

T1 GPRS Protocol

Applicable Model: T1

Change History

File Name	T1 GPRS Protocol		
Project	T1	Creation Date	2020-01-17
		Update Date	2020-10-30
Subproject	GPRS Protocol	Total Pages	40
Version	V1.3	Confidential	Internal Documentation

Contents

1 Command Format	- 5 -
1.1 GPRS Command Format	- 5 -
1.2 Tracker Command Format	- 5 -
1.3 Event Code	- 11 -
2 Command List	- 12 -
3 Command Details	- 14 -
3.1 Real-Time Location Query – A10	- 14 -
3.2 Setting a Heartbeat Packet Reporting Interval – A11	- 14 -
3.3 Tracking by Time Interval – A12	- 15 -
3.4 Setting the Cornering Report – A13	- 15 -
3.5 Tracking by Distance – A14	- 16 -
3.6 Waking the Device Up by Vibration – A19	- 16 -
3.7 Setting GPRS Parameters – A21	- 16 -
3.8 Setting the DNS Server IP Address – A22	- 17 -
3.9 Setting the Standby GPRS Server – A23	- 17 -
3.10 Setting the Man Down Alert – A29	- 17 -
3.11 Reading All Authorized Phone Numbers – A70	- 18 -
3.12 Setting Authorized Phone Numbers – A71	- 18 -
3.13 Setting the Smart Sleep Mode – A73	- 18 -
3.14 Setting APN Parameters – A81	- 19 -
3.15 Setting the Maximum Working Time of the Woken GPS Module – A83	- 19 -
3.16 Setting the Unit of the GPRS Data Interval – A84	- 20 -
3.17 Setting a Positioning Mode – A85	- 20 -
3.18 Setting the Smart Mode – AA5	- 20 -
3.19 Setting the Time Interval of Searching WiFi Zones – AA6	- 20 -
3.20 Setting the Audio Playing Function – AA7	- 21 -
3.21 Setting an Alarm Clock – AA8	- 21 -
3.22 Setting the Bluetooth Function – AA9	- 21 -
3.23 Setting the Vibration Function – AAB	- 22 -
3.24 Requesting the Platform Response for the SOS Event – AAC	- 22 -
3.25 Setting the Response Request Function of the SOS Event – AAE	- 23 -
3.26 Setting the Calling Mode for Unauthorized Phone Numbers – AAF	- 23 -
3.27 Setting the GPS Tracking Time Interval in Smart Mode – AB0	- 23 -
3.28 Setting the interval between long connection handshakes – ABE	- 23 -
3.29 Setting important events requires the platform to confirm successful reception – ABF	- 24 -
3.30 Setting a Geo-Fence – B05	- 24 -
3.31 Deleting a Geo-Fence – B06	- 25 -
3.32 Setting the Speeding Alert – B07	- 25 -
3.33 Setting the Vibration Sensitivity Level – B09	- 25 -
3.34 Fast Setting the Towing Alert – B10	- 25 -
3.35 Setting a Polygonal Geo-Fence – B11	- 26 -
3.36 Turning off the LED Indicator – B31	- 26 -

3.37 Setting a Log Interval – B34	- 27 -
3.38 Setting the SMS Time Zone – B35	- 27 -
3.39 Setting the GPRS Time Zone – B36.....	- 27 -
3.40 Setting the Audio File – B47.....	- 28 -
3.41 Setting Parameters for Downloading FTP Audio Files – B66	- 28 -
3.42 Setting Audio File Operation Parameters – B67	- 28 -
3.43 Setting SMS Event Characters – B91.....	- 29 -
3.44 Setting Event Authorization – B99.....	- 30 -
3.45 Setting whether the device is automatically switched on/off when charging– BC8	- 30 -
3.46 Setting Avoid Voicemail Box Mode – BC9	- 31 -
3.47 Notifying the Device of Sending an SMS – C02	- 31 -
3.48 Setting a GPRS Event Transmission Mode – C03	- 31 -
3.49 Setting the Positioning Mode – C67	- 32 -
3.50 Setting the Microphone and Speaker – C69.....	- 32 -
3.51 Powering Off the Device by a Command – C76.....	- 32 -
3.52 Setting the Power-off Function of the Power Button – C77	- 32 -
3.53 Filtering GPS Data of a Heartbeat Packet – C78	- 33 -
3.54 Obtaining Device Hardware Functions –C83.....	- 33 -
3.55 Deleting an Event in the Buffer – CFF	- 33 -
3.56 Allocating GPRS Cache and GPS Log Storage Space – D73	- 33 -
3.57 Reading Device's Firmware Version and SN – E91.....	- 34 -
3.58 Restarting the GSM and GPS Modules – F00	- 34 -
3.59 Restarting the GSM Module – F01	- 34 -
3.60 Restarting the GPS Module – F02.....	- 34 -
3.61 Setting the Mileage and Run Time – F08	- 34 -
3.62 Deleting SMS or GPRS Cache Data – F09	- 35 -
3.63 Restoring Initial Settings – F11.....	- 35 -
4 Appendix 1: Parameter ID.....	- 35 -
5 Appendix 2: Data Type.....	- 40 -

1 Command Format

1.1 GPRS Command Format

GPRS command sent from the server to the tracker:

```
@@<Data identifier><Data length>,<IMEI>,<Command type>,<Command content><*Checksum>\r\n
```

GPRS command sent from the tracker to the server:

```
$$<Data identifier><Data length>,<IMEI>,<Command type>,<Command content><*Checksum>\r\n
```

1.2 Tracker Command Format

```
$$<Data identifier><Data length>,<IMEI>,<Command type>,<Number of remaining cache records><Number of data packets><Data packet 1><Data packet 2>...<*Checksum>\r\n
```

```
24 24 45 31 31 38 2C 38 36 33 39 32 32 30 33 31 36 36 38 35 36 30 2C 43 43 45 2C 00 00 00 00 01 00 54 00 13 00 05
01 23 05 00 06 00 07 0E 15 00 06 08 00 00 09 00 00 0A 00 00 0B 00 00 19 64 01 1A CF 01 07 02 25 87 57 01 03 E3 60
CC 06 04 6B BB 43 25 0C 00 00 00 00 0D AC E9 08 00 1C 01 00 00 00 FE 37 00 00 00 00 01 0E 0C CC 01 01 00 45 A5 8B
D4 E9 01 BB FF 2A 38 42 0D 0A
```

Note:

- A comma (,) is used to separate data characters. The character type is the American Standard Code for Information Interchange (ASCII) (hexadecimal: 0x2C).
- Symbols "<" and ">" will not be present in actual data, only for documentation purpose only.
- The size of a GPRS data packet is about 50–1046 bytes.

