Description                                                                                       | Wire connection definition                                                                                            |
|-----|------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| ST1 | BIT7 | 1 means ACC OFF;<br>0 means ACC ON                                                                | White wire-(G101/G102/G200/G500)-<br>(High level trigger)                                                             |
|     | BIT6 | 1 means High reserved Or Air condition normal;<br>0 means high reserved Or Air condition trigger; | Brown wire-G500-M -(High level trigger)<br>Brown wire-G101/G102-INPUT3<br><b>Brown wire-G108/G108P (Analog input)</b> |
|     | BIT5 | 1 means Low reserved normal;<br>0 means Low reserved trigger                                      | Blue wire-G500-M2-(Low level trigger)                                                                                 |
|     | BIT4 | 1 means High reserved 3 normal;<br>0 means high reserved 3 trigger;                               | Green wire-G500-I3-(High level trigger)<br><b>White wire-G106-I9-(High level trigger)</b>                             |
|     | BIT3 | 1 means High reserved 2 normal;<br>0 means high reserved 2 trigger;                               | Grey wire-G500-I1-(High level trigger)<br><b>Black wire-G106-I8-(High level trigger)</b>                              |
|     | BIT2 | 1 means oil /engine circuit normal;<br>0 means oil /engine circuit break                          | Yellow wire-G200/G500-M4<br>Yellow wire-G101/G102-OUT1<br><b>G106 Out1 Status</b>                                     |
|     | BIT1 | 1 means Tamper switch normal;<br>0 means Tamper switch trigger                                    | GPS tracker Tamper alert<br>Tamper switch                                                                             |
|     | BIT0 | 1 means normal;<br>0 means active                                                                 | <b>G106 Out2 Status</b>                                                                                               |
| ST2 | BIT7 | 1 means SOS button normal;<br>0 means trigger SOS button                                          | Blue wire M2-(Low level trigger)<br><b>G106 Brown wire M5-(High level trigger)</b>                                    |
|     | BIT6 | 1 means normal;<br>0 means over speed alert                                                       |                                                                                                                       |
|     | BIT5 | 1 means normal;<br>0 means over parking alert                                                     |                                                                                                                       |
|     | BIT4 | 1 means normal;<br>0 means exit geo-fence                                                         |                                                                                                                       |
|     | BIT3 | 1 means normal;<br>0 means enter into geo-fence                                                   |                                                                                                                       |
|     | BIT2 | 1 means normal;<br>0 means door open                                                              | Brown black wire-G500-I9-(Low level trigger)                                                                          |
|     | BIT1 | <b>1 mean's Pulse mode</b><br><b>0 mean's GPS mode</b>                                            | <b>working mode</b><br><b>Only Speed Limiter support</b>                                                              |
|     | BIT0 | <b>1 mean's Pulse wire connected</b><br><b>0 mean's Pulse wire disconnected</b>                   | <b>Pulse wire status</b><br><b>G106 Blue wire M6-(Negative Trigger)</b>                                               |

|     |               |                                                                                                                                              |                                                                 |
|-----|---------------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| ST3 | BIT7          | Reserve                                                                                                                                      |                                                                 |
|     | <b>BIT6</b>   | <b>1 means platform should send response command:<br/>0x21 to confirm the data;<br/>0 means Platform doesn't need to response this data.</b> |                                                                 |
|     | BIT5          | 1 means normal;<br>0 means the pulse signal value is greater than the preset value                                                           | Pulse wire alert status<br>G106 Blue wire M6-(Negative Trigger) |
|     | BIT4-<br>BIT0 | CSQ signal strength                                                                                                                          |                                                                 |
| ST4 | BIT7-<br>BIT2 | Reserve                                                                                                                                      |                                                                 |
|     | BIT1          | 1 means lift<br>0 means drop                                                                                                                 | Dumper bucket status                                            |
|     | BIT0          | 1 means RFID connection false<br>0 means RFID connection ok                                                                                  | Dumper bucket RFID reader connection state                      |

Table-Vehicel Status

## 6.2.2 Position Data and Peripheral Data 0xA3

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data Format(HEX):      | 2929<0xA3><Data Length><Tracker ID>< Position Data + Peripheral Data ><Checksum>0D                                                                                                                                                                                                                                                                                                                                       |
| Functions Description: | The tracker will upload this data to the platform with the preset upload interval. When the tracker loaded peripherals like : fuel level sensor, temperature sensor, RFID, bar-code scanner and other peripherals, this data will be replaced the position data 0x80 data and uploaded to the platform (means tracker will not upload 0x80 data any more). 0xA3 data content contains position data and peripheral data. |
| Data example:          | 29 29 A3 L 0A 9F 95 38 < Position Data + Peripheral Data ><Checksum> 0D                                                                                                                                                                                                                                                                                                                                                  |
| Note:                  | Tracker ID: 0A 9F 95 38 Convert to the actual tracker ID is: 10312156<br><b>Position Data:</b> Refer to <a href="#">6.2.1 Position Data 0x80</a><br><b>Peripheral Data:</b> Data analysis is shown in the below form: "Peripheral Data"                                                                                                                                                                                  |
| Universal Response     | The platform requires confirmation of the 0xA3 data. Refer to <a href="#">7.1 Universal Response Command 0x21</a>                                                                                                                                                                                                                                                                                                        |

Raw data sample (HEX)

2929A3003C24D3CD55170510173408003329791031941701200149FB00B1C9FFFF4A00001E00000000000000141808F05AFFFFFFFFFFFF0D068012002BFFFFBA0D

For the sake of ease of reading, separate the fields with underscores.

2929\_A3\_003C\_24D3CD55\_170510173408\_00332979\_10319417\_0120\_0149\_FB\_00B1C9\_FFFF4A00\_001E\_00\_00\_00\_00\_00\_0014\_18\_08\_F05AFFFFFFFFFFFF\_0D\_06\_8012002BFFFF\_BA\_0D

**Note:**

**Peripheral Data:** All fields from 'Length of Peripheral Data ' to ' Peripheral X Data Content'.

| Field Name                | Length (Byte) | Data Example (HEX)                                                                                                                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Header                    | 2             | 2929                                                                                                                                | Data header, fixed value                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Command Word              | 1             | A3                                                                                                                                  | Means position data and peripheral data                                                                                                                                                                                                                                                                                                                                                                                                                |
| Data Length               | 2             | 003C                                                                                                                                | 0x3C means 60 bytes data<br>Means the length from the 'Tracker ID' until the end of the 'data frame'                                                                                                                                                                                                                                                                                                                                                   |
| Tracker ID                | 4             | 24D3CD55                                                                                                                            | 36837785<br>Refer to <a href="#">4.3 Tracker ID Conversion Instructions</a>                                                                                                                                                                                                                                                                                                                                                                            |
| Position Data             | 34            | 170510173408                                                                                                                        | Date Time                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                           |               | 00332979                                                                                                                            | Latitude                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           |               | 10319417                                                                                                                            | Longitude                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                           |               | 0120                                                                                                                                | Speed                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                           |               | 0149                                                                                                                                | Direction                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                           |               | FB                                                                                                                                  | Positioning, antenna, power status and mileage unit indication bit                                                                                                                                                                                                                                                                                                                                                                                     |
|                           |               | 00B C9                                                                                                                              | Mileage                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                           |               | FFFF4A00                                                                                                                            | Vehicle State                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                           |               | 001E                                                                                                                                | State V1_V2                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                           |               | 00                                                                                                                                  | State V3                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           |               | 00000000                                                                                                                            | State V4-V7                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                           |               | 00                                                                                                                                  | State V8                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           |               | Refer to <a href="#">6.2.1 Position Data 0x80</a> Data analysis<br><b>Position Data:</b> All fields from "Data Time" to "State V8". |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Length of Peripheral Data | 2             | 0014                                                                                                                                | 20 bytes, data length is not fixed, data length is from peripheral type1 to packet tail.                                                                                                                                                                                                                                                                                                                                                               |
| Peripheral Type 1         | 1             | 18                                                                                                                                  | 0x18 means fuel level sensor. Other peripherals please refer to <a href="#">6.2.2.1 Peripheral List</a><br><b>Note:</b><br>The 0x18 peripheral type data is not fixed, only when the fuel sensor driver was loaded, it will appear fuel sensor data. If didn't load fuel sensor driver, it won't appear any fuel sensor data. So does other peripheral data. About configuring the peripheral command, refer to <a href="#">7.7 Peripheral Command</a> |
| Peripheral 1 Data Length  | 2             | 08                                                                                                                                  | Fuel level data length is 8 bytes                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Peripheral 1 Data Content | N             | F05AFFFFFFFFFFFF                                                                                                                    | From left to right, it means AD value of 4 fuel level sensors<br>F05A FFFF FFFF FFFF<br>0xF05A means the first fuel sensor's fuel level AD value is 61530<br>Divide 61530 by 65534, it will get the percentage of remaining fuel in the fuel tank, it is 93.89%<br><b>Note:</b><br>0001 means the minimum AD value<br>FFFE means the maximum fuel level is 65534                                                                                       |

|                           |     |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|-----|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           |     |              | <p>0000 means the communication is abnormal, especially after the first communication is successful, disconnect the connection.</p> <p>FFFF means the fuel sensor driver has been loaded, but not connect fuel sensor to GPS tracker.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Peripheral Type 2         | 1   | 0D           | <p>0x0D means the temperature sensor, other peripherals please refer to <a href="#">6.2.2.1 Peripheral List</a></p> <p><b>Note:</b></p> <p>The 0x0D peripheral type data is not fixed, only when the temperature sensor driver was loaded, it will appear temperature sensor data. If didn't load temperature sensor driver, it won't appear any temperature sensor data. So does other peripheral data. About configuring the peripheral command, refer to <a href="#">7.7 Peripheral Command</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Peripheral 2 Data Length  | 2   | 06           | Temperature sensor data length is 6 bytes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Peripheral 2 Data Content | N   | 8012002BFFFF | <p>It means three temperature sensors data.</p> <p>Temperature range from -40 to 125 degrees Celsius</p> <p>0x8012 means the first temperature sensor data is -1.8 °C</p> <p>The first digit is 8, then it is negative temperature value, take the last three digits 012, after converting to decimal then divided by 10, and got the current temperature;</p> <p>0x012B means the second temperature sensor data is 4.3 °C</p> <p>The first digit is 0, then it is positive temperature value, take the last three digits 02B, after converting to decimal then divided by 10, and got the current temperature;</p> <p>0x FFFF means the temperature sensor driver has been loaded, but not connect the temperature sensor to GPS tracker.</p> <p><b>Note:</b></p> <p>FFFE means the communication is abnormal, especially after the temperature sensor was initialized successfully, disconnect the connection;</p> <p>FFFF means the temperature sensor driver has been loaded, but not connect the temperature sensor to GPS tracker.</p> |
| ...                       | ... | ...          | ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Checksum                  | 1   | BA           | From 'header' to before 'Checksum' every byte XOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Tail character            | 1   | 0D           | Tail character, fixed value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Table- Position Data and Peripheral Data

## 6.2.2.1 Peripherals List

| Peripheral Name                                 | Peripheral Type ID | Peripheral Data Length (HEX) | Peripheral Data Content | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------|--------------------|------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fuel Level Sensor (Digital signal)              | 0x18               | 08                           | F05AFFFFFFFFFFFF        | <p>From left to right,it means AD value of 4 fuel level sensors<br/>F05A FFFF FFFF FFFF<br/>0xF05A means the first fuel sensor's fuel level AD value is 61530<br/>Divide 61530 by 65534, it will get the percentage of remaining fuel in the fuel tank,it is 93.89%</p> <p><b>Note:</b><br/>0001 means the minimum AD value<br/>FFFE means the maximum fuel level is 65534<br/>0000 means the communication is abnormal, especially after the first communication is successful, disconnect the connection.<br/>FFFF means the fuel sensor driver has been loaded, but not connect fuel sensor to GPS tracker.</p> |
| Fuel Level Sensor (Voltage input)               | 0x18               | 08                           | FFFFFFFFFFFFF05A        | <p>FFFF FFFF FFFF F05A<br/>The front 6 bytes are fixed to FF.<br/>0xF05A means tracker connected a voltage input fuel sensor.AD value is 61530<br/>Divide 61530 by 65535 it will get the percentage of remaining fuel in the fuel tank,it is 93.89%</p> <p><b>Note:</b><br/>0000 means the minimum AD value 0<br/>FFFF means the maximum fuel level is 65535</p>                                                                                                                                                                                                                                                   |
| Fuel Level Sensor Speed Limiter (Voltage input) | 0x18               | 08                           | F05AFFFFFFFFFFFF        | <p>F05A FFFF FFFF FFFF<br/>0xF05A means tracker connected a voltage input fuel sensor.AD value is 61530<br/>Divide 61530 by 65535 it will get the percentage of remaining fuel in the fuel tank,it is 93.89%</p> <p><b>Note:</b><br/>0000 means the minimum AD value 0<br/>FFFF means the maximum fuel level is 65535</p>                                                                                                                                                                                                                                                                                          |
| Temperature Sensor                              | 0x0D               | 06                           | 8012002BFFFF            | <p>8012 002B FFFF<br/>Temperature range from -40 to 125 degrees</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

|                             |      |    |                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------|------|----|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             |      |    |                                                                          | <p>Celsius</p> <p>0x8012 means the first temperature sensor data is -1.8 °C</p> <p>The first digit is 8, then it is negative temperature value, take the last three digits 012, after converting to decimal then divided by 10, and got the current temperature;</p> <p>0x012B means the second temperature sensor data is 4.3 °C</p> <p>The first digit is 0, then it is positive temperature value, take the last three digits 02B, after converting to decimal then divided by 10, and got the current temperature;</p> <p>0x FFFF means the temperature sensor driver has been loaded, but not connect the temperature sensor to GPS tracker.</p> <p><b>Note:</b></p> <p>FFFE means the communication is abnormal, especially after the temperature sensor was initialized successfully, disconnect the connection;</p> <p>FFFF means the temperature sensor driver has been loaded, but not connect the temperature sensor to GPS tracker.</p> |
| RFID tags                   | 0x05 | 0B | 0130303039353932313033                                                   | <p>First byte</p> <p>01 means sign in</p> <p>02 means sign out</p> <p>30303039353932313033 converted to ASCII, means RFID card number 0009592103</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Trailer ID                  | 0x06 | N  | 01303030393537313731387C<br>303030393539323130337C                       | <p>First digit</p> <p>01 means sign in</p> <p>303030393537313731387C303030393539323130337C converted to ASCII, means 0009571718 0009592103 </p> <p>' ' means separator</p> <p>0009571718 means trailer ID</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Bar-code Scanner            | 0x07 | N  | 383633383335303234393635<br>3632317C3836333833353032<br>343935383137307C | <p>863835024965621 863835024958170 </p> <p>' ' means separator</p> <p>863835024965621 means barcode number</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| School bus Active RFID tags | 0x19 | 0B | 0130303039353932313033                                                   | <p>First byte 01 means sign in</p> <p>02 means sign out</p> <p>30303039353932313033 converted to ASCII, means RFID card number 0009592103</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Load sensor AD              | 0x1A | 02 | 267A                                                                     | Covert 0x26 0x7A to decimal system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|                                                 |      |    |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------|------|----|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 |      |    |                                                 | <p>value:9850. 9850/65535=15%</p> <p>15%*10 V= 1.5 V</p> <p>10 V is the maximum detecting range of AD input wire.</p> <p>load sensor Value range: 0.00 V to 5.00V DC</p>                                                                                                                                                                                                                                                                            |
| External Power supply voltage(Charging voltage) | 0x21 | 02 | 00F1                                            | <p>0x00 0xF1 convert to decimal system value: 241 . the unit is 0.1 V.</p> <p>241*0.1=24.1 V</p> <p>External power supply voltage is 24.1 Volts</p>                                                                                                                                                                                                                                                                                                 |
| Battery Level and voltage                       | 0x22 | 03 | 641068                                          | <p>Battery Level 0x00 to 0x64.</p> <p>Value range :[0% ~ 100%]</p> <p>Battery voltage :the unit is mV.</p> <p>0x10 0x68 4200 mV</p>                                                                                                                                                                                                                                                                                                                 |
| Base Station Info.                              | 0x23 | N  | 0101CC00249911A017                              | <p>0101CC00249911A01F</p> <p>01 means one group base station info.it can upload the nearest base station info. If required.</p> <p>01CC means MCC (mobile country code) China 460</p> <p>00 means MNC(mobile network code) China mobile 00</p> <p>2499 means LAC</p> <p>11A0 means CELL ID</p> <p>17 means GSM signal strength</p>                                                                                                                  |
| Flow Meter data                                 | 0x28 | 10 | 3D 85 A1 CE 00 00 00 00 3B 88 88 89 3F B9 99 9A | <p>Total Flow: 3D 85 A1 CE (unit is liter)</p> <p>IEEE 754 standard</p> <p>4bytes HEX data convert to Float: 0.6525 L</p> <p>Instantaneous flow: 00 00 00 00 (unit is liter/hour)</p> <p>Total hours: 3B 88 88 89 (unit is hour)</p> <p>IEEE 754 standard</p> <p>4bytes HEX data convert to Float: 0.00417 hour</p> <p>Single Pulse flow: 3F B9 99 9A (unit is mL)</p> <p>IEEE 754 standard</p> <p>4bytes HEX data convert to Float: 1.45000 mL</p> |
| Forklift time statistics                        | 0x29 | 0C | 00 15 34 26 00 78 13 24 FF 00 00 11             | <p>00 15 34 26 means ACC On cumulative time .unit as sec. 1389606 sec;</p> <p>00 78 13 24 means Forklift working cumulative time .unit as sec. 7869220 sec;</p> <p>FF 00 00 11 means Forklift lifting cumulative time.unit as sec. 4278190097</p>                                                                                                                                                                                                   |