Descriptions about GPRS packets from the tracker are as follows:

Parameter	Description	Example
@@ / \$\$	@@: Indicates the GPRS data packet header sent from the server to the device. The header type is ASCII (hexadecimal: 0x40). \$\$: Indicates the GPRS data packet header sent from the device to the server. The header type is ASCII (hexadecimal: 0x24).	@@ / \$\$
Data identifier	Contains one byte. The type is the ASCII, and its value ranges from 0x41 to 0x7A .	a
Data length	Indicates the length of characters from the first separator "," to the ending character "\r\n" (including "," and "\r\n"). Decimal. \$\$<Data identifier><Data length>,<IMEI>,<Command type>,<Hexadecimal data packet><*Checksum>\r\n	118
IMEI	Indicates the device's IMEI number. The number type is ASCII. It has 15 digits generally.	863922031668560
Command type	Hexadecimal For details, see the chapter 2 "Command List" and chapter 3 "Command Details."	CCE
The following data is hexadecimal:		

Number of remaining cache records		0x00 0x00 0x00 0x00 Contains four bytes; hexadecimal; little-endian	0x00 0x00 0x00 0x00 The number of remaining cache records is 0.
Number of data packets		Indicates the number of data packets in a piece of data. Contains two bytes; hexadecimal; little-endian	0x01 0x00 There is only one data packet in the piece of data.
Length of a data packet		Contains two bytes; hexadecimal; little-endian	0x54 0x00 The length of a data packet is 84 bytes.
Total number of ID in a data packet		Contains two bytes; hexadecimal; little-endian	0x13 0x00 There are 19 ID numbers in the data packet.
Number of 1-byte parameter ID		Value range: 0x00–0xFF The length of the following parameter ID numbers is one byte.	0x05 There are five parameter ID numbers. 0x00: There is no parameter ID number whose length is one byte.
Event code	Parameter ID: 0x01	For details, see the section 1.3 "Event Code."	0x23 The event code is 35.
GPS positioning status	Parameter ID: 0x05	0x01: The GPS positioning is valid. 0x00: The GPS positioning is invalid.	0x00 The GPS positioning is invalid.
Number of satellites	Parameter ID: 0x06	Indicates the number of received GPS satellites.	0x00 The number of received GPS satellites is 0.
GSM signal strength	Parameter ID: 0x07	Value range: 0x00–0x31	0x0E The GSM signal strength is 14.
Input port status	Parameter ID: 0x15	Indicates the status values of eight input ports. Bits 0–7 correspond to status of input ports 1–8. Hexadecimal digits need to be converted to binary digits.	0x00 Status: Input inactive
Geo-fence number	Parameter ID: 0x1B	The data is available only when the GPRS event code is 20 or 21.	0x00 There is no geo-fence number.
Battery percentage	Parameter ID: 0xFE69	Remaining battery power	0x2E The remaining battery power is 46%.
Number of 2-byte parameter ID		Value range: 0x00–0xFF The length of the following parameter ID numbers is two bytes.	0x06 There are six parameter ID numbers.
Speed	Parameter ID: 0x08	Unit: km/h; little-endian	0x00 0x00 The driving speed is 0 km/h.
Driving	Parameter	Unit: degree	0x00 0x00

direction	ID: 0x09	When the parameter value is 0 , the direction is due north. The parameter value ranges from 0 to 359 . Little-endian.	The driving direction is 0 degree.
Horizontal dilution of precision (HDOP)	Parameter ID: 0x0A	Value range: 5–999 Unit: 1/10; little-endian	0x00 0x00 The HDOP is 0.
Altitude	Parameter ID: 0x0B	Unit: meter; little-endian	0x00 0x00 The altitude is 0.
AD5	Parameter ID: 0x1A	External power analog <AD5>; little-endian Voltage formula of analog: AD5/100	0xCF 0x01 Convert the digits to decimal digits. 463/100 = 4.63 The voltage of the external power supply is 4.63 V.
Number of 4-byte parameter ID		Value range: 0x00–0xFF The length of the following parameter ID numbers is four bytes.	0x07 There are seven parameter ID numbers. 0x00: There is no parameter ID number.
Latitude	Parameter ID: 0x02	Unit: millionth of a degree; little-endian	0x25 0x87 0x57 0x01 Convert the digits to decimal digits. The latitude is 22.513445 degrees.
Longitude	Parameter ID: 0x03	Unit: millionth of a degree; little-endian	0xE3 0x60 0xCC 0x06 Convert the digits to decimal digits. The longitude is 114.057443 degrees.
Date and time	Parameter ID: 0x04	Contains four bytes; little-endian Unit: second Starting time: 1 January, 2000, 00:00:00 am	0x6B 0xBB 0x43 0x25 The value is 625195883 seconds. 2019-10-24 01:31:23
Mileage	Parameter ID: 0x0C	Indicates the total mileage. Unit: meter; little-endian	0x00 0x00 0x00 0x00 The total mileage is 0.
Run time	Parameter ID: 0x0D	Indicates the total time. Unit: second; little-endian	0xC7 0x54 0x03 0x00 The run time is 584108 seconds.
System flag	Parameter ID: 0x1C	The data is available only when the GPRS event code is 35. Bit 0: Whether to modify the EEP2 parameter. When the parameter value is 1 , the EEP2	0x01 0x00 0x00 0x00 The device parameters are modified.

		<p>parameter is modified.</p> <p>Bit 1: Indicates the ACC status. When the parameter value is 1, the ACC is on.</p> <p>Bit 2: Indicates the anti-theft status. When the parameter value is 1, the device is in the arming state.</p> <p>Bit 3: vibration flag. When the parameter value is 1, the device is vibrating.</p> <p>Bit 4: motion flag. When the parameter value is 1, the device is moving.</p> <p>Bit 5: Whether to connect the external power supply. When the parameter value is 1, the external power supply is connected.</p> <p>Bit 6: Whether the device is charging. When the parameter value is 1, the device is charging.</p> <p>Bit 7: Whether to enable the sleep mode. When the parameter value is 1, the sleep mode is enabled.</p> <p>Bit 8: Whether to connect the FMS. When the parameter value is 1, the FMS is connected.</p> <p>Bit 9: Whether to enable the FMS function. When the parameter value is 1, the FMS function is enabled.</p> <p>Bits 10–31: reserved.</p>	
Step	Parameter ID: 0xFE37	Unit: step; little-endian	<p>0x00 0x00 0x00 0x00</p> <p>The number of steps is 0.</p>
Number of unfixed-byte parameter ID		<p>Value range: 0x00–0xFF</p> <p>The length of the following parameter ID numbers is unfixed. The following data has no fixed sequences. For details, see the chapter 4 "Appendix 1: Parameter ID" and the chapter 5 "Appendix 2: Data Type."</p>	<p>0x01</p> <p>There is one parameter ID number.</p> <p>0x00: There is no parameter ID number whose length is unfixed.</p>
WiFi info 1	Parameter ID: 0x1D	<p>When no GPS signal is detected, enable the WiFi function. Then WiFi data can be obtained.</p> <p><Data length><MAC><RSSI></p> <p>Data length: hexadecimal; indicates the length of the MAC address and RSSI. Unit: byte. The fixed data length is 8 bytes.</p> <p>MAC: Contains 6 bytes; indicates the MAC address of the WiFi network.</p> <p>RSSI: signed; 2 bytes; little-endian; indicates the WiFi signal strength.</p>	<p>0x08 0x00 0x25 0x86 0xA7</p> <p>0x0B 0x0A 0xDA 0xFF</p> <p>0x08: The data length is 8 bytes.</p> <p>0x00 0x25 0x86 0xA7 0x0B</p> <p>0x0A:</p> <p>The MAC address is 00-25-86-A7-0B-0A.</p> <p>0xCF 0xFF: The signal strength is -49 dbm.</p>
WiFi info 2	Parameter ID: 0x1E	The description is the same as that of WiFi info 1.	<p>0x08 0x38 0x83 0x45 0xE1</p> <p>0xA6 0x36 0XC7 0xFF</p>

			The description is the same as that of WiFi info 1.
WiFi info 3	Parameter ID: 0x1F	The description is the same as that of WiFi info 1.	0x08 0x8C 0x21 0x0A 0x78 0x30 0x56 0xC6 0xFF The description is the same as that of WiFi info 1.
WiFi info 4	Parameter ID: 0x20	The description is the same as that of WiFi info 1.	0x08 0xF0 0xB4 0x29 0x8B 0x4B 0xDD 0xBF 0xFF The description is the same as that of WiFi info 1.
WiFi info 5	Parameter ID: 0x21	The description is the same as that of WiFi info 1.	0x08 0x38 0x83 0x45 0xAD 0x89 0x72 0xBE 0xFF The description is the same as that of WiFi info 1.
WiFi info 6	Parameter ID: 0x22	The description is the same as that of WiFi info 1.	0x08 0x00 0x25 0x68 0x60 0x1F 0x10 0xB9 0xFF The description is the same as that of WiFi info 1.
WiFi info 7	Parameter ID: 0x23	The description is the same as that of WiFi info 1.	0x08 0x0A 0x18 0xD6 0x0B 0x15 0xAE 0xB8 0xFF The description is the same as that of WiFi info 1.
WiFi info 8	Parameter ID: 0x24	The description is the same as that of WiFi info 1.	0x08 0x7C 0x03 0xC9 0x10 0xF9 0xB0 0xB8 0xFF The description is the same as that of WiFi info 1.
Current base station info	Parameter ID: 0x0E	<p><Data length><MCC><MNC><LAC><CELL_ID><RX_LEVEL></p> <p>Data length: hexadecimal; indicates the length of the base station data. Unit: byte. The fixed data length is 12 bytes.</p> <p>MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code.</p> <p>MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code.</p> <p>LAC: 16-bit unsigned; little-endian; indicates the Location Area Code.</p> <p>CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID.</p> <p>RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength.</p>	<p>0x0C 0xCC 0x01 0x01 0x00 0x45 0xA5 0x8B 0xD4 0xE9 0x01 0xBB 0xFF</p> <p>0x0C: The data length is 12 bytes.</p> <p>0xCC 0x01: The MCC is 460.</p> <p>0x01 0x00: The MNC is 01.</p> <p>0x45 0xA5: The LAC is 42309.</p> <p>0x8B 0xD4 0xE9 0x01: The cell ID is 32101515.</p> <p>0xBB 0xFF: The signal strength is -69 dbm.</p>
Base station 1	Parameter ID: 0x0F	The description is the same as that of the current base station info.	The description is the same as that of the current base station

			info.
Base station 2	Parameter ID: 0x10	The description is the same as that of the current base station info.	The description is the same as that of the current base station info.
Base station 3	Parameter ID: 0x11	The description is the same as that of the current base station info.	The description is the same as that of the current base station info.
Base station 4	Parameter ID: 0x12	The description is the same as that of the current base station info.	The description is the same as that of the current base station info.
Base station 5	Parameter ID: 0x13	The description is the same as that of the current base station info.	The description is the same as that of the current base station info.
Network Information	Parameter ID: 0x4B	<p>The network information that the device is connecting to.</p> <p><ID_Len><version><Type><DescriptorLen><Descriptor></p> <p>ID Len: 1 byte Version: 1 byte, 0x01 by default Type: The type of network being connected, 1 byte. 0: No Network, 1: Mobile Network, 2:WIFI (Reserved) DescriptorLen: the length of the network descriptor, 1 byte, range: 0~32 Descriptor: Network descriptor, string Data type:STRUCT</p>	<p>14 01 01 11 4C 54 45 28 45 55 54 52 41 4E 2D 42 41 4E 44 38 29</p> <p>14: The data length is 14 bytes 01: version 01: using mobile network 11: The length of the network descriptor is 17 bytes 4C 54 45 28 45 55 54 52 41 4E 2D 42 41 4E 44 38 29: Network descriptor is LTE(EUTRAN-BAND8)</p>
Call record	Parameter ID: 0xFE36	<p>The data is available only when the GPRS event code is 111.</p> <p>< Data length >< Protocol version >< Calling type > < Phone number >< Date >< Calling time ></p> <p>Data length: hexadecimal; indicates the length of the Call record. Unit: byte. Protocol version: contains one byte. Calling type: contains one byte, 01: Two-way calling. 02: Listen-in. Phone number. The data length is 16 bytes. Date: little-endian. The data length is 6 bytes. Calling time: little-endian. Unit: second</p>	<p>1C 01 01 31 33 32 35 30 30 36 32 37 35 31 30 00 00 00 00 09 30 14 07 08 19 10 00 00 00</p> <p>1C: The data length is 28 bytes. 01: Indicates the protocol. 01: Indicates Two-way calling. 31 33 32 35 30 30 36 32 37 35 31 30 00 00 00 00: Indicates the phone number. 09 30 14 07 08 19: Indicates the date, converted digits: 190807-14:30:09. 10 00 00 00: Indicates the calling time; 10 seconds .</p>