|                                 |      |    |                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------|------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 |      |    |                                                                                                                                                                                                                                                                                                                             | sec.                                                                                                                                                                                                                                                                                                                                                                                                                     |
| AT3642 Interpreter data         | 0x42 | 16 | <b>01</b> 40 4E 02 8E 02 00 02 04 70<br>03 FF 00 C8 78 50 00 00 00 E8<br>76 0D                                                                                                                                                                                                                                              | <b>01</b> means driver type, AT3642 Interpreter fixed to 01;<br>40 4E 02 8E 02 00 02 04 70 03 FF 00 C8 78 50 00 00 00 E8 76 0D :<br>This is the raw data from ATBS-AT3642 interpreter. Refer to < CANBUS and Trouble Code Decoding Manual> document to decode the detailed data content.                                                                                                                                 |
| AT3647-J1939 Interpreter data   | 0x47 | N  | <b>00</b> 01 02 00 00 05 04 12 34 00<br>00 06 01 06 07 02 D0 20 09 01<br>13 10 02 55 66 11 04 00 00 00<br>01 13 01 3B 15 04 64 00 00 00<br>16 02 00 00 21 02 00 3B 22 01<br>38 23 01 BB 27 01 20 28 02 0E<br>34 29 01 00 31 02 20 22 43 02<br>05 1D 44 02 C2 0E 46 01 14 51<br>04 00 00 00 00 52 04 00 00 00<br>00 54 01 00 | <b>00</b> means driver type, AT3647 Interpreter - J1939 protocol fixed to 00;<br>010200000504123400000601060702D0200<br>901131002556611040000000113013B15046<br>4000000160200002102003B2201382301BB<br>27012028020E34290100310220224302051<br>D4402C20E46011451040000000052040000<br>0000540100:<br>To decode the detailed data content, software engineer need to refer to <AT3647 J1939 and J1708 Key Value> document. |
| AT3647-J1708 Interpreter data   | 0x47 | N  | <b>01</b> 01 02 00 00 05 04 12 34 00<br>00 06 01 06 07 02 D0 20 08 01<br>00 09 01 13 10 02 55 66 11 04<br>00 00 00 01 14 02 00 00 16 02<br>00 00 17 02 00 00                                                                                                                                                                | <b>01</b> means driver type, AT3647 Interpreter - J1708 protocol fixed to 01;<br>010200000504123400000601060702D0200<br>801000901131002556611040000000114020<br>0001602000017020000:<br>To decode the detailed data content, software engineer need to refer to <AT3647 J1939 and J1708 Key Value> document.                                                                                                             |
| AT3648 Interpreter data         | 0x48 | 16 | <b>01</b> 40 22 0C 0E A2 23 B9 21 76<br>C8 14 00 00 00 00 00 12 34 73<br>0D 0A                                                                                                                                                                                                                                              | <b>01</b> means driver type, AT3648 Interpreter fixed to 01;<br>40 22 0C 0E A2 23 B9 21 76 C8 14 00 00 00 00 12 34 73 0D 0A :<br>This is the raw data from ATBS-AT3648 interpreter. Refer to < CANBUS and Trouble Code Decoding Manual> document to decode the detailed data content.                                                                                                                                    |
| AT36XX Interpreter-trouble code | 0x92 | N  | 402A04FF9404030B000000000000000000<br>0000000000000000A90D0A                                                                                                                                                                                                                                                                | 402A04FF9404030B000000000000000000<br>0000A90D0A:<br>This is AT36XX Interpreter-trouble code. this data should come together with 0x42/0x47/0x48 <b>Peripheral Type ID</b> . when                                                                                                                                                                                                                                        |

|  |  |  |  |                                                                                                                                                                                                                           |
|--|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |  |  |  | <p>trouble Resolved. 0x92 will be also disappeared in 0xA3 Position data.</p> <p><b>Note:</b></p> <p>To decode the trouble code, engineer need to refer to &lt; CANBUS and Trouble Code Decoding Manual&gt; document.</p> |
|--|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Table- Peripheral Data List

### 6.2.3 One time track on demand Data 0x81

This data will generate when you send [one time track on demand command 0x30](#) from software platform to device.

**Note:**

The platform send [one time track on demand command 0x30](#) ,the tracker response 0x81. 0x81 data content format and position data 0x80 are the same.

### 6.2.4 Cellular network Blind Zone Data 0x8E

|                       |                                                                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Data Format(HEX):     | 2929<0x8E><Data Length><Tracker ID><Position Data><Checksum>0D                                                                                    |
| Function Description: | The tracker will upload the cellular network blind zone data to the platform when recover from GPRS blind zone.its Position data is same as 0x80. |
| Data Example:         | 29 29 8E L 0A 9F 95 38 <Position Data><Checksum> 0D                                                                                               |
| Note:                 | Tracker ID: 0A 9F 95 38 Convert to the actual tracker ID is:10312156<br>Position Data:Data analysis is shown in the table:'Position Data'         |
| Universal Response    | The platform requires confirmation of the 0x8E data.Refer to <a href="#">7.1 Universal Response Command 0x21</a>                                  |

**Raw data example (HEX)**

29298E002824D3CD55170510173408003329791031941701200149FB00B1C9FFFF4A00001E00000000000009F0D

## 6.3 Alarm Data 0x82

|                       |                                                                                                                      |
|-----------------------|----------------------------------------------------------------------------------------------------------------------|
| Data Format(HEX)      | 2929<0x82><Data Length><Tracker ID><Alarm Data><Checksum>0D                                                          |
| Function Description: | All the alarm data of the terminal is uploaded to the platform through 0x82 data                                     |
| Data Examples         | 29 29 82 L 0A 9F 95 38 <Alarm Data><Checksum> 0D                                                                     |
| Note                  | Tracker ID: 0A 9F 95 38 Switch to actual Tracker ID is:10312156<br>Alarm Data:See below this section < Alarm Data >  |
| Universal Response    | The platform requires confirmation of the 0x82 data.<br>Refer to <a href="#">7.1 universal response command 0x21</a> |

Raw data example( HEX)

29298200232591D91B1705302347210030173110133320012001499000000000000010000004E0D

For easy reading, separate the fields with underscores.

2929\_82\_0023\_2591D91B\_170530234721\_00301731\_10133320\_0120\_0149\_90\_00\_00\_000000\_0001000000\_4E\_0D

**Note:**

Alarm data: All fields between 'Datetime' to 'AlarmStatus':

| Field Name  | Length (Bytes) | Data Sample (HEX) | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------|----------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Header      | 2              | 29 29             | packet header, fixed value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Command     | 1              | 82                | Mean' alarm data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Data Length | 2              | 00 23             | 0x23 mean's 35 bytes data<br>Mean's the length from the 'Tracker ID' until the end of the 'data frame 0x0D'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Tracker ID  | 4              | 25 91 D9 1B       | 37178927 Refer to <a href="#">4.3 Tracker ID Conversion Instructions</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Datetime    | 6              | 17 05 30 23 47 21 | GMT time:<br>Datetime format: year/month/day hour:min:sec<br>YY/MM/DD HH:MM:SS<br>17 year 05 month 30 day 23:47:21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Latitude    | 4              | 00 30 17 31       | BCD code ,format is:DDDMM.MMM<br>Latitude range:00°00.000' — 89°59.999';<br>The first three digits represent degrees, and also means the sign bit;<br>The last five digits represent minutes. That is, 3 degrees 1.731 minutes<br><b>Converted to latitude in degree: <math>3^{\circ}+1.731'/60=3.02885^{\circ}</math></b><br><b>The method of judging the latitude value as "North Latitude" (ie, positive value) and "South Latitude" (ie, negative value) is as below::</b><br>DDD<=800 ,that is North Latitude<br>DDD>800 ,that is South Latitude<br>For example:83 03 79 01<br>830>800, it is South Latitude<br>800-830=-30 that is, -30 degree<br>37901 that is, 37.901 minutes<br>-30°37.901'<br><b>Converted to latitude in degree:</b><br><b><math>-(30^{\circ}+37.901'/60)=-30.631683^{\circ}</math></b> |
| Longitude   | 4              | 10 13 33 20       | BCD code ,format is:DDDMM.MMM<br>Longitude range: 000°00.000' — 179°59.999';<br>The first three digits represent degrees, and also means the sign bit;<br>The last five digits represent minutes. That is,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                   |                                                    |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |         |      |                                                    |           |         |
|-------------------|----------------------------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|------|----------------------------------------------------|-----------|---------|
|                   |                                                    |                         | 101 degrees 33.320 minutes<br>Converted to longitude in degree:<br>101°+33.320′/60=101.555333°<br><br>The method of judging the longitude as "East Longitude" (ie,positive value) and "West Longitude" (ie, negative value) is as below:<br>DDD<=800 ,that is East Longitude<br>DDD>800 ,that is West Longitude<br>For example:93 04 56 08<br>930>800, it is West Longitude<br>800-930=-130     that is, -130 degree<br>45608   that is, 45.608 minutes<br>-130°45.608′<br><br>Converted to longitude in degree:-(130°+45.608′/60)=-130.760133° |            |         |      |                                                    |           |         |
| Speed             | 2                                                  | 01 20                   | 120 KM/Hour<br>BCD code<br>e.g.   00 80 mean’s 80KM/Hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |         |      |                                                    |           |         |
| Direction         | 2                                                  | 01 49                   | 149 degree<br>BCD code,North is 0 degree,Clockwise count<br>The unit is:degree scope:000——359 degree                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |         |      |                                                    |           |         |
| Positioning State | 1                                                  | 90                      | 0x90 change to binary format is: 10010000<br>Form left to right,BIT7 - BIT0<br>BIT7=1 mean’s GPS locate <table><tr><td>Indication</td><td>Explain</td></tr><tr><td>BIT7</td><td>1   mean’s GPS locate<br/>0   mean’s GPS not locate</td></tr><tr><td>BIT6-BIT0</td><td>Reserve</td></tr></table>                                                                                                                                                                                                                                                | Indication | Explain | BIT7 | 1   mean’s GPS locate<br>0   mean’s GPS not locate | BIT6-BIT0 | Reserve |
| Indication        | Explain                                            |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |         |      |                                                    |           |         |
| BIT7              | 1   mean’s GPS locate<br>0   mean’s GPS not locate |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |         |      |                                                    |           |         |
| BIT6-BIT0         | Reserve                                            |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |         |      |                                                    |           |         |
| Overloaded State  | 1                                                  | 00                      | Reserve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            |         |      |                                                    |           |         |
| Logging Status    | 1                                                  | 00                      | Reserve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            |         |      |                                                    |           |         |
| Alarm Status      | 8                                                  | 00 00 00 00 01 00 00 80 | From left to right are <b>ST1 to ST8</b><br>0x00   0x00   0x00   0x00   0x01   0x00   0x00   0x80<br>Likewise, when each byte is converted to binary, BIT7 to BIT0, from left to right, from high to low<br>In this example,<br>ST5 is converted to binary is 00000001<br>ST8 is converted to binary is 10000000<br>Indicates that the ACC open event has been generated<br>Detailed alarm status analysis, refer to <a href="#">6.3.1 alarm status</a>                                                                                         |            |         |      |                                                    |           |         |
| Check sum         | 1                                                  | 91                      | From ‘header’ to before ‘Check Sum’every bytes XOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |         |      |                                                    |           |         |
| Packet Tail       | 1                                                  | 0D                      | packet tail, fixed value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |         |      |                                                    |           |         |

Table- Alarm Data

### 6.3.1 Alarm Status

| ST  | BIT           | Event name                          | Note                                                              |
|-----|---------------|-------------------------------------|-------------------------------------------------------------------|
| ST1 | BIT 7         | Enter Geofence                      |                                                                   |
|     | BIT 6         | Exit Geofence                       |                                                                   |
|     | BIT 5         | <del>Load Sensor Disconnect</del>   |                                                                   |
|     | BIT 4         | low voltage                         | Low external voltage                                              |
|     | BIT 3         | Door Open                           | G500-I9                                                           |
|     | BIT 2         | user-defined 2                      | SOS wire (Blue Wire)                                              |
|     | BIT 1         | High reserved-or (air condition) Or | I/O M1-brown wire                                                 |
|     |               | Trailer coupling/decoupling         | G500-M1-brown wire                                                |
|     | BIT 0         | illegal ignition                    | G102B-CarAlarm                                                    |
| ST2 | BIT 7         | illegal door open                   | G102B-CarAlarm<br>G500-I3                                         |
|     | BIT 6         | Towing Alarm                        |                                                                   |
|     | BIT 5         | Vibration Alarm                     | G102B-CarAlarm                                                    |
|     | BIT 4         | forklift lift                       | G500-I1                                                           |
|     |               | RPM Alarm                           | G106 M6-Blue wire                                                 |
|     | BIT 3         | Main Power Disconnected             |                                                                   |
|     | BIT 2         | Reverse Alarm                       | G500: I/O I4 voltage>20V trigger                                  |
|     | BIT 1         | Over Speed Alarm                    |                                                                   |
|     | BIT 0         | SOS Alarm                           | Other Models: I/O M2-Blue wire<br>G106: I/O M5-Brown wire         |
| ST3 | BIT 7         | Idling Alarm                        |                                                                   |
|     | BIT 6         | <del>Fatigue Driving</del>          | 0xDA command set                                                  |
|     | BIT 5         | <del>Overtime Parking</del>         |                                                                   |
|     | BIT 4         | Tamper alarm                        | G500(Tamper switch)<br>G107(Light-sensitive)<br>W500(Reed switch) |
|     | BIT 3         | Seat belt is not connected          |                                                                   |
|     | BIT 2         | Temperature abnormal                |                                                                   |
|     | BIT 1         | Right turn signal                   | G500: I/O I3 (Right light)                                        |
|     | BIT 0         | Left turn signal                    | G500: I/O I1 (Left light)                                         |
| ST4 | BIT 7 - BIT 0 | GeoFence ID or Max Speed            | Geofence ID Or over speeding the max value                        |
| ST5 | BIT 7         | Engine fault light                  | G500: I/O M1                                                      |
|     | BIT 6         | Turn right without lights           | G500: I/O I3 (Right light)                                        |
|     | BIT 5         | Turn left without lights            | G500: I/O I1 (Left light)                                         |
|     | BIT 4         | Pulse signal tamper                 | F600-Speed limiter                                                |
|     | BIT 3         | Overtime Driving                    | G500: Drive more than 14 hours a day                              |
|     | BIT 2         | Reserve                             |                                                                   |
|     | BIT 1         | Fatigue Driving                     | G500: Must rest for 30 minutes after driving for four hours       |
|     | BIT 0         | ACC On alarm                        | I/O M3 - White wire                                               |

|     |               |                         |                                               |
|-----|---------------|-------------------------|-----------------------------------------------|
| ST6 | BIT 7 – BIT 0 | Reserve                 |                                               |
| ST7 | BIT 7         | Crash                   |                                               |
|     | BIT 6         | Harsh cornering         |                                               |
|     | BIT 5         | Harsh acceleration      | G102/G106/G108/G500                           |
|     | BIT 4         | Harsh braking           | G102/G106/G108/G500                           |
|     | BIT 3         | Fall down/Overturn/Flip | G107                                          |
|     | BIT 2         | skip bucket lifting     | G500                                          |
|     | BIT 1         | Siphon                  |                                               |
|     | BIT 0         | fuel level low          |                                               |
| ST8 | BIT 7         | Event start flag bit    | 0 mean's event occur<br>1 mean/s event finish |
|     | BIT 6 – BIT 0 | Reserve                 |                                               |

Table-Alarm Status 1

## 6.4 Universal Command Response 0x85

|                       |                                                                                                                                                                                                                                                                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data Format(HEX):     | 2929<0x85><Data Length><Tracker ID><Position Data><Checksum>0D                                                                                                                                                                                                                                                                      |
| Function Description: | Except universal response command 0x21, one time track on demand command 0x30 and camera-related command sent by the platform, other commands sent by platform , once the tracker got the commands,it will inform the platform that the tracker has received this command successfully through the 0x85 universal response command. |
| Data Examples:        | 29 29 85 00 08 1D D0 8C 22 17 05 12 17 40 26 02 65 45 71 03 12 54 17 00 00 00 00 F8 19 C8 39 FF FF 1D 00 00 1E 00 50 00 00 00 30 ED 0D                                                                                                                                                                                              |
| Note:                 | Tracker ID: 1D D0 8C 22 converted to actual tracker ID is:29801234<br><b>Position Data:</b> Refer to <a href="#">6.2.1 Position Data 0x80</a><br>The 'state V8' field is 0x30, means this data is the response data for the one time track on demand command, if it is dispatch command, the 'state V8' field is 0x3A.              |
| Universal Response    | no need response this data at platform side                                                                                                                                                                                                                                                                                         |

## 6.5 Dispatch Command Response 0x84

This section mainly describes the format of the dispatch command response data. Detailed tracker dispatch command response – refer to [7 Platform Send Command](#)

|                       |                                                                                                                                                                                                                                                                                                                                              |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data Format(HEX):     | 2929<0x84><Data Length><Tracker ID><Dispatch Command Response><Checksum>0D                                                                                                                                                                                                                                                                   |
| Function Description: | In order to better compatible and retain the command frame system of the old tracker, while optimizing the upgrade,new command will be sent by <a href="#">Dispatch Command 0x3A</a> ,in order to realize the contents of the command in the GPRS dispatch command are consistent with the serial port and SMS channel, thus simplifying the |

|                    |                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | whole command system.                                                                                                                                                                                                                                                                                                                                                                                         |
| Data Examples:     | 29298400510A86D117<br>473230302D4E2076312E31304046656220313720323031372031383A35373A333620494D45493<br>A38363330393230313030363831323320434349443A353032313934313030383636363730<br>E30D                                                                                                                                                                                                                      |
| Note:              | Tracker ID: 0A 86 D1 17 converted to actual tracker ID is:10068123<br><b>Command Response:</b> convert them to ASCII character ,get the data as follows:<br>G200-N v1.10@Feb 17 2017 18:57:36 IMEI:863092010068123<br>CCID:502194100866670<br>This data means that this product is model G200,firmware version is 17 <sup>th</sup> Feb, 2017<br>18:57:36,IMEI is 863092010068123 and CCID is 502194100866670. |
| Universal Response | no need response this data at platform side                                                                                                                                                                                                                                                                                                                                                                   |

## 6.6 Camera Data

Refer to [Appendix 1: Take Photo Process](#)

## 6.7 'X' Command function switch for AD/Temperature...

\*SPJLX\*P:753869\*X:00000#

000000:AD、temperature、Unlock position、0x21 command respond、acc off sleep、define 2/SOS

e.g. The acc off go to sleep mode command is :

\*SPJLX\*P:753869\*X:00010#

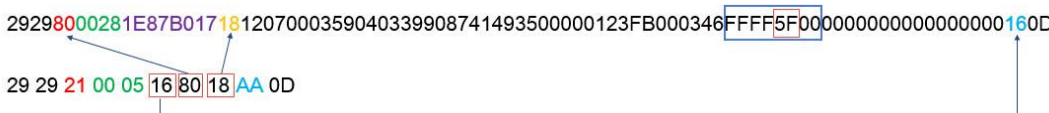
e.g. Enable the AD & temperature

\*SPJLX\*P:753869\*X:11000#

# 7 Platform Send Command to Tracker

## 7.1 Universal Response Command 0x21

|                        |                                                                                                    |
|------------------------|----------------------------------------------------------------------------------------------------|
| Function Description : | Used for confirming the data uploaded by the tracker,such as Login 0xB1, position data, alarm data |
| Compatible Models:     | All models                                                                                         |
| Data                   | 2929<21><Data Length><Response Data checksum >< Response Data Command Word ><First Byte            |

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Format(HEX):              | of Data Content ><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| GPRS command example:     | 29 29 <b>21</b> 00 05 82 B1 0C <b>1B</b> 0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Note:                     | <p><b>Raw data example1:</b><br/>Tracker send Login data<br/>29 29 <b>B1</b> 00 07 0A 9F 95 38 0C <b>82</b> 0D<br/>Platform response:<br/>29 29 <b>21</b> 00 05 82 B1 0C <b>1B</b> 0D<br/>Response Data checksum: 0x<b>82</b><br/>Response Data's Command Word: 0xB1<br/>First Byte of Data Content: 0x0C</p> <p><b>Raw data example2:</b><br/>Tracker send:<br/>2929<b>80</b>00<b>28</b>1<b>E8</b>7<b>B0</b>17<b>18</b>1207000359040339908741493500000123FB000346FFFF5F00000000000000000000<b>16</b>0D<br/>Platform response:<br/>29 29 <b>21</b> 00 05 16 80 18 <b>AA</b> 0D<br/>Response Data checksum: 0x<b>16</b><br/>Response Data's Command Word: 0x<b>80</b><br/>First Byte of Data Content: 0x<b>18</b></p>  <p><b>Note:</b><br/>Vehicle Status -see section <a href="#">6.2.1.1</a><br/>FF FF 5F 00<br/>0X5F convert to binary system : 0<b>1</b>01 1111<br/>ST3. BIT6=1, this position data, the platform need to acknowledge it.</p> |
| Tracker response example: | --                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Note:                     | The tracker will continue to upload other data once it got response data from the platform                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## 7.2 Communication Parameter Setting Command

### 7.2.1 Query Communication Parameter

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:           | Query the communication parameters configuration of the tracker<br>The platform send this command to the tracker through the Dispatching Command 0x3A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Compatible Models:              | All models                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Data Format (HEX):              | 2929<3A><<Data Length><Tracker ID><Query Communication Parameter ><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| GPRS Command(HEX)Example:       | 29293A00190A9F95382A53504A4C582A503A3735333836392A433A235A0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Note:                           | 0019: Data Length is 25 bytes<br>0A9F9538:Tracker ID is 10312156<br>2A53504A4C582A503A3735333836392A433A23 is command content,convert to ASCII charater is: *SPJLX*P:753869*C:#                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Dispatch Command Response 0x84  | 292984009F0A9F95385E593A747261636B65722E6D6F6269636F6D747261636B696E672E636F6D2C31323030302C313B413A636D6E65742C2C3B4E3A38383130333132313536213B4D443A343B453A312C33302C36303B44553A313030303B43553A33303B52473A313B53513A32353B473A3235352C303B543A382C383B45473A313B50573A313B563A473130325376312E32354053657020203220323031373B60170D                                                                                                                                                                                                                                                                                                                                                                    |
| Note:                           | 84 Command Word 0x84    009F Data Length 159    0A9F9538:Tracker ID is 10312156<br>Command Response<br>Content:5E593A747261636B65722E6D6F6269636F6D747261636B696E672E636F6D2C31323030302C313B413A636D6E65742C2C3B4E3A38383130333132313536213B4D443A343B453A312C33302C36303B44553A313030303B43553A33303B52473A313B53513A32353B473A3235352C303B543A382C383B45473A313B50573A313B563A473130325376312E32354053657020203220323031373B60<br>Convert to ASCII character is:<br>^Y:tracker.mobicomtracking.com,12000,1;A:cmnet,,;N:8810312156!;MD:4;E:1,30,60;DU:1000;C U:30;RG:1;SQ:25;G:255,0;T:8,8;EG:1;PW:1;V:G102Sv1.25@Sep 2 2017;`<br>query communication parameter is: Y:tracker.mobicomtracking.com,12000,1 |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispath Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 7.2.2 Set IP Address/Domain name and Port

|                       |                                                                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Function Description: | Remotely set the IP address/domain name and port.when received this command, tracker will change its IP address/domain name and port. |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------|

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | <p><b>Note:</b> IP address or domain name, allowing only one of the parameters exist, can not set the IP address and domain name at the same time.</p> <p>The platform send this command to the tracker through the Dispatching Command 0x3A</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Compatible Models:</b>       | <b>All models</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Data Format(HEX):               | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| GPRS Command(HEX)Example:       | 29293A002D0A9F95382A53504A4C582A503A3735333836392A553A35322E31362E34302E3135332C363636362C312C23780D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Note:                           | <p>002D: Data length is 45bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A553A35322E31362E34302E3135332C363636362C312C23 is command content,convert to ASCII character is: *SPJLX*P:753869*U:52.16.40.153,6666,1,#</p> <p>52.16.40.153,6666,1 is parameter</p> <p>IP address:52.16.40.153</p> <p>Port:6666</p> <p>TCP : 1 If it is UDP then it is 0</p> <p><b>Example 1:</b> Configure the server public network IP address:152.126.40.153 TCP port:12000<br/>Then command content is: *SPJLX*P:753869*U:152.126.40.153,12000,1,#</p> <p><b>Example 2:</b> Configure the server public network IP address:152.126.40.153 UDP port:9999<br/>Then command content is:*SPJLX*P:753869*U:152.126.40.153,9999,0,#</p> <p><b>Example 3:</b> Configure the server public network domain name:gps.tracking.com UDP port:9999<br/>Then command content is:*SPJLX*P:753869*U: gps.tracking.com,9999,0,#</p> |
| Dispatch Command Response 0x84  | 29298400230A9F95383C54554750532A553A35322E31362E34302E3135332C363636362C313EB10D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Note:                           | <p>84 Command Word 0x84 0023 Data Length 35 0A9F9538:Tracker ID is 10312156</p> <p>Command Response</p> <p>Content:3C54554750532A553A35322E31362E34302E3135332C363636362C313E</p> <p>Convert to ASCII character is: &lt;TUGPS*U:52.16.40.153,6666,1&gt;</p> <p>Means the above is the response of the setting parameter</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispath Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

### 7.2.3 Set APN and APN Account

|                           |                                                                                                                                            |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:     | <p>Remotely set the tracker's GPRS parameter</p> <p>The platform send this command to the tracker through the Dispatching Command 0x3A</p> |
| <b>Compatible Models:</b> | <b>All Models</b>                                                                                                                          |
| Data Format(HEX):         | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                             |

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GPRS<br>Command(HEX)Example:       | 29293A002C0A9F95382A53504A4C582A503A3735333836392A413A41504E2C41504E75736572<br>2C41504E7061737323320D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Note:                              | <p>002C: Data length is 44bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A413A41504E2C41504E757365722C41504E7061737323<br/>is command content,convert to ASCII character is:*SPJLX*P:753869*A:APN,APNuser,APNpass#</p> <p>APN,APNuser,APNpass is parameter</p> <p><b>Example 1:</b> If the customer's SIM card APN is internet, APN user name is web, APN password is web<br/>then the command content is: *SPJLX*P:753869*A:internet,web,web#</p> <p><b>Example 2:</b> If the customer's SIM card APN is CMNET,then the user name and password are empty.<br/>then the command content is:*SPJLX*P:753869*A:CMNET, , #</p> |
| Dispatch Command<br>Response 0x84  | 29298400230A9F95383C54554750532A413A41504E2C41504E757365722C41504E706173733E60D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Note:                              | <p>84 Command Word 0x84    0023 Data Length 35    0A9F9538:Tracker ID is 10312156</p> <p>Command <span style="float: right;">Response</span></p> <p>Content:3C54554750532A413A41504E2C41504E757365722C41504E706173733E</p> <p>Convert to ASCII character is: &lt;TUGPS*A:APN,APNuser,APNpass&gt;</p> <p>Means the above is the response of the setting parameter</p>                                                                                                                                                                                                                                                                                            |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## 7.3 Data Upload Interval Setting Command

### 7.3.1 Query Data Upload Interval Parameter

|                              |                                                                                                                                                                                                      |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:        | Used for querying the tracker data upload interval<br>The platform sends this command to the tracker through the Dispatching Command 0x3A.                                                           |
| Compatible Models:           | All models                                                                                                                                                                                           |
| Data Format(HEX):            | 2929<3A>< Data Length >< Tracker ID>< Command Content><Checksum>0D                                                                                                                                   |
| GPRS<br>Command(HEX)Example: | 29293A00190A9F95382A53504A4C582A503A3735333836392A433A235A0D                                                                                                                                         |
| Note:                        | <p>0019: Data length is 25 bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A433A23 is command content,convert to ASCII character<br/>is: *SPJLX*P:753869*C: #</p> |

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dispatch Command<br>Response 0x84  | 292984009F0A9F95385E593A747261636B65722E6D6F6269636F6D747261636B696E672E636F6D2C31323030302C313B413A636D6E65742C2C3B4E3A38383130333132313536213B4D443A343B453A312C33302C36303B44553A313030303B43553A33303B52473A313B53513A32353B473A3235352C303B543A382C383B45473A313B50573A313B563A473130325376312E32354053657020203220323031373B60170D                                                                                                                                                                                                                                                                                                                                                                   |
| Note:                              | <p>84 Command Word 0x84    009F Data Length 159    0A9F9538:Tracker ID is 10312156</p> <p>Command Response</p> <p>Content:5E593A747261636B65722E6D6F6269636F6D747261636B696E672E636F6D2C31323030302C313B413A636D6E65742C2C3B4E3A38383130333132313536213B4D443A343B453A312C33302C36303B44553A313030303B43553A33303B52473A313B53513A32353B473A3235352C303B543A382C383B45473A313B50573A313B563A473130325376312E32354053657020203220323031373B60</p> <p>Convert to ASCII character is:</p> <p>^Y:tracker.mobicomtracking.com,12000,1;A:cmnet,,;N:8810312156!;MD:4;E:1,30,60;DU:1000;CU:30;RG:1;SQ:25;G:255,0;T:8,8;EG:1;PW:1;V:G102Sv1.25@Sep 2 2017;`</p> <p>data upload interval parameter is: E:1,30,60</p> |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 7.3.2 Set Upload data by time Interval

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:        | <p>Set the tracker to upload the time interval under the moving and static state</p> <p>Moving state: When the tracker moving speed &gt; 5 km / h and remains more than 5 seconds, then the tracker is considered to be moving; otherwise, it is the static state.</p> <p><b>Note:</b> uploading by time interval or distance, only one function takes effect. If the timing upload is set, the tracker will not upload by distance interval.</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p>                                    |
| Compatible Models:           | All models                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Data Format(HEX):            | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| GPRS<br>Command(HEX)Example: | 29293A00210A9F95382A53504A4C582A503A3735333836392A453A312C33302C36303023600D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Note:                        | <p>0021: Data length is 33 bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A453A312C33302C36303023 is command content, convert to ASCII character is: *SPJLX*P:753869*E:1,30,600#</p> <p>30,600 is parameter</p> <p>30 means when the tracker is moving, the upload interval is 30seconds, parameter range:[3-65534]</p> <p>600 means when the tracker is static, the upload interval is 600seconds, parameter range:[3-65534]</p> <p><b>Example 1:</b> Set the tracker upload interval as 10seconds under moving state, and 1800 seconds</p> |

|                                    |                                                                                                                                                                                                                                                                                                        |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | upload interval under static state. Then command content is: *SPJLX*P:753869*E:1,10,1800#                                                                                                                                                                                                              |
| Dispatch Command<br>Response 0x84  | 292984001C0A9F95383C54554750532A453A312C33302C3630302C302C303EB60D                                                                                                                                                                                                                                     |
| Note:                              | <p>84 Command Word 0x84    001C Data Length 28    0A9F9538: Tracker ID is 10312156</p> <p>Command Response Content:3C54554750532A453A312C33302C3630302C302C303E</p> <p>Convert to ASCII character is: &lt;TUGPS*E:1,30,600,0,0&gt;</p> <p>Means the above is the response of the setting parameter</p> |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                |

### 7.3.3 Set Upload data by distance Interval

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:             | <p>Set the tracker upload data by distance interval. When the tracker moves beyond the distance interval, then upload a data.</p> <p><b>Note:</b> uploading by time interval or distance, only one function takes effect. If the timing upload is set, the tracker will not upload by distance interval.</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p>                                                                    |
| Compatible Models:                | All models                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Data Format(HEX):                 | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                              |
| GPRS<br>Command(HEX)Example:      | 29293A001E0A9F95382A53504A4C582A503A3735333836392A453A322C31303023740D                                                                                                                                                                                                                                                                                                                                                                                                      |
| Note:                             | <p>001E: Data Length is 33bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A453A322C31303023 is command content, convert to ASCII character is: *SPJLX*P:753869*E:2,100#</p> <p>100 is parameter</p> <p>100 means positioning upload interval is 100 meters, parameter range:[10-65534]</p> <p><b>Example 1:</b> Set the tracker positioning upload interval as 50 meters</p> <p>then the command content is: *SPJLX*P:753869*E:2,50#</p> |
| Dispatch Command<br>Response 0x84 | 292984001E0A9F95383C54554750532A453A312C33302C3630302C3130302C303EB50D                                                                                                                                                                                                                                                                                                                                                                                                      |
| Note:                             | <p>84 Command Word 0x84    001E Data Length 30    0A9F9538:Tracker ID is 10312156</p> <p>Command Response Content</p> <p>3C54554750532A453A312C33302C3630302C3130302C303E</p> <p>Convert to ASCII character is: &lt;TUGPS*E:1,30,600,100,0&gt;</p> <p>Means the above is the response of the setting parameter</p>                                                                                                                                                          |
| Universal Command                 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                     |

|               |                               |
|---------------|-------------------------------|
| Response 0x85 | <a href="#">Response 0x85</a> |
|---------------|-------------------------------|