WiFi zone	Parameter ID: 0xFE39	The data is available only when the GPRS event code is 150 or 151. < Data length >< Protocol version >< Geo-fence name > Data length: hexadecimal; indicates the length of the WiFi zone. Unit: byte. Protocol version: contains one byte. Geo-fence name: contains a maximum of 64 bytes.	05 01 31 32 33 34 05: The data length is 5 bytes. 01: Indicates the protocol version. 31 32 33 34: Indicates the geo-fence name
Alarm clock info	Parameter ID: 0xFE40	The data is available only when the GPRS event code is 127. < Data length >< Protocol version >< Alarm clock name > Data length: hexadecimal; indicates the length of the Alarm clock info. Unit: byte. Protocol version: contains one byte. Alarm clock name; contains a maximum of 32 bytes.	04 01 31 32 33 04: The data length is 4 bytes. 01: Indicates the protocol version. 31 32 33: Indicates the alarm clock name;
*		Contains one byte. It is used to separate the command content from the checksum. ASCII (hexadecimal: 0x2A)	*
Checksum		Contains two bytes. Indicates the sum of characters from the packet header "\$\$"to the asterisk "*" (including the packet header and asterisk). Hexadecimal <u>\$\$<Data identifier><Data length>,<IMEI>,<Command type>,<Hexadecimal data packet><*Checksum></u> \r\n	8B
\r\n		Contains two bytes. This is an ending character. The type is ASCII (hexadecimal: 0x0d,0x0a).	\r\n

Note:

- 1) If the first byte of ID is 0XFE, it indicates that the ID is an extension ID, and the actual ID is added by the first and second bytes. For example: 0XFE 0X01 means ID:255;0XFE 0X02 means ID:256, and so on.
- 2) In order to the tracking platform showing that the T1 is online at any time, if the T1 does not upload data to the server in more than 10 minutes, it will automatically send a data format of AAA to keep the network link connected.If there is no need for this, ignore this data or use the ABE command to turn it off.The data format is as follows (the number of commas is fixed):
\$\$<Data identifier><Data length>,<IMEI>,AAA,31,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

1.3 Event Code

Event Code	Event	Default SMS Header (At Most 16 Bytes)
------------	-------	---------------------------------------

1	SOS Pressed	SOS
17	Low Battery	Low Battery
19	Speeding	Speeding
20	Enter Geo-fence	Enter Fence N (N means the number of the fence)
21	Exit Geo-fence	Exit Fence N (N means the number of the fence)
24	GPS Signal Lost	GPS Signal Lost
25	GPS Signal Recovery	GPS Recovery
26	Enter Sleep	Enter Sleep
27	Exit Sleep	Exit Sleep
29	Device Reboot	Power On
31	Heartbeat	/
32	Cornering	Cornering
33	Track By Distance	Distance
34	Reply Current (Passive)	Now
35	Track By Time Interval	Interval
36	Tow	Tow
40	Power Off	Power Off
70	Reject Incoming Call	/
72	Auto Answer Incoming Call	/
73	Listen-in (Voice Monitoring)	/
79	Fall	Fall
111	Call Record	/
127	Alarm Clock Info	Alarm info
152	Start Trip	/
153	End Trip	/
154	Reset Step	/
155	Within Frequent Parking Place	/
156	Outside Frequent Parking Place	/
157	Lost	LOSE
158	Lost Recovery	LOSE RECOVERY

2 Command List

Command	Command Description
A10	Real-Time Location Query
A11	Setting a Heartbeat Packet Reporting Interval
A12	Tracking by Time Interval
A13	Setting the Cornering Report
A14	Tracking by Distance
A19	Waking the Device Up by Vibration
A21	Setting GPRS Parameters

A22	Setting the DNS Server IP Address
A23	Setting the Standby GPRS Server
A29	Setting the Man Down Alert
A70	Reading All Authorized Phone Numbers
A71	Setting Authorized Phone Numbers
A73	Setting the Smart Sleep Mode
A81	Setting APN Parameters
A83	Setting the Maximum Working Time of the Woken GPS Module
A84	Setting the Unit of the GPRS Data Interval
AA5	Setting the Smart Mode
AA6	Setting the Time Interval of Searching WiFi Zones
AA7	Setting the Audio Playing Function
AA8	Setting an Alarm Clock
AA9	Setting the Bluetooth Function
AAB	Setting the Vibration Function
AAC	Requesting the Platform Response for the SOS Event
AAE	Setting the Response Request Function of the SOS Event
AAF	Setting the Calling Mode for Unauthorized Phone Numbers
AB0	Setting the GPS Tracking Time Interval in Smart Mode
ABE	Setting the interval between long connection handshakes
ABF	Setting important events requires the platform to confirm successful reception
B05	Setting a Geo-Fence
B06	Deleting a Geo-Fence
B07	Setting the Speeding Alert
B09	Setting the Vibration Sensitivity Level
B10	Fast Setting the Towing Alert
B11	Setting a Polygonal Geo-Fence
B31	Turning off the LED Indicator
B35	Setting the SMS Time Zone
B36	Setting the GPRS Time Zone
B47	Setting the Audio File
B66	Setting Parameters for Downloading FTP Audio Files
B67	Setting Audio File Operation Parameters
B91	Setting SMS Event Characters
B99	Setting Event Authorization
BC8	Setting whether the device is automatically switched on when charging
BC9	Setting Avoid Voicemail Box Mode
C02	Notifying the Device of Sending an SMS
C03	Setting a GPRS Event Transmission Mode
C67	Setting the Positioning Mode
C69	Setting the Microphone and Speaker
C76	Powering Off the Device by a Command

C77	Setting the Power-off Function of the Power Button
C78	Filtering GPS Data of a Heartbeat Packet
C83	Obtaining Device Hardware Functions
CFF	Deleting an Event in the Buffer
D73	Allocating GPRS Cache and GPS Log Storage Space
E91	Reading Device's Firmware Version and SN
F00	Restarting the GSM and GPS Modules
F01	Restarting the GSM Module
F02	Restarting the GPS Module
F08	Setting the Mileage and Run Time
F09	Deleting SMS or GPRS Cache Data
F11	Restoring Initial Settings

Note: Important events with event codes 1(SOS Pressed),17(Low Battery),29(Device Reboot),40(Power Off),79(Fall),127(Alarm Clock Info),152(Start Trip) and 153(End Trip) require the server to confirm that data has been received successfully. The CFF command is required to be integrated. If there is no requirement for this, use the ABF instruction to turn this feature off.