### 7.3.4 Set Inflection Point Upload Interval

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:           | <p>Set the tracker inflection point upload interval. When the tracker moves beyond the specific angle, then upload a data.</p> <p><b>Note:</b> inflection point upload can work together with timing upload or distance interval upload, only one function takes effect.</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p>                                                                                         |
| Compatible Models:              | All models                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Data Format(HEX):               | 2929<3A><Data Length><Tracker ID>< Command Content ><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                 |
| GPRS Command(HEX)Example:       | 29293A001D0A9F95382A53504A4C582A503A3735333836392A453A332C333023440D                                                                                                                                                                                                                                                                                                                                                                                             |
| Note:                           | <p>001D: Data Length is 29bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A453A332C333023 is command content,convert to ASCII character is: *SPJLX*P:753869*E:3,30#</p> <p>30 is parameter</p> <p>30 means the angle changes as 30 degree,parameter range:[10-180]</p> <p><b>Example 1:</b>Set the tracker upload data when the tracker angle changed over 40 degree.then the command content is: *SPJLX*P:753869*E:3,40#</p> |
| Dispatch Command Response 0x84  | 292984001F0A9F95383C54554750532A453A312C33302C3630302C3130302C33303E870D                                                                                                                                                                                                                                                                                                                                                                                         |
| Note:                           | <p>84 Command Word 0x84    001F Data Length 31    0A9F9538: Tracker ID is 10312156</p> <p>Command Response Content:3C54554750532A453A312C33302C3630302C3130302C33303E</p> <p>Convert to ASCII character is: &lt;TUGPS*E:1,30,600,100,30&gt;</p> <p>Means the above is the response of the setting parameter</p>                                                                                                                                                  |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispath Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                            |

## 7.4 Basic Function Command

### 7.4.1 Query Tracker Firmware Version

|                       |                                 |
|-----------------------|---------------------------------|
| Function Description: | Query tracker firmware version. |
|-----------------------|---------------------------------|

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | The platform sends this command to the tracker through the Dispatching Command 0x3A.                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Compatible Models:</b>       | <b>All models</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Data Format(HEX):               | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                              |
| GPRS Command(HEX)Example:       | 29293A00190A9F95382A53504A4C582A503A3735333836392A433A235A0D                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Note:                           | <p>0019: Data length is 25 bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A433A23 is command content,convert to ASCII character is: *SPJLX*P:753869*V:88#</p>                                                                                                                                                                                                                                                                                           |
| Dispatch Command Response 0x84  | 29298400550A9F95385E563A473130325376312E32354053657020203520323031372031383A34393A31342C3836323831303033373736323831312C38393836303242373039313737303231353433362C30302E31423B60C30D                                                                                                                                                                                                                                                                                                        |
| Note:                           | <p>84 Command Word 0x84    0021 Data Length 33    0A9F9538:Tracker ID is 10312156</p> <p>Command Response Content:</p> <p>5E563A473130325376312E32354053657020203520323031372031383A34393A31342C3836323831303033373736323831312C38393836303242373039313737303231353433362C30302E31423B60</p> <p>Convert to ASCII character is:</p> <p>^V:G102Sv1.25@Sep 5 2017 18:49:14,862810037762811,898602B7091770215436,00.1B;`</p> <p>Tracker firmware version is: G102Sv1.25@Sep 5 2017 18:49:14</p> |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispatch Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                      |

## 7.4.2 Query IMEI and ICCID

|                                |                                                                                                                                                                                                  |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:          | Query tracker IMEI and ICCID.The platform sends this command to the tracker through the Dispatching Command 0x3A.                                                                                |
| <b>Compatible Models:</b>      | <b>All models</b>                                                                                                                                                                                |
| Data Format(HEX):              | 2929<3A><Data length><Tracker ID><Command Content><Checksum>0D                                                                                                                                   |
| GPRS Command(HEX)Example:      | 29293A00190A9F95382A53504A4C582A503A3735333836392A433A235A0D                                                                                                                                     |
| Note:                          | <p>0019: Data length is 25bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A433A23 is command content,convert to ASCII character is: *SPJLX*P:753869*V:88#</p> |
| Dispatch Command Response 0x84 | 29298400550A9F95385E563A473130325376312E32354053657020203520323031372031383A34393A31342C3836323831303033373736323831312C38393836303242373039313737303231353433362C30302E31423B60C30D             |
| Note:                          | 84 Command Word 0x84    0021 Data Length 33    0A9F9538:Tracker ID is 10312156                                                                                                                   |

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | <p>Command Response Content:</p> <p><b>5E563A473130325376312E32354053657020203520323031372031383A34393A31342C3836323831303033373736323831312C38393836303242373039313737303231353433362C30302E31423B60</b></p> <p>Convert to ASCII character is:</p> <p>^V:G102Sv1.25@Sep 5 2017 18:49:14,862810037762811,898602B7091770215436,00.1B;`</p> <p>IMEI is: 862810037762811</p> <p>ICCID is: 898602B7091770215436</p> |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispath Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                          |

### 7.4.3 Set Initial Mileage

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:           | <p>Set tracker initial mileage.</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Compatible Models:              | All models                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Data Format(HEX):               | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| GPRS Command(HEX)Example:       | 29293A00250A9F95382A53504A4C582A503A3735333836392A4D3A312C3132302C393831323335236E0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Note:                           | <p>0025: Data length is 37bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A4D3A312C3132302C39383132333523 is command content,convert to ASCII character is: *SPJLX*P:753869*M:1,120,981235#</p> <p>120,981235 is parameter</p> <p>120 Means the mileage coefficient,default is 120,don't recommend changing,parameter range:[0-200]</p> <p>981235 Means the initial mileage is 981235KM,parameter range:[0-16777215]</p> <p><b>Example 1:</b>Set the tracker initial mileage as 5000KM</p> <p>Then command content is: *SPJLX*P:753869*M:1,120,5000#</p> |
| Dispatch Command Response 0x84  | 292984001C0A9F95383C54554750532A4D3A312C3132302C3938313233353EBC0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Note:                           | <p>84 Command Word 0x84 001C Data Length 28 0A9F9538: Tracker ID is 10312156</p> <p>Command Response Content:3C54554750532A4D3A312C3132302C3938313233353E</p> <p>Convert to ASCII character is: &lt;TUGPS*M:1,120,981235&gt;</p> <p>Means the above is the response of the setting parameter</p>                                                                                                                                                                                                                                                                                            |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispath Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## 7.4.4 Set Authorized Phone Number

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:           | Set authorized phone number to send and receive SMS command<br>The platform sends this command to the tracker through the Dispatching Command 0x3A.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Compatible Models:              | All models                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Data Format(HEX):               | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| GPRS Command(HEX)Example:       | 29293A00430A9F95382A53504A4C582A503A3735333836392A533A383631333431323334353637382C383631353031323334353637382C383631373831323334353637382C23060D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Note:                           | <p>0043: Data length is 67 bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A533A383631333431323334353637382C383631353031323334353637382C383631373831323334353637382C23 is command content,convert to ASCII character is: *SPJLX*P:753869*S:8613412345678,8615012345678,8617812345678,#</p> <p>8613412345678, 8615012345678,8617812345678, is parameter</p> <p>8613412345678 means the first authorized phone number,86 means country code, 13412345678 is phone number</p> <p>8615012345678 means the second authorized phone number</p> <p>8617812345678 means the third authorized phone number</p> <p><b>Example 1:</b>Query authorized phone number configuration<br/>command content is: *SPJLX*P:753869*S:#</p> <p><b>Example 2:</b> Clear all authorized phone number<br/>Command content is: *SPJLX*P:753869*S:,,,#</p> |
| Dispatch Command Response 0x84  | 29298400390A9F95383C54554750532A533A383631333431323334353637382C383631353031323334353637382C383631373831323334353637383EBB0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Note:                           | <p>84 Command Word 0x84    0039 Data Length 57    0A9F9538:Tracker ID is 10312156</p> <p>Command Response</p> <p>Content:3C54554750532A533A383631333431323334353637382C383631353031323334353637382C383631373831323334353637383E</p> <p>Convert to ASCII character is: &lt;TUGPS*S:8613412345678,8615012345678,8617812345678&gt;</p> <p>Means the above is the response of the setting parameter</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispath Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## 7.4.5 One Time Track on Demand 0x30

|                       |                                                                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description: | The platform sends one time track on demand command, tracker will reply a new position data to the platform once it received this command. |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|

|                                       |                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Compatible Models:</b>             | <b>All models</b>                                                                                                                                                                                                                                                                                               |
| Data Format(HEX):                     | 2929<30><Data Length><Tracker ID><Checksum>0D                                                                                                                                                                                                                                                                   |
| GPRS<br>Command(HEX)Example:          | 29 29 30 00 06 0A 9F 95 38 0E 0D                                                                                                                                                                                                                                                                                |
| Note:                                 | <p>0x30: Command Word is 0x30</p> <p>0006: Data length is 6 bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>this command doesn't have parameter</p>                                                                                                                                                         |
| One Time Track on Demand<br>Data 0x81 | 29298100280A9F9538170428160131022394301140372500000330FF0000007FFC0F00001E00000000034200D                                                                                                                                                                                                                       |
| Note:                                 | <p>81 Command Word 0x81    0028 Data Length40    0A9F9538: Tracker ID is 10312156</p> <p>Command Response</p> <p>Content:170428160131022394301140372500000330FF0000007FFC0F00001E000000000034</p> <p>Data content is equivalent to <a href="#">6.2.1Position Data 0x80</a> ,only command word is different.</p> |
| Universal Command<br>Response 0x85    | ---                                                                                                                                                                                                                                                                                                             |

### 7.4.6 Dispatch Command 0x3A

|                                    |                                                                                                                                                                            |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:              | Currently,it's mainly be used to send commands to the tracker.<br>If the command format is not satisfied,then no dispatch command response.                                |
| <b>Compatible Models:</b>          | <b>All models</b>                                                                                                                                                          |
| Data Format(HEX):                  | 2929<3A><Data Length><Tracker ID><Data Content><Checksum>0D                                                                                                                |
| GPRS<br>Command(HEX)Example:       | 29293A00120A9F953848656C6C6F2C776F726C64213D0D                                                                                                                             |
| Note:                              | <p>0012: Data length is 18 bytes</p> <p>0A9F9538:Trackere ID is 10312156</p> <p>48656C6C6F2C776F726C6421 is command content,convert to ASCII character is:Hello,world!</p> |
| Dispatch Command<br>Response 0x84  | If the command format is not satisfied,then no dispatch command response                                                                                                   |
| Note:                              | ---                                                                                                                                                                        |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispath Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                      |

### 7.4.7 Set Vehicle Name

|                       |                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------|
| Function Description: | Set the vehicle name, used to replace tracker ID that in tracker SMS alarm as the vehicle name. |
|-----------------------|-------------------------------------------------------------------------------------------------|

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | License plate number, up to 14 bytes. Currently supports ASCII code only, does not support Chinese.<br>The platform sends this command to the tracker through the Dispatching Command 0x3A.                                                                                                                                                                                                                                                                                                                            |
| <b>Compatible Models:</b>          | <b>G102</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Data Format(HEX):                  | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| GPRS<br>Command(HEX)Example:       | 29293A002B0A9F95382A53504A4C582A503A3735333836392A4E3A31333631303037363632312157574238383623010D                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Note:                              | <p>002B: Data length is 43 bytes</p> <p>0A9F9538: Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A4E3A31333631303037363632312157574238383623 is command content, convert to ASCII character is: *SPJLX*P:753869*N:13610076621!WWB886#</p> <p>10076621!WWB886 is parameter</p> <p>10076621 this is the tracker ID, please don't change the ID</p> <p>! separator</p> <p>WWB886 License plate number, no coded limitation, but 0x00 is automatically truncated. Up to 14 bytes, don't support Chinese.</p> |
| Dispatch Command<br>Response 0x84  | ---                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Note:                              | ---                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                                                |

## 7.4.8 Set SMS Alarm Time Zone

|                              |                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:        | <p>Set the time zone that in the SMS alarm. Since the default time zone is 0, so it needs to be adjusted by this command.</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p>                                                                                                                                                                                     |
| <b>Compatible Models:</b>    | <b>G500/G102</b>                                                                                                                                                                                                                                                                                                                                                                                              |
| Data Format(HEX):            | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                |
| GPRS<br>Command(HEX)Example: | 29293A001C0A9F95382A53504A4C582A503A3735333836392A543A302C38236C0D                                                                                                                                                                                                                                                                                                                                            |
| Note:                        | <p>001C: Data length is 28 bytes</p> <p>0A9F9538: Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A543A302C3823 is command content, convert to ASCII character is: *SPJLX*P:753869*T:0,8#</p> <p>0,8 is parameter</p> <p>0 means GPRS data time zone, default is 0, don't recommend changing</p> <p>8 means SMS alarm data zone, 8 means UTC+08:00 If it is UTC-10:00, then it should be -10</p> |

|                                    |                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------|
|                                    | Currently don't support the non-integer time zone, e.g. UTC +09:30                                      |
| Dispatch Command<br>Response 0x84  | ---                                                                                                     |
| Note:                              | ---                                                                                                     |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a> |

### 7.4.9 Set Listen-in (Voice Monitoring)

|                                    |                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:              | Set the listen-in phone number, the platform sends this command to request the tracker to call this listen-in phone number actively. The entire voice call process is one-way call, the tracker is monitored, can not hear the voice from the listener. The platform sends this command to the tracker through the Dispatching Command 0x3A.                 |
| Compatible Models:                 | All models                                                                                                                                                                                                                                                                                                                                                   |
| Data Format(HEX):                  | 2929<3A>< Data Length>< TrackerID>< CommandContent><Checksum>0D                                                                                                                                                                                                                                                                                              |
| GPRS<br>Command(HEX)Example:       | 29293A00260A9F95382A53504A4C582A503A3735333836392A493A3836313538303237313234333523590D                                                                                                                                                                                                                                                                       |
| Note:                              | <p>0026: Data length is 38 bytes</p> <p>0A9F9538: Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A493A3836313538303237313234333523 is command content, convert to ASCII character is: *SPJLX*P:753869*I:8615802712435#</p> <p>8615802712435 is parameter</p> <p>15802712435 means the listen-in phone number, need to add the country code</p> |
| Dispatch Command<br>Response 0x84  | 292984001D0A9F95383C54554750532A493A383631353830323731323433353E890D                                                                                                                                                                                                                                                                                         |
| Note:                              | <p>84 Command Word 0x84    001D Data Length 29    0A9F9538: Tracker ID is 10312156</p> <p>Command Response Content: 3C54554750532A493A383631353830323731323433353E</p> <p>Convert to ASCII character is: &lt;TUGPS*I:8615802712435&gt;</p> <p>Means the above is the response of the setting parameter</p>                                                   |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                      |

### 7.4.10 Remote Restart the Tracker

|                       |                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------|
| Function Description: | Remote restart the tracker, it will restart immediately once tracker received the command. |
|-----------------------|--------------------------------------------------------------------------------------------|

|                                    |                                                                                                                                                                                                                                                                                        |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | The platform sends this command to the tracker through the Dispatching Command 0x3A.                                                                                                                                                                                                   |
| <b>Compatible Models:</b>          | <b>All models</b>                                                                                                                                                                                                                                                                      |
| Data Format(HEX):                  | 2929<3A>< Data Length >< Tracker ID>< Command Content ><Checksum>0D                                                                                                                                                                                                                    |
| GPRS<br>Command(HEX)Example:       | 29293A00190A9F95382A53504A4C582A503A3735333836392A423A235B0D                                                                                                                                                                                                                           |
| Note:                              | <p>0019: Data length is 25 bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A423A23 is command content,convert to ASCII character is: *SPJLX*P:753869*B:#</p> <p>No parameter</p>                                                                    |
| Dispatch Command<br>Response 0x84  | 292984002A0A9F95383C54554750532A423A3836333833353032343936303031302C526573746172742E2E3ED0D                                                                                                                                                                                            |
| Note:                              | <p>84 Command Word 0x84    002A Data Length 42    0A9F9538: Tracker ID is 10312156</p> <p>Command Response</p> <p>Content:3C54554750532A423A3836333833353032343936303031302C526573746172742E2E3E</p> <p>Convert to ASCII character is:: &lt;TUGPS*B:863835024960010,Restart...&gt;</p> |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                 |