3 Command Details

3.1 Real-Time Location Query – A10

GPRS Sending	A10
GPRS Reply	\$\$<Data identifier><Data length>,<IMEI>,<CCE>,<Number of remaining cache records><Number of data packets><Data packet on event 34><*Checksum>\r\n
Description	34: Indicates the event code of the GPRS command.
Example	
GPRS Sending	@@A25,865789020991321,A10*62\r\n
GPRS Reply	\$\$A118,865789020991321,CCE,<00 00 00 00 01 00 54 00 12 00 06 01 22 05 00 06 00 07 15 14 00 15 00 04 08 00 00 09 14 01 0A E7 03 0B 00 00 06 02 25 87 57 01 03 E3 60 CC 06 04 41 3A 2D 20 0C 74 0D 00 00 0D EC 50 03 00 1C 00 00 00 00 02 0E 0C CC 01 01 00 45 A5 8B D4 E9 01 01 FF 1D 08 00 25 86 A7 0B 0A D5 FF>*1D\r\n

3.2 Setting a Heartbeat Packet Reporting Interval – A11

GPRS Sending	A11,Interval
GPRS Reply	A11,OK
Description	<p>The heartbeat packet function is used to keep the Transmission Control Protocol (TCP) connection open when the interval of scheduled GPRS reporting is long.</p> <p>Interval = 0: function disabled (default).</p> <p>Interval = [1...65535]: function enabled. Set the heartbeat packet reporting interval. Unit: minute.</p> <p>The heartbeat function is available only in conjunction with deep sleep mode. When the device enters the deep sleep mode, a heartbeat packet will be sent at the specified</p>

	<p>interval.</p> <p>Note:</p> <ol style="list-style-type: none"> 1. The GPS positioning is enabled first. If it cannot work properly, the WiFi positioning is enabled, which takes at most five seconds. If you want to obtain a heartbeat packet with valid positioning information, use the A83 command to enable the GPS module. 2. If the device is in the LBS positioning mode, an event will be generated immediately.
Example	
GPRS Sending	@@S28,353358017784062,A11,10*FD\r\n
GPRS Reply	\$\$S28,353358017784062,A11,OK*FE\r\n <i>After the above command is sent successfully, the device will send a GPRS heartbeat packet to the platform every 10 minutes in sleep mode.</i>

3.3 Tracking by Time Interval – A12

GPRS Sending	A12,Interval
GPRS Reply	A12,OK
Description	<p>Default interval unit: x10 seconds. (Users can change the interval by the A84 command.)</p> <p>Interval = 0: function disabled.</p> <p>The maximum time interval is 65535 x 10 seconds.</p> <p>Recommended value: 6 x 10 seconds</p>
Example	
GPRS Sending	@@V27,353358017784062,A12,6*D5\r\n
GPRS Reply	\$\$V28,353358017784062,A12,OK*02\r\n <i>After the above command is sent successfully, the device will send a GPRS data packet to the platform every one minute.</i>

3.4 Setting the Cornering Report – A13

GPRS Sending	A13,Angle
GPRS Reply	A13,OK
Description	<p>When the driving angle exceeds the preset value, the device will send a GPRS data packet with location information to the server, which ensures smoother travel routes on the platform.</p> <p>Angle = 0: function disabled (default).</p> <p>Angle = [1...359]: function enabled. Set the cornering angle.</p> <p>Recommended value: 30</p>
Example	
GPRS Sending	@@X29,353358017784062,A13,120*37\r\n
GPRS Reply	\$\$X28,353358017784062,A13,OK*05\r\n <i>After the above command is sent successfully, if the cornering angle is greater than 120 degrees, the device will send a GPRS data packet to the server.</i>

3.5 Tracking by Distance – A14

GPRS Sending	A14,Distance
GPRS Reply	A14,OK
Description	Distance = 0: function disabled (default). Distance = [1...65535]: function enabled. Unit: meter.
Example	
GPRS Sending	@@D30,353358017784062,A14,1000*4A\r\n
GPRS Reply	\$\$D28,353358017784062,A14,OK*F2\r\n <i>After the above command is sent successfully, if the driving distance reaches 1000 meters, the device will send a data packet to the server.</i>

3.6 Waking the Device Up by Vibration – A19

GPRS Sending	A19,X
GPRS Reply	A19,OK
Description	This function is used to determine whether the device can be woken up from the deep mode by vibration. X = 0: The device cannot be woken up by vibration. X = 1: The device can be woken up by vibration (default).
Example	
GPRS Sending	@@H27,353358017784062,A19,1*C9\r\n
GPRS Reply	\$\$H28,353358017784062,A19,OK*F8\r\n

3.7 Setting GPRS Parameters – A21

GPRS Sending	A21,Connection mode,IP address,Port,APN,APN user name,APN password
GPRS Reply	A21,OK
Description	Connection mode = 0: function disabled. Connection mode = 1: function enabled; use the TCP/IP reporting mode. Connection mode = 2: function enabled; use the UDP reporting mode. IP address: IP address or domain name; contains a maximum of 32 bytes. Port: Contains a maximum of 5 digits. APN/APN user name/APN password: Contains a maximum of 32 bytes respectively. If no user name and password are required, leave them blank. Note: 1. If you want to modify a parameter (named A), the parameters before A cannot be empty. 2. If you do not want to modify the parameters after A , no comma is required when you edit the command. 3. If you want to clear the parameters after A , commas are required when you edit the command. For example, if you want to modify the IP address and port only, send

	A21,1,192.168.1.1,8800.
Example	
GPRS Sending	@@H58,353358017784062,A21,1,server.meigps.com,8800,CMNET,,*A0
GPRS Reply	\$\$H28,353358017784062,A21,OK*F4\r\n

3.8 Setting the DNS Server IP Address – A22

GPRS Sending	A22,DNS server IP address
GPRS Reply	A22,OK
Description	<p>An incorrect DNS server IP address may lead to GPRS data reporting failures after the A21 command is used. You can use the A22 command to set the DNS server IP address (confirm the IP address with your domain name provider), and then use the A21 command to reset the domain name.</p> <p>DNS server IP address: Contains a maximum of 16 bytes.</p>
Example	
GPRS Sending	@@K38,353358017784062,A22,75.127.67.90*FD\r\n
GPRS Reply	\$\$K28,353358017784062,A22,OK*F8\r\n

3.9 Setting the Standby GPRS Server – A23

GPRS Sending	A23,IP address,Port
GPRS Reply	A23,OK
Description	<p>IP address: Contains a maximum of 32 bytes.</p> <p>Port: Contains a maximum of 5 digits.</p> <p>When the device fails to send data to the active server set by the A21 command, data will be automatically sent to the standby server to prevent data loss.</p>
Example	
GPRS Sending	@@S44,353358017784062,A23,182.92.69.175,8800*35\r\n
GPRS Reply	\$\$S28,353358017784062,A23,OK*01\r\n