### 7.4.11 Restore Factory Settings

|                                   |                                                                                                                                                                                                                                                         |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:             | <p>Except IP, PORT, APN, ID, peripheral configuration, the other parameters restore to the default value, meanwhile clear all the GPRS blind area data.</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p> |
| <b>Compatible Models:</b>         | <b>All models</b>                                                                                                                                                                                                                                       |
| Data Format(HEX):                 | 2929<3A>< Data Length ><Tracker ID>< Command Content ><Checksum>0D                                                                                                                                                                                      |
| GPRS<br>Command(HEX)Example:      | 29293A001B0A9F95382A53504A4C582A503A3735333836392A423A383823590D                                                                                                                                                                                        |
| Note:                             | <p>001B: Data length is 27 bytes</p> <p>0A9F9538: Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A423A383823 is command content,convert to ASCII character is: *SPJLX*P:753869*B:88#</p>                                                  |
| Dispatch Command<br>Response 0x84 | 29298400280A9F95383C54554750532A423A3836333833353032343936303031302C52657365742E2E3ED0D                                                                                                                                                                 |
| Note:                             | <p>84 Command Word 0x84    0028 Data Length 40    0A9F9538:Tracker ID 10312156</p> <p>Command Response</p>                                                                                                                                              |

|                                    |                                                                                                                                                 |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | Content:3C54554750532A423A3836333833353032343936303031302C52657365742E2E3E<br>Convert to ASCII character is: <TUGPS*B:863835024960010,Reset...> |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispath Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                          |

## 7.4.12 Data Transparent transmission

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:              | User can send the user-defined content to the GPS tracker's serial port, thereby configure the connected peripheral parameters through the serial port remotely. The platform sends this command to the tracker through the Dispatching Command 0x3A.                                                                                                                                                                                                                                                     |
| Compatible Models:                 | All models                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Data Format(HEX):                  | 2929<3A>< Data Length ><Tracker ID>< Command Content ><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| GPRS<br>Command(HEX)Example:       | 29293A002B0A9F9538202A53504A4C58202A503A373533383639202A43543A3031343135343233303030443041231D0D                                                                                                                                                                                                                                                                                                                                                                                                          |
| Note:                              | <p>002B: Data length is 33 bytes</p> <p>0A9F9538: Tracker ID is 10312156</p> <p>202A53504A4C58202A503A373533383639202A43543A303134313534323330303044304123 is command content, convert to ASCII character is: *SPJLX *P:753869 *CT:01415423000D0A#</p> <p>CT means Transparent transmission command</p> <p>01 means serial port 1-COM1 ;02 means serial port2-COM2</p> <p>415423000D0A means user-defined content, convert to ASCII character is:</p> <p>AT#00</p> <p>Newline (Non-visible character)</p> |
| Dispatch Command<br>Response 0x84  | 292984000B0A9F95380133330D3E850D                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Note:                              | <p>01 means serial port 1-COM1 ;02 means serial port2-COM2</p> <p>33330D3E means response content from connected peripheral.</p>                                                                                                                                                                                                                                                                                                                                                                          |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispath Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                                    |

## 7.4.13 Set/Query Power Saving mode

|                       |                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description: | With this command, the power saving mode can be configured to save power consumption of the GPS device and prolong the battery usage time when the vehicle is not started for a long time. Prevent the battery power consumption in a short period of time, resulting in damage to the car battery. This feature is not turned on by default. |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | <p><b>Note:</b></p> <p><b>This feature is only supported in firmware versions after 20190102.</b></p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Compatible Models:</b>       | <b>G500/G102(3G)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Data Format(HEX):               | 2929<3A>< Data Length ><Tracker ID>< Command Content ><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| GPRS Command(HEX)Example:       | 29293A001A0A9F95382A53504A4C582A503A3735333836392A393A3023130D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Note:                           | <p>001A: Data length is 26 bytes</p> <p>0A9F9538: Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A393A3023 is command content,convert to ASCII character is: *SPJLX*P:753869*9:0#</p> <p>9 means power saving mode command</p> <p>0 means query</p> <p><b>Example1:</b> Disable Power saving mode</p> <p>*SPJLX*P:753869*9:1,0#</p> <p><b>Example2:</b> Standard power saving mode</p> <p>After turn off ACC 5minutes ,this function will take effect</p> <p>T1: Wake-up time interval after sleep    T2: Wake up working time in seconds</p> <p>*SPJLX*P:753869*9:1,1,T1,T2#</p> <p><b>e.g.:</b> Setting the GPS device After the ACC is turned off, it wakes up periodically at 1800 seconds, and continues to work for 180 seconds after waking up.</p> <p><b>Note:</b> Within this 180 seconds, the data is sent at the upload interval of ACC OFF. If the default ACC OFF upload interval is greater than 180 seconds, the device uploads only one position data and then goes to sleep.</p> <p>*SPJLX*P:753869*9:1,1,1800,180#</p> <p><b>Example3:</b> The ACC turns off the sleep mode, that is, after the ACC is turned off, the GPS device sleeps after 5 minutes, and the GPS device wakes up and works after the ACC is turned on;</p> <p>*SPJLX*P:753869*9:1,2#</p> <p><b>Example4:</b> Low voltage sleep mode. Only low-voltage sleep, ACC On or voltage recovery wakes up the device and works outside the battery voltage is 16~22V or 5~11V DC is low power, enters sleep, and the standby power does not go to sleep.</p> <p>*SPJLX*P:753869*9:1,3#</p> |
| Dispatch Command Response 0x84  | 29298400150A9F95383C2A393A20302C3330302C3138303E980D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Note:                           | 3C2A393A20302C3330302C3138303E convert to ASCII character is:<*9: 0,300,180>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispath Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### 7.4.14 Set/Query Heartbeat packet upload interval

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:          | <p>With this command, you can configure the upload interval of the heartbeat packet or disable the heartbeat packet upload. Currently, the default heartbeat packet upload interval is 45 seconds. The main purpose of the heartbeat package is to maintain the GPRS network communication connection. If the GPS device is configured with a half-hour position data upload interval, the mobile operator will actively interrupt the GPRS connection, and the communication between the platform and the GPS device will be disconnected. At this point, there is a problem with the platform and GPS device command interaction. The heartbeat packet maintains this communication connection with less data traffic, ensuring real-time communication between the platform and the GPS device, and at the same time, it also carries a certain amount of data traffic.</p> <p><b>Note:</b><br/> <b>This feature is only supported in firmware versions after 20181225.</b></p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p> |
| Compatible Models:             | <b>G500/G102(3G)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Data Format(HEX):              | 2929<3A>< Data Length ><Tracker ID>< Command Content ><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| GPRS Command(HEX)Example:      | 29293A001C0A9F95382A53504A4C582A503A3735333836392A31303A3023200D0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Note:                          | <p>001C: data length is 28bytes<br/> 0A9F9538: Tracker ID is 10312156<br/> 2A53504A4C582A503A3735333836392A31303A302320 is command content,convert to ASCII character is: *SPJLX*P:753869*10:0#<br/> 10 means heartbeat packet setting command<br/> 0 means query</p> <p><b>Example1:</b> Query Heartbeat packet upload time interval<br/> *SPJLX*P:753869*10:0#</p> <p><b>Example2:</b> Set heartbeat packet upload time interval. Unit as sec. if the upload time interval is 0 ,means disable heartbeat packet uploading<br/> *SPJLX*P:753869*10:1,x#<br/> e.g. Set the heartbeat packet upload time interval to 120 sec<br/> *SPJLX*P:753869*10:1,120#<br/> Disable heartbeat packet uploading<br/> *SPJLX*P:753869*10:1,0#</p>                                                                                                                                                                                                                                                                                                                                            |
| Dispatch Command Response 0x84 | 292984000F0A9F95383C2A31303A2034353E810D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Note:                          | 3C2A31303A2034353E convert to ASCII character is: <*10: 45>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Universal Command              | Tracker response to 0x3A Dispath Command,refer to <a href="#">6.4 Universal Command</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|               |                               |
|---------------|-------------------------------|
| Response 0x85 | <a href="#">Response 0x85</a> |
|---------------|-------------------------------|

## 7.5 Basic Alarm Command

### 7.5.1 Set Over-speed Alarm 0xDB

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:              | This command is used to configure the over speed and triggering time threshold.                                                                                                                                                                                                                                                                                                                                                                                                     |
| Compatible Models:                 | All models                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Data Format(HEX):                  | 2929<DB><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                      |
| GPRS<br>Command(HEX)Example:       | 29 29 DB 00 09 0A 9F 95 38 <i>Byte1 Byte2 Byte3 Xor</i> 0D                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Note:                              | <p>0009: Data length is 9 bytes</p> <p>0A9F9538: Tracker ID is 10312156</p> <p><b>Byte1:</b> Over speed threshold, unit as km/h.<br/>Example:<br/><i>Byte1=0x64 (0x64=100)</i>, means the speed limit is 100km/h. Specially,<br/><i>Byte1=0x00</i> means cancel over speed alarm checking.</p> <p><b>Byte2 Byte3:</b> Over speed triggering time threshold. unit as sec.<br/>Example <i>Byte2Byte3=0x000A (0x000A =10)</i>, means that the over speed limit trig-time is 10sec.</p> |
| Dispatch Command<br>Response 0x84  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Note:                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Universal Command<br>Response 0x85 | Tracker response to 0xDB Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                             |

### 7.5.2 Set Geo-fence(Reserve)

|                              |  |
|------------------------------|--|
| Function Description:        |  |
| Compatible Models:           |  |
| Data Format(HEX):            |  |
| GPRS<br>Command(HEX)Example: |  |
| Note:                        |  |

|                                    |                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------|
| Dispatch Command<br>Response 0x84  |                                                                                                         |
| Note:                              |                                                                                                         |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a> |

### 7.5.3 Set Remove Alarm(Reserve)

|                                    |                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------|
| Function Description:              |                                                                                                         |
| <b>Compatible Models:</b>          |                                                                                                         |
| Data Format(HEX):                  |                                                                                                         |
| GPRS<br>Command(HEX)Example:       |                                                                                                         |
| Note:                              |                                                                                                         |
| Dispatch Command<br>Response 0x84  |                                                                                                         |
| Note:                              |                                                                                                         |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a> |

### 7.5.4 Set Illegal Ignition Alarm(Reserve)

|                                         |                                                                                                         |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------|
| Function Description:                   |                                                                                                         |
| <b>Compatible Models:</b>               |                                                                                                         |
| Data Format(HEX):                       |                                                                                                         |
| GPRS<br>Command(HEX)Example:            |                                                                                                         |
| Note:                                   |                                                                                                         |
| Dispatch Command<br>Response 0x84       |                                                                                                         |
| Note:                                   |                                                                                                         |
| 0x85 Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a> |

### 7.5.5 Set Fatigue Alarm(Reserve)

|                                    |                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------|
| Function Description:              |                                                                                                         |
| <b>Compatible Models:</b>          |                                                                                                         |
| Data Format(HEX):                  |                                                                                                         |
| GPRS<br>Command(HEX)Example:       |                                                                                                         |
| Note:                              |                                                                                                         |
| Dispatch Command<br>Response 0x84  |                                                                                                         |
| Note:                              |                                                                                                         |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a> |

### 7.5.6 Set Idle Alarm(Reserve)

|                                    |                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------|
| Function Description:              |                                                                                                         |
| <b>Compatible Models:</b>          |                                                                                                         |
| Data Format(HEX):                  |                                                                                                         |
| GPRS<br>Command(HEX)Example:       |                                                                                                         |
| Note:                              |                                                                                                         |
| Dispatch Command<br>Response 0x84  |                                                                                                         |
| Note:                              |                                                                                                         |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a> |

## 7.6 I/O Control Command

### 7.6.1 Stop Engine (Remote Immobilize)

#### Method 1

|              |                                                                                                                                                                                                                                                                                               |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Command:     | 2929<0x39><Length><ID><Checksum><\r>                                                                                                                                                                                                                                                          |
| Description: | This command sends from server to device, when receive this command, device will give output control signal, normally we use it control vehicle oil pump. The reply for this command, please see <a href="#">Set Reply</a> . Command for recover please sees <a href="#">Recover Engine</a> . |
| Example:     | 29 29 39 00 06 0A 9F 95 38 07 0D                                                                                                                                                                                                                                                              |
| Note:        | <b>This command will have physical operations to user's Car, please make two confirmations for this function in software, to make sure operations to car is safe.</b>                                                                                                                         |

#### Method 2

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:          | <p>When the tracker receives the command, the immobilize signal wire will output or disconnect according to the preset rules, so as to control the automobile engine or oil pump circuit at intervals. For the sake of safety, it is generally recommended that the user control the pump circuit. When the platform sends command, it is necessary to remind the user to confirm the current vehicle driving status.</p> <p><b>Note:</b> Need to connect the relay to control the engine/fuel pump circuit.</p> <p>Working Logic:</p> <ol style="list-style-type: none"> <li>1. Tracker received this command, Immobilize the car instantly <b>when GPS signal true and speed less than or equal to 30 km/h.</b></li> <li>2. Tracker received this command, Immobilize the car for 2 sec and recover; immobilize the car for 2 sec after 20 sec and recover; immobilize the car for 2 sec after 40 sec and recover; immobilize the car thoroughly after 60 sec <b>when GPS signal is false or speed more than 30km/h.</b></li> </ol> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p> |
| Compatible Models:             | All models                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Data Format (HEX):             | 2929<3A>< Data Length>< Tracker ID>< Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| GPRS Command (HEX)Example:     | 29293A001C0A9F95382A53504A4C582A503A3735333836392A443A4F323123140D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Note:                          | <p>001C: Data length is 28 bytes</p> <p>0A9F9538: Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A443A4F323123 is command content, convert to ASCII character is:*SPJLX*P:753869*D:021#</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Dispatch Command Response 0x84 | 29298400110A9F95383C54554750532A443A313E8F0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Note:                          | 84 Command Word 0x84    0011 Data Length 17    0A9F9538:Tracker ID is 10312156                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|                                 |                                                                                                        |
|---------------------------------|--------------------------------------------------------------------------------------------------------|
|                                 | Command Response Content:3C54554750532A443A313E<br>Convert to ASCII character is: <TUGPS*D:1>          |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispath Command, refer to <a href="#">6.4 Universal Command Response 0x85</a> |

## 7.6.2 Recover Engine (Disable Immobilize)

### Method 1

|              |                                                                                                               |
|--------------|---------------------------------------------------------------------------------------------------------------|
| Command:     | 2929<0x38><Length><ID><Checksum><\r>                                                                          |
| Description: | Tracker will disable immobilize once it got the command.                                                      |
| Example:     | 29 29 38 00 06 0A 9F 95 38 06 0D                                                                              |
| Note:        | This command will cancel the stop engine status in <a href="#">position data</a> , and write 0x38 in V8 part. |

### Method 2

|                                 |                                                                                                                                                                                           |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:           | Tracker will disable immobilize once it got the command.<br>The platform sends this command to the tracker through the Dispatching Command 0x3A.                                          |
| Compatible Models:              | All models                                                                                                                                                                                |
| Data Format(HEX):               | 2929<3A>< Data Length>< Tracker ID>< Command Content><Checksum>0D                                                                                                                         |
| GPRS Command(HEX)Example:       | 29293A001C0A9F95382A53504A4C582A503A3735333836392A443A4F323023150D                                                                                                                        |
| Note:                           | 001C: Data length is 28 bytes<br>0A9F9538:Tracker ID is 10312156<br>2A53504A4C582A503A3735333836392A443A4F323023 is command content, convert to ASCII character is:*SPJLX*P:753869*D:020# |
| Dispatch Command Response 0x84  | 29298400110A9F95383C54554750532A443A303E8E0D                                                                                                                                              |
| Note:                           | 84 Command Word 0x84    0011 Data Length 17    0A9F9538: Tracker ID is 10312156<br>Command Response Content:3C54554750532A443A303E<br>Convert to ASCII character is: <TUGPS*D:0>          |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispath Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                    |

## 7.6.3 Set AD input sampling mode G500

|                       |                                                                                                                                                                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description: | Through this command, the AD sampling mode is configured to optimize the filtering abnormal fluctuation value, which can be used to optimize the voltage signal input of fuel sensor or load sensor. The algorithm takes the average of all the |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | data after taking the sampled AD values to the highest and minimum values.<br>Default, This feature is disabled.<br>The platform sends this command to the tracker through the Dispatching Command 0x3A.                                                                                                                                                                                                                                                                                           |
| <b>Compatible Models:</b>          | <b>G500</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Data Format(HEX):                  | 2929<3A>< Data Length>< Tracker ID>< Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| GPRS<br>Command(HEX)Example:       | 29293A001B0A9F95382A53504A4C582A503A3735333836392A56463A30233B0D                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Note:                              | <p>001B: Data length is 27 bytes.</p> <p>0A9F9538: Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A56463A3023 is command content,convert to ASCII character is: *SPJLX*P:753869*VF:0#</p> <p><b>Example1:</b> Query AD input sampling mode setting<br/>*SPJLX*P:753869*VF:0#</p> <p><b>Example2</b> Set AD input sampling mode, sampling time, unit milliseconds, sampling times<br/>Such as: set at 100 millisecond intervals, sampling 50 times<br/>*SPJLX*P:753869*VF:1,1,50#</p> |
| Dispatch Command<br>Response 0x84  | 29298400110A9F95383C2A56463A20312C35303E970D                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Note:                              | <p>84 Command word 0x84    0011 Data length 17</p> <p>0A9F9538: Tracker ID is 10312156</p> <p>Command Response Content: 3C2A56463A20312C35303E</p> <p>Convert to ASCII character is: &lt;*VF: 1,50&gt;</p>                                                                                                                                                                                                                                                                                         |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispath Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                              |

## 7.7 Peripheral Command

### 7.7.1 Set the Serial Port Driver G200

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:     | <p>Set the G200 Tracker COM 1 peripheral</p> <p><b>Note:</b> If you need to connect a number of fuel level sensors (maximum 3) to COM 1, it needs to use the RS485 fuel level sensor (set different fuel sensor ID 1, 2, 3), set COM1 as RS485 communication,and connect 'RS232 to RS485 tieline', in order to make the G200 tracker communicate with multiple fuel sensors . Likewise,the temperature sensor (maximum 3), camera (maximum 4)</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p> |
| <b>Compatible Models:</b> | <b>G200</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| Data Format(HEX):                  | 2929<3A><Data Length><Tracker ID>< Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |                 |   |                              |    |                              |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|---|------------------------------|----|------------------------------|
| GPRS<br>Command(HEX)Example:       | 29293A00220A9F95382A53504A4C582A503A3735333836392A4F3A322C33322C312C302C235F0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |                 |   |                              |    |                              |
| Note:                              | <p>0022: Data length is 34 bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A4F3A322C33322C312C302C23 is command content,convert to ASCII character is:*SPJLX*P:753869*O:2,32,1,0,#</p> <p>2,32,1 is parameter</p> <p>2 means set the serial port fuel level data</p> <p>32 means the current connected fuel sensor— mobicom MOB/A protocol fuel stick</p> <p>Peripheral ID please refer to below form</p> <table border="1"> <thead> <tr> <th>Peripheral ID</th><th>Peripheral Name</th></tr> </thead> <tbody> <tr> <td>2</td><td>Fuel sensor – MOB/B protocol</td></tr> <tr> <td>32</td><td>Fuel sensor – MOB/A protocol</td></tr> </tbody> </table> <p>1 means currently one fuel level sensor connected.it's RS232 signal.</p> <p>If this value&gt;1, COM1 be used as RS485 port.</p> <p><b>Example 1:</b> Set COM1 connect 4 RS485 fuel level sensor</p> <p>*SPJLX*P:753869*O:2,32,4,0,#</p> <p><b>Configure Camea:</b></p> <p><b>Example 2:</b> Set COM1 connect 1 RS232 camera</p> <p>*SPJLX*P:753869*H:1,1,0,0,#</p> <p><b>Example 3:</b> Set COM1 connect 4 RS485 camera</p> <p>*SPJLX*P:753869*H:1,4,0,0,#</p> <p><b>Example 4:</b> Clear COM1 peripheral setting</p> <p>*SPJLX*P:753869*H:0,0,0,0,#</p> | Peripheral ID | Peripheral Name | 2 | Fuel sensor – MOB/B protocol | 32 | Fuel sensor – MOB/A protocol |
| Peripheral ID                      | Peripheral Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |                 |   |                              |    |                              |
| 2                                  | Fuel sensor – MOB/B protocol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |                 |   |                              |    |                              |
| 32                                 | Fuel sensor – MOB/A protocol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |                 |   |                              |    |                              |
| Dispatch Command<br>Response 0x84  | 292984001A0A9F95383C54554750532A573A20446576696365204F4B3E9A0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |                 |   |                              |    |                              |
| Note:                              | <p>84 Command Word 0x84    001A Data Length 26    0A9F9538: Tracker ID is 10312156</p> <p>Command Response Content:3C54554750532A573A20446576696365204F4B3E</p> <p>Convert to ASCII character is: &lt;TUGPS*W: Device OK&gt;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |                 |   |                              |    |                              |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |                 |   |                              |    |                              |

## 7.7.2 Set the Serial Port Driver G500

|                       |                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description: | <p>Set the G500 Tracker COM 1 peripheral and COM 2 peripheral.</p> <p>Note: If you need to connect a number of fuel level sensors (maximum 3), it needs to use the RS485 fuel level sensor (set different fuel sensor ID 1, 2, 3), set COM 1 or COM 2 as RS485 communication,and connect 'RS232 to RS485 tieline', in order to make the G500 tracker</p> |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                  | <p>communicate with multiple fuel sensors . Likewise,the temperature sensor (maximum 3), camera (maximum 4)</p> <p><b>Tips:</b> if connected two RS232 cameras or two RS232 Fuel sensor, just connected them to COM1 and COM2, and load the driver to COM1 and COM2 meanwhile,no need set the camera ID or fuel sensor ID. This is compatible for GP500 device.</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|---|---------------|---|------------------------------|---|------------------------------|---|---------------|---|----------------|----|------|----|-----------|----|--------------------|-----|------------------|-----|------------------------|-----|-------------|------|----------------------|------|------------|------|-----------------------------|
| <b>Compatible Models:</b>        | <b>G500</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| <b>Data Format(HEX):</b>         | 2929<3A>< Data Length>< Tracker>< Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| <b>GPRS Command(HEX)Example:</b> | 29293A00200A9F95382A53504A4C582A503A3735333836392A573A302C322C302C34235D0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| <b>Note:</b>                     | <p>0020: Data length is 32 bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A573A302C322C302C3423 is command content,convert to ASCII character is:*SPJLX*P:753869*W:0,2,0,4#</p> <p>0,2,0,4 is parameter</p> <p>0 means COM1 communication mode is RS232; If it is 1 means COM1 communication mode is RS485</p> <p>2 means loading the fuel level sensor driver to COM1</p> <p>0 means COM2 communication mode is RS232; If it is 1 means COM2 communication mode is RS485</p> <p>4 means loading the camera driver to COM2</p> <p>Peripheral ID please refer to below form</p> <table border="1"> <thead> <tr> <th>Peripheral ID</th><th>Peripheral Name</th></tr> </thead> <tbody> <tr><td>0</td><td>No Peripheral</td></tr> <tr><td>1</td><td>Fuel sensor – MOB/B protocol</td></tr> <tr><td>2</td><td>Fuel sensor – MOB/A protocol</td></tr> <tr><td>4</td><td>Camera-AMWELL</td></tr> <tr><td>8</td><td>Camera-mobicom</td></tr> <tr><td>16</td><td>RFID</td></tr> <tr><td>32</td><td>TrailerID</td></tr> <tr><td>64</td><td>Temperature sensor</td></tr> <tr><td>128</td><td>Bar-code Scanner</td></tr> <tr><td>256</td><td>School bus active RFID</td></tr> <tr><td>512</td><td>Dumper RFID</td></tr> <tr><td>2048</td><td>ATBS-CANBUS OR OBDII</td></tr> <tr><td>4096</td><td>Flow Meter</td></tr> <tr><td>8192</td><td>Ultrasonic oil level sensor</td></tr> </tbody> </table> <p><b>Example 1:</b> Set COM1 connect RS485 fuel level sensor<br/>*SPJLX*P:753869*W:1,2,0,0#</p> <p><b>Example 2:</b> Set COM1 connect RS485 fuel level sensor,COM2 connect 1 RS232 camera<br/>*SPJLX*P:753869*W:1,2,0,4#</p> | Peripheral ID | Peripheral Name | 0 | No Peripheral | 1 | Fuel sensor – MOB/B protocol | 2 | Fuel sensor – MOB/A protocol | 4 | Camera-AMWELL | 8 | Camera-mobicom | 16 | RFID | 32 | TrailerID | 64 | Temperature sensor | 128 | Bar-code Scanner | 256 | School bus active RFID | 512 | Dumper RFID | 2048 | ATBS-CANBUS OR OBDII | 4096 | Flow Meter | 8192 | Ultrasonic oil level sensor |
| Peripheral ID                    | Peripheral Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 0                                | No Peripheral                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 1                                | Fuel sensor – MOB/B protocol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 2                                | Fuel sensor – MOB/A protocol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 4                                | Camera-AMWELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 8                                | Camera-mobicom                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 16                               | RFID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 32                               | TrailerID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 64                               | Temperature sensor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 128                              | Bar-code Scanner                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 256                              | School bus active RFID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 512                              | Dumper RFID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 2048                             | ATBS-CANBUS OR OBDII                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 4096                             | Flow Meter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |
| 8192                             | Ultrasonic oil level sensor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |                 |   |               |   |                              |   |                              |   |               |   |                |    |      |    |           |    |                    |     |                  |     |                        |     |             |      |                      |      |            |      |                             |

|                                    |                                                                                                                                                                                                          |
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|                                    | <b>Example 3:</b> Set COM1 connect RS485 temperature sensor<br>*SPJLX*P:753869*W:1,64,0,0#<br><b>Example 4:</b> Query COM1 and COM2 peripheral setting<br>*SPJLX*P:753869*G:#                            |
| Dispatch Command<br>Response 0x84  | 292984001A0A9F95383C54554750532A573A20446576696365204F4B3E9A0D                                                                                                                                           |
| Note:                              | 84 Command Word 0x84    001A Data Length 26    0A9F9538: Tracker ID 10312156<br>Command Response Content:3C54554750532A573A20446576696365204F4B3E<br>Convert to ASCII character is: <TUGPS*W: Device OK> |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                  |

### 7.7.3 Set Temperature Alarm(Reserve)

|                                    |                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------|
| Function Description:              |                                                                                                         |
| <b>Compatible Models:</b>          |                                                                                                         |
| Data Format(HEX):                  |                                                                                                         |
| GPRS<br>Command(HEX)Example:       |                                                                                                         |
| Note:                              |                                                                                                         |
| Dispatch Command<br>Response 0x84  |                                                                                                         |
| Note:                              |                                                                                                         |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a> |

### 7.7.4 Set Fuel Level Alarm(Reserve)

|                              |  |
|------------------------------|--|
| Function Description:        |  |
| <b>Compatible Models:</b>    |  |
| Data Format(HEX):            |  |
| GPRS<br>Command(HEX)Example: |  |
| Note:                        |  |

|                                    |                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------|
| Dispatch Command<br>Response 0x84  |                                                                                                         |
| Note:                              |                                                                                                         |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a> |

## 7.7.5 Set Fuel Sensor Parameter

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:              | <p>Set Fuel Sensor ID.</p> <p>Note: Set RS485 Fuel Sensor ID. Premise: need to set the COM1 or COM2 as RS485 communication and load the fuel level sensor driver (Refer to <a href="#">Set the Serial Port Driver G500</a>), then single fuel sensor connect COM1 or COM2, so you can configure the fuel sensor ID successfully.</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p>       |
| Compatible Models:                 | <b>G500</b>                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Data Format(HEX):                  | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                         |
| GPRS<br>Command(HEX)Example:       | 29293A001C0A9F95382A53504A4C582A503A3735333836392A4A3A352C31237E0D                                                                                                                                                                                                                                                                                                                                                                     |
| Note:                              | <p>001C: Data length is 28 bytes</p> <p>0A9F9538: Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A4A3A352C3123 is command content, convert to ASCII character is: *SPJLX*P:753869*J:5,1#</p> <p>1 is parameter</p> <p>1 means fuel sensor ID is 1. If it is 2, means fuel sensor ID is 2, 3 means fuel sensor ID is 3</p> <p><b>Example 1:</b> Set the RS485 fuel level sensor ID is 2</p> <p>*SPJLX*P:753869*J:5,2#</p> |
| Dispatch Command<br>Response 0x84  | 29298400140A9F95383C434831204F696C203D204F6B3EE30D                                                                                                                                                                                                                                                                                                                                                                                     |
| Note:                              | <p>84 Command Word 0x84    0014 Data Length 20    0A9F9538: Tracker ID is 10312156</p> <p>Command Response Content: 3C434831204F696C203D204F6B3E</p> <p>Convert to ASCII character is: &lt;CH1 Oil = Ok&gt;</p>                                                                                                                                                                                                                        |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                |

## 7.7.6 Set RFID Working Mode-G500

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description: | <p>Set RFID working mode.</p> <p><b>Note:</b></p> <p>Premise:need to set the COM1 or COM2 load the RFID driver(Refer to <a href="#">Set the Serial Port Driver G500</a>).Currently,there are 4 RFID working modes.</p> <p>Swiping card under mode 1 and mode 2 will not control fuel and electricity,and no white list restriction.Sign out and sign in,tracker will upload the RFID card information automatically.</p> <p><b>Mode 1:</b></p> <p>Sign in:ACC on, anytime when swiping RFID card,it is sign in;Ignore the same RFID card or other cards during swiping card;</p> <p>Sign out:ACC off,sign out automatically.</p> <p><b>Mode 2:</b></p> <p>Sign in:ACC on, anytime when swiping RFID card,it is sign in;When swiping another RFID card,then the last RFID card sign out automatically, and the current RFID card is sign in.</p> <p>Sign out:Swiping another different RFID card or ACC off.</p> <p>Swiping card under mode 3 and mode 4 will control fuel and electricity,and need to set the white list(maximum 10).Sign out and sign in,the tracker will upload the RFID card data automatically.</p> <p><b>Mode 3:</b></p> <p>Premise: If not swiping card, the vehicle ignition circuit is disconnected, ie,the vehicle can not ignite (controlled by normal open relay) and the white list RFID card is configured.</p> <p>Sign in: Swiping RFID card (white list), then restore the ignition circuit, the vehicle is allowed ignition, ignition success,that is, sign in; swiping non-white list card, can not normally sign in, the vehicle can not ignite.</p> <p>Sign out:ACC off,sign out automatically after 1 minute, And no longer control the relay work. If you swipe other RFID cards within 1 minute, driver will immediately sign out and generate a new one; if you swipe the same card within 1 minute, it will be ignored.</p> <p><b>Note:</b></p> <p>After the ignition is successful, the current default is to control the relay operation; considering the ignition is completed, the engine has started, no need for the ignition circuit, and in order to extend the relay usage time, the relay will not be controlled after ACC on for 1 minute.</p> <p><b>Mode 4:</b></p> <p>Premise: Connect the normal close relay properly (normally control the pump circuit),and the white list RFID card is configured.</p> <p>Sign in: Swipe the RFID card (white list), ignite or after igniting, swipe</p> |
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|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | <p>the RFID card (white list), that is, sign in; swipe the non-white list card, then after igniting, the relay will disconnect the pump circuit, the vehicle can not start.</p> <p>Sign out:ACC off, sign out automatically after 1 minute. If you swipe other RFID cards within 1 minute, driver will immediately sign out and generate a new one; if you swipe the same card within 1 minute, it will be ignored.</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Compatible Models:</b>          | <b>G500</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Data Format(HEX):                  | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| GPRS<br>Command(HEX)Example:       | 29293A001A0A9F95382A53504A4C582A503A3735333836392A513A31237A0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Note:                              | <p>001A: Data length is 26 bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A513A3123 is command content,convert to ASCII character is:*SPJLX*P:753869*Q:1#</p> <p>1 is parameter</p> <p>1 means setting RFID working mode 1; If it is 2 means RFID working mode 2</p> <p><b>Example 1:</b> RFID working mode 3,set 10 white list RFID cards as below<br/>0005122241,0005111125,0005221126,0004221129, 0004221001, 0004221002, 0004221003, 0004221004, 0004221005, 0004221005, 0004221006<br/>*SPJLX*P:753869*Q:3, 0005122241,0005111125,0005221126,0004221129, 0004221001, 0004221002, 0004221003, 0004221004, 0004221005, 0004221005, 0004221006,#</p> <p><b>Example 2:</b> RFID working mode 4,set 4 white list RFID cards as below<br/>0005122241,0005111125,0005221126,0004221129<br/>*SPJLX*P:753869*Q:4, 0005122241,0005111125,0005221126,0004221129,,,,,,#</p> <p><b>Example 3:</b>Query mode and white list<br/>*SPJLX*P:753869*Q:0#</p> <p><b>Example 4:</b>Clear all white list setting under mode 3<br/>*SPJLX*P:753869*Q:3#</p> <p><b>Example 5:</b>Clear all white list setting under mode 4<br/>*SPJLX*P:753869*Q:4#</p> |
| Dispatch Command<br>Response 0x84  | 29298400130A9F95383C52464944204D6F64653A313EBC0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Note:                              | <p>84 Command Word 0x84    0013 Data Length 19    0A9F9538: Tracker ID is 10312156</p> <p>Command Response Content:3C52464944204D6F64653A313E</p> <p>Convert to ASCII character is: &lt;RFID Mode:1&gt;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 7.7.7 Set White List of dumper RFID reader -G500