3.10 Setting the Man Down Alert – A29

GPRS Sending	A29,Switch,Time,Grade
GPRS Reply	A29,OK
Description	<p>Switch: Whether to enable the man down alert detection function. The parameter value is 0 or 1. When the parameter value is 1, the man down alert detection function is enabled. When the parameter value is 0, the man down alert detection function is disabled. The default parameter value is 0.</p> <p>Time: Indicates the buzzing and vibration time after the device falls to the ground. During this period, users can press any button of the device to clear the alert, so as to avoid misinformation. If no button is pressed during this period, a man down alert will be generated or the device will call the designated contact. Unit: second; value range: 0–255; default value: 10.</p> <p>Grade: Indicates the man down alert level (sensitivity). The parameter value ranges from</p>

	0 to 3 and it is in decimal format. The default parameter value is 1 . The smaller the value is, the higher the alert probability is.
Example	
GPRS Sending	@@S32,353358017784062,A29,1,10,1*BB\r\n
GPRS Reply	\$\$S28,353358017784062,A29,OK*07\r\n

3.11 Reading All Authorized Phone Numbers – A70

GPRS Sending	A70
GPRS Reply	A70,SOS phone number 1,SOS phone number 2,SOS phone number 3,Listen-in phone number 1,Listen-in phone number 2
Description	Read all authorized phone numbers.
Example	
GPRS Sending	@@T25, 353358017784062,A70*93\r\n
GPRS Reply	\$\$T85,353358017784062,A70,13811111111,13822222222,13833333333,13844444444,13855555555*21\r\n

3.12 Setting Authorized Phone Numbers – A71

GPRS Sending	A71,Phone number 1,Phone number 2,Phone number 3,Phone number 4,Phone number 5
GPRS Reply	A71,OK
Description	<p>Phone number: Contains a maximum of 16 bytes. If no phone numbers are set, leave them blank. Phone numbers are empty by default.</p> <p>Phone number 1/2/3/4/5: SOS phone numbers. When you call the device by using these phone numbers, you will receive an SMS notification about the location, geo-fence alert and low power alert.</p> <p>When the SOS button is pressed, the device will dial phone numbers 1, 2, 3, 4, and 5 in sequence. It will stop dialing when a phone number responds.</p>
Example	
GPRS Sending	@@U86,353358017784062,A71,13811111111,13822222222,13833333333,13844444444,13855555555*7C\r\n
GPRS Reply	\$\$U28,353358017784062,A71,OK*06\r\n

3.13 Setting the Smart Sleep Mode – A73

GPRS Sending	A73,Sleep level
GPRS Reply	A73,OK
Description	<p>Set the auto smart sleep mode when the device is idle.</p> <p>Sleep level = 0: function disabled (default).</p> <p>Sleep level = 2: deep sleep. If no event is triggered after five minutes, the GPS and WiFi</p>

	<p>module will stop working and the GSM module will enter the sleep mode. Once an event is triggered, the GPS, WiFi and GSM modules will be woken up. The above actions will be cycled.</p> <p>Sleep level = 3: super deep sleep. If no event is triggered after five minutes, the GPS, WiFi and GSM module will stop working. Once an event is triggered, the GPS, WiFi and GSM modules will be woken up. The above actions will be cycled.</p> <p>Note:</p> <ol style="list-style-type: none"> 1. Triggering events include the SOS alert, auxiliary button pressed, vibration, towing alert, USB plug/unplug, charging, alarm clock, reset step event, calling/incoming call (deep sleep mode), SMS receiving (deep sleep mode). 2. The difference between the Super Deep Sleep mode and the Deep Sleep mode is that the GSM module of the former will stop working, and the device cannot be woken up by call and SMS. 3. The heartbeat event is triggered in the Deep Sleep mode and Supper Deep Sleep mode, which is uploaded every one hour by default.
Example	
GPRS Sending	@@W27,353358017784062,A73,2*D9\r\n
GPRS Reply	\$\$W28,353358017784062,A73,OK*0A\r\n

3.14 Setting APN Parameters – A81

GPRS Sending	A81,APN,APN_NAME,APN_PW
GPRS Reply	A81,OK
Description	<p>APN: Indicates the Access Point Name (APN); contains a maximum of 32 characters.</p> <p>APN_NAME: Indicates the APN user name; contains a maximum of 32 characters.</p> <p>APN_PW: Indicates the APN password; contains a maximum of 32 characters.</p>
Example	
GPRS Sending	@@W33,353358017784062,A81,CMNET,,*72\r\n
GPRS Reply	\$\$W28,353358017784062,A81,OK*09\r\n

3.15 Setting the Maximum Working Time of the Woken GPS Module – A83

GPRS Sending	A83,X
GPRS Reply	A83,OK
Description	<p>X: Indicates the maximum working time of the GPS module woken up by a heartbeat packet. Decimal; value range: 0–255; unit: minute. The default parameter value is 0.</p> <p>X = 0: The GPS module does not work and a heartbeat event will be generated.</p> <p>X = [1...255]: The GPS module will work for X minutes. If the device positioning time exceeds the preset value, a heartbeat event with invalid positioning information will be sent.</p>
Example	

GPRS Sending	@@W27,353358017784062,A83,1*D9\r\n
GPRS Reply	\$\$W28,353358017784062,A83,OK*0B\r\n

3.16 Setting the Unit of the GPRS Data Interval – A84

GPRS Sending	A84,X
GPRS Reply	A84,OK
Description	X: Indicates the unit of the GPRS data interval. Decimal; value range: 1–255; unit: second. The default parameter value is 10 .
Example	
GPRS Sending	@@W27,353358017784062,A84,1*DA\r\n
GPRS Reply	\$\$W28,353358017784062,A84,OK*0C\r\n

3.17 Setting a Positioning Mode – A85

GPRS Sending	A85,X
GPRS Reply	A85,OK
Description	X: decimal; value: 0–3 X = 0: GPS + LBS positioning X = 1: WiFi + LBS positioning(Reserved) X = 2: GPS + WiFi + LBS positioning (The WiFi positioning function will be enabled automatically only after the function is set in advance and the GPS is invalid.) X = 3: LBS positioning(Reserved)
Example	
GPRS Sending	@@W27,353358017784062,A85,2*DB\r\n
GPRS Reply	\$\$W28,353358017784062,A85,OK*0D\r\n

3.18 Setting the Smart Mode – AA5

GPRS Sending	AA5,X
GPRS Reply	AA5,OK
Description	X = 0: Normal Mode. Normal mode includes No-Sleep Mode, Deep Sleep Mode and Super Deep Sleep Mode, Please refer to A73 command for details. X = 1: Smart Mode. In the smart working mode, the device will determine whether it continues to work or enters the sleep mode based on users' behaviors, so as to save power. But the condition is that this action cannot affect the device's travel routes. After the smart working mode is enabled, the heartbeat and deep sleep functions will be unavailable. If you want to read the command settings, send AA5 .
Example	
GPRS Sending	@@W27,353358017784062,AA5,1*EA\r\n
GPRS Reply	\$\$W28,353358017784062,AA5,OK*16\r\n