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:              | <p>Set white list of dumper RFID reader</p> <p><b>Note:</b></p> <p>Premise:need to set the COM1 or COM2 load the Dumper RFID driver(Refer to <a href="#">Set the Serial Port Driver G500</a>). The platform sends this command to the tracker through the Dispatching Command 0x3A.</p> <p>After load the dumper RFID driver to COM port, RFID reader will read RFID tag continuously.If during preset time threshold, there is no RFID tag data coming, will trigger the skip bucket lifting alarm.</p> |
| Compatible Models:                 | <b>G500</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Data Format(HEX):                  | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| GPRS<br>Command(HEX)Example:       | 29293A001F0A9F95382A53504A4C582A503A4F3A313233343536373839302C353023540D                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Note:                              | <p>001F: Data length is 26 bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A4F3A313233343536373839302C353023 is command content,convert to ASCII character is: *SPJLX*P:753869*O:1234567890,50#</p> <p>1234567890,50 is parameter</p> <p>1234567890 means RFID tag ID</p> <p>50 means the time threshold if the RFID tags deviate from RFID reader reading range.unit as seconds</p>                                                                                                |
| Dispatch Command<br>Response 0x84  | 29298400130A9F95383C5345542A4F3A20313233343536373839302C35303EB80D                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Note:                              | <p>84 Command Word 0x84    0013 Data Length 19    0A9F9538: Tracker ID is 10312156</p> <p>Command Response Content: 3C5345542A4F3A20313233343536373839302C35303E</p> <p>Convert to ASCII character is: &lt;SET*O: 1234567890,50&gt;</p>                                                                                                                                                                                                                                                                  |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                                   |

### 7.7.8 Set fuel level for full tank and empty tank -G500(Voltage signal and Ultrasonic oil level sensor )

|                       |                                                                                                                                                                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description: | <p>Set fuel level for full tank and empty tank for voltage signal fuel sensor and ultrasonic oil level sensor.</p> <p><b>Note:</b></p> <p>1. If it's voltage signal fuel sensor,no need load the peripheral driver (section 7.7.2)in COM port.</p> |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | <p>2. If it's ultrasonic oil level sensor, customers need to load the ultrasonic oil level sensor's driver to G500's COM1 or COM2 port. (Refer to section <a href="#">7.7.2 Set the Serial Port Driver G500</a>)</p> <p>3. Please refer to its corresponding user manual for oil calibration</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Compatible Models:</b>        | <b>G500</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Data Format(HEX):</b>         | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>GPRS Command(HEX)Example:</b> | 29293A00230A9F95382A53504A4C582A503A3735333836392A41463A322C373030302C353023140D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Note:</b>                     | <p>0023: Data length is 35 bytes</p> <p>0A9F9538: Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A41463A322C373030302C353023 is command content, convert to ASCII character is: *SPJLX*P:753869*AF:2,7000,50#</p> <p>Command description:</p> <p>*SPJLX*P:753869*AF:op,x,y#</p> <p>AF means command word</p> <p>op means operation code.</p> <ul style="list-style-type: none"> <li>? means query the previous setting</li> <li>1 means set the voltage input – AD input fuel sensor</li> <li>2 means set ultrasonic oil level sensor</li> <li>0 means disable this function</li> </ul> <p><b>If op=1 means set voltage input fuel sensor</b></p> <p>x means voltage value when full tank, the unit is mV ;</p> <p>y means voltage value when empty tank, the unit is mV;</p> <p><b>Note:</b> If y &gt; x, means its connecting a original vehicle fuel sensor signal, this signal is reverse.</p> <p><b>Example1:</b> set voltage value is : 9 Volt when full tank , empty tank, voltage value is 3.5 Volt</p> <p>*SPJLX*P:753869*AF:1,9000,3500#</p> <p><b>Example2:</b> set voltage value is : 2.5 Volt when full tank , empty tank, voltage value is 10 Volt</p> <p>*SPJLX*P:753869*AF:1,2500,10000#</p> <p><b>Example3:</b> query previous setting</p> <p>*SPJLX*P:753869*AF:?,0,0#</p> <p><b>Example4:</b> disable this function</p> <p>*SPJLX*P:753869*AF:0,0,0#</p> <p><b>If op=2 means set voltage input fuel sensor</b></p> <p>x means oil level height when full tank, the unit is 0.1mm ;</p> <p>y means oil level height when empty tank, the unit is 0.1mm;</p> <p><b>Example5:</b> set oil level height is : 700 mm when full tank , empty tank, oil level height is 5mm.</p> |

|                                    |                                                                                                                                                                                                                             |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | *SPJLX*P:753869*AF:2,7000,50#                                                                                                                                                                                               |
| Dispatch Command<br>Response 0x84  | 29298400180A9F95383C5345542A41463A322C373030302C35303EC30D                                                                                                                                                                  |
| Note:                              | <p>84 Command Word 0x84    0018 Data Length 24    0A9F9538: Tracker ID is 10312156</p> <p>Command Response Content: 3C5345542A41463A322C373030302C35303E</p> <p>Convert to ASCII character is: &lt;SET*AF:2,7000,50&gt;</p> |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                     |

## 7.7.9 Reserve

### 7.7.10 Set CANBUS Communication Protocol for G500

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:        | <p>Set G500 tracker captures CANBUS or OBDII data from Taiwan ATBS AT3642,AT3647,AT3648 Interpreter.</p> <p><b>Note:</b></p> <p>This command needs to cooperate with <a href="#">7.7.2 set the serial port driver G500</a>, and the ATXX interpreter will be communicated with G500 only when the Peripheral ID 2048 has been loaded in G500 serial port.</p> <p>e.g. Load the CANBUS driver to G500's COM1, send below command:</p> <p>*SPJLX*P:753869*W:0,2048,0,0#</p> <p>Firmware version support: G500_20190117-4G-0930_General and latest version.</p> <p>CANBUS data refer to section: <a href="#">6.2.2.1 Peripherals List</a> .0x42 ,0x47,0x48 ,0x92 Peripheral type ID</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p>                                                                                                                                                                                      |
| Compatible Models:           | <b>G500</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Data Format(HEX):            | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| GPRS<br>Command(HEX)Example: | <p>29293A00DA0A9F95382A53504A4C582A503A3735333836392A43493A343735453030303130323030303130353034303530363037303830363031303930373032304130423039303130443130303230453046313130343130313131323133313330313143313530343231323232333234313630323235323632313032324232433232303132443233303132453237303133323238303233333333432393031333533313032333733383433303235423543343430323544354534363031363735313034364536463730373135323034373237333734373535343031373823AD0D</p> <p>Command Content:</p> <p>2A53504A4C582A503A3735333836392A43493A343735453030303130323030303130353034303530363037303830363031303930373032304130423039303130443130303230453046313130303230453046313130343130313131323133313330313143313530343231323232333234313630323235323632313032324232433232303132443233303132453237303133323238303233333333432393031333533313032333733383433303235423543343430323544354534363031363735313034364536463730373135323034373237333734373535343031373823AD0D</p> |

|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <p>3135323034373237333734373535343031373823</p> <p>Convert to ASCII:</p> <p>*SPJLX*P:753869*CI:475E000102000105040506070806010907020A0B09010D10020E0F11041011121313011C1504212223241602252621022B2C22012D23012E270132280233342901353102373843025B5C44025D5E46016751046E6F7071520472737475540178#</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Note: | <p><b>Example1:</b> Load AT3642 Protocol to G500</p> <p>*SPJLX*P:753869*CI:420101#</p> <p>Key Parameters description:</p> <p>CI: 420101</p> <p>CI means command code</p> <p>42 means AT3642</p> <p>01 means data length</p> <p>01 means driver type. fixed value</p> <p><b>Example2:</b> Load AT3648 Protocol to G500</p> <p>*SPJLX*P:753869*CI: 480101#</p> <p>Key Parameters description:</p> <p>CI: 480101</p> <p>CI means command code</p> <p>48 means AT3648</p> <p>01 means data length</p> <p>01 means driver type.fixed value</p> <p><b>Example3:</b> Load AT3647-J1939 Protocol to G500</p> <p>*SPJLX*P:753869*CI:475E000102000105040506070806010907020A0B09010D10020E0F11041011121313011C1504212223241602252621022B2C22012D23012E270132280233342901353102373843025B5C44025D5E46016751046E6F7071520472737475540178#</p> <p>Key Parameters description:</p> <p>CI:475E000102000105040506070806010907020A0B09010D10020E0F11041011121313011C1504212223241602252621022B2C22012D23012E270132280233342901353102373843025B5C44025D5E46016751046E6F7071520472737475540178</p> <p>CI means command code</p> <p>47 means AT3647</p> <p>5E means data length is 94</p> <p>00 means J1939 protocol</p> <p>01020001 01 means key value, 02 means data length; 00 01 means J1939 data address, refer to &lt;AT3647 J1939 and J1708 key value&gt; document.</p> <p>050405060708 05 means key value, 04 means data length; 05060708 means J1939 data address.</p> <p>...</p> <p><b>Example4:</b> Load AT3647-J1708 Protocol to G500</p> <p>*SPJLX*P:753869*CI:4729010102000105040506070806010907020A0B09010D10020E0F11041011121313011C21022B2C22012D#</p> <p>Key Parameters description:</p> |

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | <p>CI:4729010102000105040506070806010907020A0B09010D10020E0F11041011121313011C21022B2C22012D</p> <p>CI means command code<br/>47 means AT3647<br/>5E means data length is 94 bytes.<br/>01 means J708 protocol<br/>01020001 01 means key value, 02 means data address; 00 01 means J1708 data address, refer to &lt;AT3647 J1939 and J1708 key value&gt; document.<br/>050405060708 05 means key value, 04 means data length; 05060708 means J1708 data address</p> |
| Dispatch Command<br>Response 0x84  | 29298400130A9F95383C4C6F61642066696E6973683EB80D                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Note:                              | 3C4C6F61642066696E6973683E convert to ASCII<br><Load finish>                                                                                                                                                                                                                                                                                                                                                                                                        |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                             |

### 7.7.11 Set the load sensor AD detection G500

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:     | <p>This command is used to configure the G500 AD input wire -I4-red black wire as the detection signal of the load sensor. The position data + peripheral data will simultaneously upload 0x1A load sensor AD data. This command configuration is not turned on by default.</p> <p><b>Note:</b><br/>This command cannot be configured at the same time as the AD input fuel sensor detection command set in the section 7.7.8.<br/>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p> |
| Compatible Models:        | <b>G500</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Data Format(HEX):         | 2929<3A><Data Length><Tracker ID><Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| GPRS Command(HEX)Example: | 29293A001B0A9F95382A53504A4C582A503A3735333836392A414C3A3023260D                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Note:                     | <p>001B: Data length is 27 bytes<br/>0A9F9538:Tracker ID is 10312156<br/>2A53504A4C582A503A3735333836392A414C3A3023 is command content,convert to ASCII character is: *SPJLX*P:753869*AL:0#<br/>Command description:<br/><b>Example1:</b> Enable load sensor AD detection function</p>                                                                                                                                                                                                                                      |

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | <p>*SPJLX*P:753869*AL:1,1#</p> <p><b>Example2:</b> Disable load sensor AD detection function</p> <p>*SPJLX*P:753869*AL:1,0#</p> <p><b>Example3:</b> query previous setting</p> <p>*SPJLX*P:753869*AL:0#</p>                                                                                                                                                                                                                                                                              |
| Dispatch Command<br>Response 0x84  | 29298400180A9F95383C5345542A414C3A312C31303030302C303EC90D                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Note:                              | <p>84 Command Word 0x84    0018 Data Length 24    0A9F9538: Tracker ID is 10312156</p> <p>Command Response Content: 3C5345542A414C3A312C31303030302C303E</p> <p>Convert to ASCII character is: &lt;SET*AL:1,10000,0&gt;</p> <p>1 means this feature is enabled, 0 means this feature is not enabled</p> <p>10000 represents this AD detection voltage, the maximum detection voltage is 10000mV = 10V</p> <p>0 means this AD detection voltage, the minimum detection voltage is 0 V</p> |
| Universal Command<br>Response 0x85 | Tracker response to 0x3A Dispatch Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                                                                                                                                  |

## 7.8 OTA Upgrade Command

### 7.8.1 OTA Upgrade Command -FTP-G101

|                                   |                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:             | <p>After the tracker receive this command, it will try to download the firmware program from the specified FTP server address ,after downloading successfully, it will be judged automatically and complete the upgrade.</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p> |
| Compatible Models:                | <b>G101</b>                                                                                                                                                                                                                                                                                                              |
| Data Format(HEX):                 | 2929<3A><Data Length>< Tracker ID>< Command Content><Checksum>0D                                                                                                                                                                                                                                                         |
| GPRS<br>Command(HEX)Example:      | 29293A00240A9F95382A4D41545550443735333836393132322E3131342E3132362E362C323123370D                                                                                                                                                                                                                                       |
| Note:                             | <p>0024: Data length is 36 bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A4D41545550443735333836393132322E3131342E3132362E362C323123 is command content,convert to ASCII character</p> <p>is:*MATUPD753869122.114.126.6,21#</p> <p>122.114.126.6 means FTP server IP address</p> <p>21 means TCP ports</p>        |
| Dispatch Command<br>Response 0x84 | 29298400220A9F95383C4F54412053746172743A3132322E3131342E3132362E362C32313E9B0D                                                                                                                                                                                                                                           |

|                                 |                                                                                                                                                                                                                                                      |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note:                           | <b>84 Command Word 0x84</b> <b>0022 Data Length 34</b> <b>0A9F9538:Tracker ID is 10312156</b><br>Command Response<br>Content:3C4F54412053746172743A3132322E3131342E3132362E362C32313E<br>Convert to ASCII character is: <OTA Start:122.114.126.6,21> |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispath Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                               |

## 7.8.2 OTA Upgrade Command -FTP-G200/G500B

|                                 |                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:           | After the tracker receive this command, it will try to download the firmware program from the specified FTP server address ,after downloading successfully, it will be judged automatically and complete the upgrade.<br>The platform sends this command to the tracker through the Dispatching Command 0x3A.                                                               |
| Compatible Models:              | <b>G200 /G500B</b>                                                                                                                                                                                                                                                                                                                                                          |
| Data Format(HEX):               | 2929< <b>3A</b> >< <b>Data Length</b> >< <b>Tracker ID</b> >< Command Content>< <b>Checksum</b> >0D                                                                                                                                                                                                                                                                         |
| GPRS Command(HEX)Example:       | 2929 <b>3A00290A9F9538</b> 2A53504A4C582A503A3735333836392A523A3132322E3131342E3132362E362C323123 <b>7C0D</b>                                                                                                                                                                                                                                                               |
| Note:                           | <b>0029: Data length is 41 bytes</b><br><b>0A9F9538:Tracker ID is 10312156</b><br>2A53504A4C582A503A3735333836392A523A3132322E3131342E3132362E362C323123 is command content,convert to ASCII character<br>is:*SPJLX*P:753869*R: <b>122.114.126.6,21</b> #<br><b>122.114.126.6,21</b> is parameter<br><b>122.114.126.6</b> is OTA upgrade server IP<br><b>21</b> is TCP port |
| Dispatch Command Response 0x84  | 2929 <b>8400220A9F9538</b> 3C4F54412053746172743A3132322E3131342E3132362E362C32313E <b>9B0D</b>                                                                                                                                                                                                                                                                             |
| Note:                           | <b>84 Command Word 0x84</b> <b>0022 Data Length 34</b> <b>0A9F9538:Tracker ID is 10312156</b><br>Command Response<br>Content:3C4F54412053746172743A3132322E3131342E3132362E362C32313E<br>Convert to ASCII character is: <OTA Start:122.114.126.6,21>                                                                                                                        |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispath Command, refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                                      |

### 7.8.3 OTA Upgrade Command -TFTP-G500/G102/G101-Gensor

|                                 |                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function Description:           | <p>After the tracker receive this command, it will try to download the firmware program from the specified TFTP server address ,after downloading successfully, it will be judged automatically and complete the upgrade.</p> <p>The platform sends this command to the tracker through the Dispatching Command 0x3A.</p>                                          |
| Compatible Models:              | <b>G500/G102/G101-Gensor</b>                                                                                                                                                                                                                                                                                                                                       |
| Data Format(HEX):               | 2929<3A><Data Length><Tracker ID>< Command Content><Checksum>0D                                                                                                                                                                                                                                                                                                    |
| GPRS Command(HEX)Example:       | 29293A002B0A9F95382A53504A4C582A503A3735333836392A523A3132322E3131342E3132362E362C38383938237C0D                                                                                                                                                                                                                                                                   |
| Note:                           | <p>002B: Data length is 43 bytes</p> <p>0A9F9538:Tracker ID is 10312156</p> <p>2A53504A4C582A503A3735333836392A523A3132322E3131342E3132362E362C3838393823 is command content,convert to ASCII character is: *SPJLX*P:753869*R:122.114.126.6,8898#</p> <p>122.114.126.6,8898 is parameter</p> <p>122.114.126.6 is OTA upgrade server IP</p> <p>8898 is UDP port</p> |
| Dispatch Command Response 0x84  | 29298400240A9F95383C4F54412053746172743A3132322E3131342E3132362E362C383839383E8F0D                                                                                                                                                                                                                                                                                 |
| Note:                           | <p>84 Command Word 0x84      0024 Data Length 36      0A9F9538:Tracker ID is 10312156</p> <p>Command Response</p> <p>Content:3C4F54412053746172743A3132322E3131342E3132362E362C383839383E</p> <p>Convert to ASCII character is: &lt;OTA Start:122.114.126.6,8898&gt;</p>                                                                                           |
| Universal Command Response 0x85 | Tracker response to 0x3A Dispath Command,refer to <a href="#">6.4 Universal Command Response 0x85</a>                                                                                                                                                                                                                                                              |

## 8 Appendix 1:

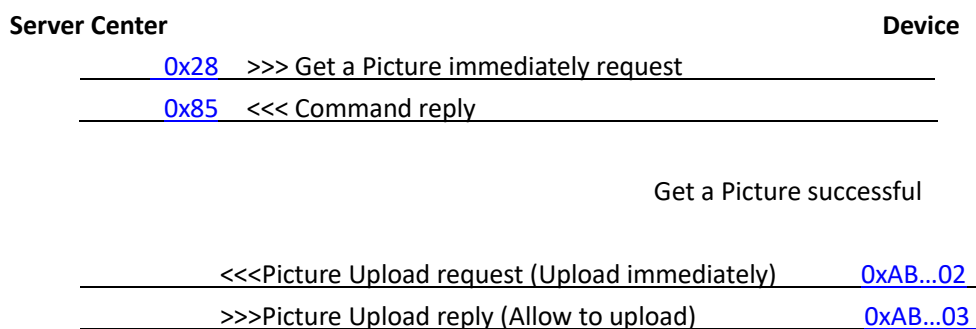
### Take Photo Process

- Step1.** Control Center send command [0x28](#) (get a picture),[0x65](#) (timing shoot),[0x26](#) (Condition trigger shoot), to request pictures.
- Step2.** Device execute take picture action
- Step3.** When finished take a picture, send “Picture upload request”.
- Step4.** Control center send reply for “Picture upload request”.

- Step5.** Device uploads picture data packet by packet in ordinal.
- Step6.** After received picture data, if no new data received in 10s, the Control center software will statistics the picture data received; if there have packet missing, program will send reissue command.
- Step7.** If Control center need to query history pictures, it need send “history pictures upload” command, device execute from step 3.

## Flow Chart Example

### *Take a picture immediately:*



|                                                                |                           |
|----------------------------------------------------------------|---------------------------|
| <<< Picture data 0x01 upload                                   | <a href="#">0xAB...04</a> |
| <a href="#">0x21</a> >>> Response the picture data 0x01        |                           |
| <<< Picture data 0x02upload                                    | <a href="#">0xAB..04</a>  |
| <a href="#">0x21</a> >>> Response the picture data 0x02        |                           |
| ...                                                            |                           |
| <<< Picture upload last packet                                 | <a href="#">0xAB..04</a>  |
| <a href="#">0x21</a> >>> Response the last packet picture data |                           |
| >>> Supplement Picture data 0xXX upload                        | <a href="#">0xAB...05</a> |
| <<< Picture data 0xXX Upload                                   | <a href="#">0xAB...04</a> |
| <a href="#">0x21</a> >>> Response the picture data 0xXX        |                           |

**Timing shoot and do not need upload immediately:**

**Server Center**

**Device**

|                                            |                         |
|--------------------------------------------|-------------------------|
|                                            | Timing shoot successful |
| <<< Picture upload request (Do not upload) | <a href="#">0xAB02</a>  |
| >>> Picture upload request (Do not upload) | <a href="#">0xAB03</a>  |
|                                            | Save picture in device  |

**History Picture upload request:**

**Server Center**

**Device**

|                                                 |                        |
|-------------------------------------------------|------------------------|
| >>> History picture data upload                 | <a href="#">0xAB06</a> |
|                                                 | Read picture           |
| <<< Picture upload request (upload immediately) | <a href="#">0xAB02</a> |
| >>>Picture upload request reply (Allow upload)  | <a href="#">0xAB03</a> |
| <<< Picture data upload                         | <a href="#">0xAB04</a> |
| <<< Picture data upload                         | <a href="#">0xAB04</a> |
| >>> Supplement Picture data upload              | <a href="#">0xAB05</a> |
| <<< Picture data Upload                         | <a href="#">0xAB04</a> |

## 8.1 Take a Photo (If have camera connect) – 0x28

|                       |                                                                                                                                                                                                                                                                                                          |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Command:              | )<0x28><L><ID><Parameter><Checksum><\r>                                                                                                                                                                                                                                                                  |
| Function Description: | This command sends from server to device. About the <Parameter> part: BYTE1 means Camera ID, the RS485 camera ID should be 01-04 ; if want to use RS232 camera, it's ID should be 05; BYTE2 means photo format, 0x00 means 320*240; 0x01 means 640*480.<br>Device reply <a href="#">universal 0x85</a> . |
| Example:              | 29 29 28 00 08 0F 80 8B 43 01 00 66 0D                                                                                                                                                                                                                                                                   |
| Note:                 | <Parameter> part is: 01 00<br>0x01 // Use X1 Camera (means Camera ID is 1)<br>0x00 // Photo format use 320*240.                                                                                                                                                                                          |

## 8.2 Photo by Interval – 0x65

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Command:              | )<0x65><L><ID><Parameter><Checksum><\r>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Function Description: | This command sends from server to device. <Parameter> part define is: The 1 <sup>st</sup> byte means time interval, value range: 1-255, Unit is 30s, so the interval range is: 30S-255*30, 0 means cancel set; the 2 <sup>nd</sup> byte means which cameras will take photo in turn (8Bit: 000X5 X1X2X3X4). At most 4 cameras take photo in turn and camera ID can't repeat. X1X2X3X4 represent 4 RS485 cameras, X1-X4 is the camera ID; X5 represent RS232 camera.<br>Device reply <a href="#">Universal Command Response 0x85</a> |
| Example:              | 29 29 65 00 08 0F 80 8B 43 04 08 26 0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Note:                 | In this example, parameter part is :04 08<br>0x04 //means take photo interval is 04*30s=2min<br>0x08 //change to binary, 0x08=0000 1000, means X1 camera take photo by this Interval.                                                                                                                                                                                                                                                                                                                                               |

## 8.3 Photo by Triggered Signal – 0x26

|                       |                                                                                                                                                                                                                                                                            |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Command:              | )<0x26><L><ID><Parameter><Checksum><\r>                                                                                                                                                                                                                                    |
| Function Description: | This command sends from server to device. <Parameter> part define is: Trigger Condition 1BYTE (8 bits):<br>BIT7: =1 means SOS trigger take photo.<br>BIT6: =1 means self define high level trigger take photo.<br>BIT5: =1 means Self define low level trigger take photo. |

|          |                                                                                                                                                     |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
|          | BIT4—BIT0 Reserved.<br><b>Note: this operate only for camera 1 (default camera)</b><br>Device reply <a href="#">Universal Command Response 0x85</a> |
| Example: | 29 29 26 00 07 0A 9F 95 38 80 99 0D                                                                                                                 |
| Note:    | In this example, parameter part is 80, in binary it is: 0B10000000, means trigger take photo by SOS alarm.                                          |

## 8.4 Photo Data- 0xAB

### Command Structure:

| Field name        | Length (byte) | Content     | Remark                                                  |
|-------------------|---------------|-------------|---------------------------------------------------------|
| header            | 2             | 29 29       | Fixed value                                             |
| Command word      | 1             | AB          |                                                         |
| Package length    | 2             | N           |                                                         |
| Device SN         | 4             | 1D D0 8C 22 | Device ID                                               |
| Parameter content | N             |             | Sub-command type(1BYTE)+ Sub-command parameters(N BYTE) |
| Check sum         | 1             |             | XOR checkout                                            |
| Tail Character    | 1             | 0D          | Fixed value                                             |

### 8.4.1 Set Photo Upload Mode – 0xAB01

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Command:              | ))<0xAB><L><ID><0x01+Parameter><Checksum><\r>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Function Description: | <p>This command is used to configure the photo handle mode, which contain two field data.</p> <p>As date stream, the <b>Parameter</b> contain 4bytes:<br/> <b>Byte1 Byte2 Byte3 Byte4.</b></p> <p>The 1<sup>st</sup> byte <b>Byte1</b> always equal 0x65.</p> <p>The 2<sup>nd</sup> byte <b>Byte2</b> used to indicate the photo handle mode of interval take picture. <b>Byte2=0x00</b> means the photo which take by interval will be save in device flash, not upload instantly. <b>Byte2=0x01</b> means upload instantly.</p> <p>This command is send from server to device. Please note the orange part, in this section, main command type do not change, only Sub-command type changes. This command defined the photo upload mode when photo by interval and photo by trigger condition: upload immediately or store in device does not upload. 1<sup>st</sup> byte is 0x65, it is command word for Photo by</p> |

|          |                                                                                                                                                                                                                                                                                                                                                                 |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | interval; 2 <sup>nd</sup> byte is mode for photo by interval, 00 means do not upload, just store in device, 01 means upload immediately; 3 <sup>rd</sup> byte is 0x26, it is command word for photo by triggered signal; 4 <sup>th</sup> byte is mode for photo by triggered signal, 00 means do not upload, just store in device, 01 means upload immediately. |
| Example: | 29 29 AB 00 0B 0A 9F 95 38 01 65 00 26 01 DB 0D                                                                                                                                                                                                                                                                                                                 |
| Note:    | In this example, the parameter part is : 01 65 00 26 01<br>01 //sub-command, define for photo upload mode<br>65 00 // means do not upload the photos took by interval<br>26 01 // means upload photos took by triggered signal                                                                                                                                  |

## 8.4.2 Photo Upload Request – 0xAB02

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Command:              | ))<0xAB><L><ID><0x02+Parameter><Checksum><\r>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Function Description: | This command is send from device to server. The describe for <0x02+Parameter> shows below:<br>0x02 //[10] (the 10 <sup>th</sup> byte) for <b>Sub Command type</b><br>[11]take picture result (1BYTE,HEX, 00 success, else fail)<br>[12,13]serial number for take a picture(2BYTE HEX BIGENDIAN)<br>[14]Condition for this picture(1BYTE, 0x01 means SOS,0x02 means self-define high, 0x03 means self define low level, 0x04 means timing shoot picture, 0x05 means picture for initiative request from control center.)<br>[15]Camera ID(1BYTE,HEX,01-05)<br>[16]Upload mode(1BYTE,00 save,01 upload immediately ,02 with draw)<br>[17]Total packet number of picture data(1BYTE)<br>[18]~[51]Position data(34BYTE) |
| Example:              | 29 29 AB 00 30 4D CD CD 4D 02 00 00 05 05 01 01 0E 11 09 15 14 43 39 02 23 59 54 11 35 18 81 00 34 03 28 F8 00 44 87 FF FF 18 00 00 1E 00 00 00 00 00 00 47 0D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Note:                 | Lets parse the parameter part in the example:<br>02 //sub-command types.<br>00 //take picture result, 00 for successful<br>00 05 //serial number for take picture, it is 5<br>05 //condition for photo, 05 means initiative request photo<br>01 //Camera ID, means it is take by camera 1<br>01 //Upload mode, 01 for upload immediately<br>0E //Total packet number of picture data, it have 14 packet.<br>11 09 15 14 43 39 02 23 59 54 11 35 18 81 00 34 03 28 F8 00 44 87 FF FF 18 00 00 1E 00 00 00 00 00 00<br>// 34 Bytes position data, you can get instruct from <b>Position Data Part</b> .<br><b>Position Data:</b> Refer to <a href="#">6.2.1 Position Data 0x80</a>                                    |

### 8.4.3 Photo Upload Request Reply – 0xAB03

|                       |                                                                                                                                                                                                                            |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Command:              | ))<0xAB><L><ID><0x03+Parameter><Checksum><\r>                                                                                                                                                                              |
| Function Description: | This command sends from server to device. Parameter part have 3 bytes: Upload mode(1BYTE, 00 Upload immediately, else save locally) + serial number for take a picture (2BYTE,HEX BIGENDIAN).                              |
| Example:              | 29 29 AB 00 0A 4D CD CD 4D 03 00 00 05 A7 0D                                                                                                                                                                               |
| Note:                 | <p>Lets parse the parameter part in the example:</p> <p>03 // sub command for request reply</p> <p>00 //upload modes, 00 for upload immediately.</p> <p>00 05 //serial number for take picture, same to request packet</p> |

#### 8.4.4 Photo Data Upload - 0xAB04

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Command:              | ))<0xAB><L><ID><0x04+Parameter><Checksum><\r>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Function Description: | <p>This packet send from device to server, 0x04 is sub command word, the 10<sup>th</sup> byte, the following bytes are:</p> <p>[11, 12] serial number for take a picture (2BYTE)</p> <p>[13] Current packet number (1BYTE)</p> <p>[14....]Picture data (N)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Example:              | <pre> 2929AB01EA4DCDCD4D04000501FFD8FFDB008400130D0E100E0C13100F 10151413161C2F1E1C1A1A1C39292B222F443C4746433C42404B546C5B4 B50665140425E805F666F73797A79495A848E83758D6C76797401141515 1C191C371E1E37744D424D7474747474747474747474747474747474747 474747474747474747474747474747474747474747474747474747474747 4747FFC000110800F0014003012100021101031101FFDD00040014FFC401A 20000010501010101010101000000000000000000102030405060708090A0B 100002010303020403050504040000017D0102030004110512213141061 3516107227114328191A1082342B1C11552D1F02433627282090A161718 191A25262728292A3435363738393A434445464748494A5354555657585 95A636465666768696A737475767778797A838485868788898A92939495 969798999AA2A3A4A5A6A7A8A9AAB2B3B4B5B6B7B8B9BAC2C3C4C5C6 C7C8C9CAD2D3D4D5D6D7D8D9DAE1E2E3E4E5E6E7E8E9EAF1F2F3F4F5F6 F7F8F9FA0100030101010101010101010100000000000000102030405060708 090A0B11000201020404030407050404000102770001020311040521310 61241510761711322328108144291A1B1C109233352F0156272D10A1624 34E125F11718191A262728292A35363738393A4344455B0D </pre> |
| Note:                 | <p>In example, 0005 is the serial number for take picture, same as we mentioned in last 2 commands.</p> <p>01 means this is the 1<sup>st</sup> packet of this picture.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### 8.4.5 Supplement Packet Request –0xAB05

|                       |                                                                                                                                                                                                                                                  |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Command:              | ))<0xAB><L><ID><0x05+Parameter><Checksum><\r>                                                                                                                                                                                                    |
| Function Description: | This command sends from server to device. Used for request lost photo data packets. Parameters are consisting of: Serial number for take a picture (2BYTES) + mount of supplement packets (1BYTE) + serial number for supplement packet (NBYTE). |
| Example:              | 29 29 AB 00 0D 4D CD CD 4D 05 00 05 03 02 08 0A A5 0D                                                                                                                                                                                            |
| Note:                 | Lets parse the parameter part in example:<br>00 05 // serial number of take a picture.<br>03 //mount of supplement packets, need re-upload 3 packet<br>02 8 0A //the serial number need re-upload is 02 08 and 0A                                |

### 8.4.6 History Picture Upload Request – 0xAB06

|                       |                                                                                                                                                                                                                                                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Command:              | ))<0xAB><L><ID><0x06+Parameter><Checksum><\r>                                                                                                                                                                                                                                                                             |
| Function Description: | This command sends from server to device, used to get the photos take and store in device before. (The photos get by “take a photo” command can’t be re-uploading by this command, since it is uploading immediately). The parameter part is consisting of: Serial number for take a picture (2BYTE).                     |
| Example:              | 29 29 AB 00 09 4D CD CD 4D 06 00 06 A2 0D                                                                                                                                                                                                                                                                                 |
| Note:                 | In example, the parameter part is :00 06<br>It is a serial number for take a photo (include picture get by command 0x26 and 0x65); this command will get the photo with number 0006 in device, and upload to device. Then device will upload photo data according the procedure <a href="#">take photo steps</a> , step 7 |