3.19 Setting the Time Interval of Searching WiFi Zones – AA6

GPRS Sending	AA6,X
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GPRS Reply	AA6,OK
Description	X: The parameter value ranges from 0 to 65535 . Unit: second. This command is used to set the time interval of searching WiFi zones. If you want to read the command settings, send AA6 .
Example	
GPRS Sending	@@W28,353358017784062,AA6,10*16\r\n
GPRS Reply	\$\$W28,353358017784062,AA6,OK*17\r\n

3.20 Setting the Audio Playing Function – AA7

GPRS Sending	AA7,A1:B1,A2:B2
GPRS Reply	AA7,OK
Description	A1: The audio playing function is enabled when a low battery alert is generated. The fixed parameter value is 0 . A2: The audio playing function is enabled when a man down alert is generated. The fixed parameter value is 1 . B1 & B2: Whether to enable the function. When the parameter value is 0 , the function is disabled. When the parameter value is 1 , the function is enabled. If you want to read the command settings, send AA7 .
Example	
GPRS Sending	@@W33,353358017784062,AA7,0:1,1:1*15\r\n
GPRS Reply	\$\$W28,353358017784062,AA7,OK*18\r\n

3.21 Setting an Alarm Clock – AA8

GPRS Sending	AA8,Time point 1,...,Time point 24
GPRS Reply	AA8,OK
Description	Time point format: A:B,C,D,E A: Indicates the alarm clock number. The parameter value ranges from 1 to 24 . (At most 24 alarm clocks can be stored.) B: Whether to enable an alarm clock. 0 : The alarm clock is disabled. 1 : The alarm clock is enabled. C: Indicates a day of a week. The parameter value ranges from 1 to 7 , which means Monday to Sunday respectively. D: Indicates the hour. The 24-hour clock is used. The parameter value ranges from 0 to 23 . E: Indicates the minute. The parameter value ranges from 0 to 59 . If you want to read the command settings, send AA8 .
Example	
GPRS Sending	@@W36,353358017784062,AA8,1:1,1,8,30*A2\r\n
GPRS Reply	\$\$W28,353358017784062,AA8,OK*19\r\n

3.22 Setting the Bluetooth Function – AA9

GPRS Sending	AA9,Mode,[Shock,Voice,Buzzer_time,Disconnect_time]
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GPRS Reply	AA9,OK
Description	<p>Mode: The parameter value ranges from 0 to 2.</p> <p>Mode = 0: Normal mode. No other parameters need to be added.</p> <p>Mode = 1: Lost & Found mode (work with the app). The parameters Shock and Voice need to be configured.</p> <p>Shock: The parameter value is 0 and 1. 0: Disable vibration. 1: Enable vibration.</p> <p>Voice: The parameter value is 0 and 1. 0: Disable the sound. 1: Enable the sound.</p> <p>Mode = 2: Anti-lost mode (work with the app or connect the Bluetooth of your phone). The parameters Shock, Voice, Buzzer time, and Disconnect time need to be configured.</p> <p>Shock: The parameter value is 0 and 1. 0: Disable vibration. 1: Enable vibration.</p> <p>Voice: The parameter value is 0 and 1. 0: Disable the sound. 1: Enable the sound.</p> <p>Buzzer time: The parameter value ranges from 0 to 4294967295. Unit: second.</p> <p>Disconnect time: The parameter value ranges from 0 to 255. Unit: second.</p> <p>If you want to read the parameters, send AA9.</p> <p>Format: A,B1:B2:B3,C1:C2:C3:C4:C5</p> <p>A: Indicates the current mode.</p> <p>B1:B2:B3 means Lost & Found mode:Shock:Voice.</p> <p>C1:C2:C3:C4:C5 means Anti-lost mode:Shock:Voice:Buzzer time:Disconnect time.</p>
Example	
GPRS Sending	@@W27,353358017784062,AA9,0*E7\r\n
GPRS Reply	\$\$W28,353358017784062,AA9,OK*1A\r\n

3.23 Setting the Vibration Function – AAB

GPRS Sending	AAB ,A B C D E F G,A1 B1 C1 D1 E1 F1 G1
GPRS Reply	AAB,OK
Description	<p>01 decimal</p> <p>02 Group 1, A: Vibration Switch B: Call C:SOS D: button E: alarm clock F: drop G: other vibration functions of this type can be set as. 0: Off 1: On</p> <p>03 Group 2, A1: Sound Switch B1: Call C1:SOS D1: button E1: alarm clock F1: drop G1: Other sound functions of this type can be set as. 0: Off 1: On</p> <p>04 can be set separately, vibration or sound, but each group should have parameters. If the second group should be set separately, ", "should be added in front to separate it</p> <p>05 If you want to read the command settings, send AAB.</p>
Example	
GPRS Sending	@@V27,353358017784062,AAB, 1 1 1 1 1 1,0 0 0 0 0 0*0D5\r\n
GPRS Reply	\$\$\$28,353358017784062,AAB,OK*FE\r\n

3.24 Requesting the Platform Response for the SOS Event – AAC

GPRS Sending	AAC,X
GPRS Reply	AAC,X
Description	X: Indicates the event code. The default event is SOS, and its event code is 1.

	Data can be sent from the platform only after the platform receives the data from the device.
Example	
GPRS Sending	@@W27,353358017784062,AAC,1*F2\r\n
GPRS Reply	\$\$W27,353358017784062,AAC,1*BA\r\n

3.25 Setting the Response Request Function of the SOS Event – AAE

GPRS Sending	AAE,X
GPRS Reply	AAE,OK
Description	X = 0: function disabled. X = 1: function enabled (default). This command is used to confirm whether an SOS event is sent to the server successfully. (For details about the server response, see the command AAC.) If you want to read the command settings, send AAE .
Example	
GPRS Sending	@@W27,353358017784062,AAE,1*F4\r\n
GPRS Reply	\$\$W28,353358017784062,AAE,OK*26\r\n

3.26 Setting the Calling Mode for Unauthorized Phone Numbers – AAF

GPRS Sending	AAF,X
GPRS Reply	AAF,OK
Description	X = 0(by default): Reject unauthorized number calls X = 1: Allow unauthorized number calls If you want to read the command settings, send AAF .
Example	
GPRS Sending	@@W27,353358017784062,AAF,1*F5\r\n
GPRS Reply	\$\$W28,353358017784062,AAF,OK*27\r\n

3.27 Setting the GPS Tracking Time Interval in Smart Mode – AB0

GPRS Sending	AB0, <i>Time interval</i>
GPRS Reply	AB0,OK
Description	Time interval: The parameter value ranges from 1 to 65535 . Unit: second. The default parameter value is 600 . If you want to read the command settings, send AB0 .
Example	
GPRS Sending	@@W27,353358017784062,AB0,1*E0\r\n
GPRS Reply	\$\$W28,353358017784062,AB0,OK*12\r\n

3.28 Setting the interval between long connection handshakes – ABE

GPRS Sending	ABE,X
GPRS Reply	ABE,OK
Description	X: Maximum value is 65535, unit: s, default is 600 seconds, X = 0 turn off this function If you want to read the command settings, send ABE .

Example	
GPRS Sending	@@W27,353358017784062,ABE,600*E0\r\n
GPRS Reply	\$\$W28,353358017784062,ABE,OK*12\r\n

3.29 Setting important events requires the platform to confirm successful reception –

ABF

GPRS Sending	ABF,X
GPRS Reply	ABF,OK
Description	<p>X = 0: function disabled. X = 1: function enabled (default).</p> <p>If you want to read the command settings, send AB0.</p> <p>Important events with event codes 1(SOS Pressed),17(Low Battery),29(Device Reboot),40(Power Off),79(Fall),127(Alarm Clock Info),152(Start Trip) and 153(End Trip) require the server to confirm that data has been received successfully. The CFF command is required to be integrated. If there is no requirement for this, use the ABF instruction to turn this feature off</p>
Example	
GPRS Sending	@@W27,353358017784062,ABF,1*E0\r\n
GPRS Reply	\$\$W28,353358017784062,ABF,OK*12\r\n

3.30 Setting a Geo-Fence – B05

GPRS Sending	B05, <i>Geo-fence number,Latitude,Longitude,Radius,Enter Geo-fence alert,Exit Geo-fence alert</i>
GPRS Reply	B05,OK
Description	<p>Geo-fence number: The parameter value ranges from 1 to 8. A maximum of eight geo-fences can be set.</p> <p>Latitude: Indicates the latitude of the geo-fence center; decimal; accurate to six digits placed after the decimal point. If there are only four digits placed after the decimal point, add two digits 0. Otherwise, the command cannot be used successfully.</p> <p>Longitude: Indicates the longitude of the geo-fence center; decimal; accurate to six digits placed after the decimal point. If there are only four digits placed after the decimal point, add two digits 0. Otherwise, the command cannot be used successfully.</p> <p>Radius: The parameter value ranges from 1 to 4294967295. Unit: meter. Take coordinates of the above latitude and longitude as the center point and draw a circle with this radius.</p> <p>Enter Geo-fence alert = 0: function disabled.</p> <p>Enter Geo-fence alert = 1: function enabled.</p> <p>Exit Geo-fence alert = 0: function disabled.</p> <p>Exit Geo-fence alert = 1: function enabled.</p>
Example	
GPRS Sending	@@H57,353358017784062,B05,1,22.913191,114.079882,1000,0,1*96\r\n
GPRS Reply	\$\$H28,353358017784062,B05,OK*F7\r\n
	<i>When the device exits the geo-fence (latitude: 22.913191; longitude: 114.079882; radius:</i>

1000 meters), it will send a PRS data packet about an Exit Geo-fence alert to the server.

3.31 Deleting a Geo-Fence – B06

GPRS Sending	B06,Geo-fence number
GPRS Reply	B06,OK
Description	Geo-fence number: The parameter value ranges from 1 to 8 . Only one geo-fence can be deleted each time by sending an SMS or GPRS command.
Example	
GPRS Sending	@@J27,353358017784062,B06,1*C8\r\n
GPRS Reply	\$\$J28,353358017784062,B06,OK*FA\r\n After the above command is sent successfully, the first geo-fence will be deleted.

3.32 Setting the Speeding Alert – B07

GPRS Sending	B07,Driving speed
GPRS Reply	B07,OK
Description	Driving speed = 0: function disabled (default). Driving speed = [1...255]: function enabled. When the driving speed reaches the preset value, a speeding alert will be sent. Unit: km/h.
Example	
GPRS Sending	@@P28,353358017784062,B07,60*05\r\n
GPRS Reply	\$\$P28,353358017784062,B07,OK*01\r\n After the above command is sent successfully, if the device's driving speed reaches 60 km/h, it will send a GPRS data packet about a speeding alert to the server.

3.33 Setting the Vibration Sensitivity Level – B09

GPRS Sending	B09,Sensitivity level
GPRS Reply	B09,OK
Description	The vibration sensitivity level is used to detect whether the tracker stops moving, starts moving or is woken up by vibration, or a towing alert is generated. Sensitivity level: The parameter value ranges from 1 to 127. The default value is 1, and the parameter value cannot be 0. The smaller the parameter value is, the stronger the sensitivity is.
Example	
GPRS Sending	@@I27,353358017784062,B09,1*CA\r\n
GPRS Reply	\$\$I28,353358017784062,B09,OK*FC\r\n

3.34 Fast Setting the Towing Alert – B10

GPRS Sending	B10,Consecutive vibration time,Idling time
GPRS Reply	B10,OK

Description	<p>Consecutive vibration time = 0: function disabled (default).</p> <p>Consecutive vibration time = [1...255]: function enabled. Set the consecutive vibration time. Unit: second.</p> <p>Idling time: The default parameter value is 2. Unit: minute.</p> <p>Idling time = 0: The power-saving mode is disabled.</p> <p>Idling time = [1...255]: The power-saving function is enabled. When the idling time exceeds the preset value, the device will enter the power-saving mode.</p>
Example	
GPRS Sending	@@I27,353358017784062,B10,3*6E\r\n
GPRS Reply	<p>\$\$I28,353358017784062,B10,OK*9E\r\n</p> <p><i>After the above command is sent successfully, if the device vibrates for more than three consecutive seconds, it will send a GPRS data packet about a towing alert to the server.</i></p>

3.35 Setting a Polygonal Geo-Fence – B11

GPRS Sending	B11,Geo-fence number,Latitude 1,Longitude 1,Longitude 2...Latitude N,Longitude N,Enter Geo-fence alert,Exit Geo-fence alert
GPRS Reply	B11,OK
Description	<p>Geo-fence number: The parameter value ranges from 1 to 8. (The maximum value varies depending on customization projects.)</p> <p>Latitude: accurate to 6 digits placed after the decimal point. For example, 22.512517 or -22.512517.</p> <p>Longitude: accurate to 6 digits placed after the decimal point. For example, 114.057200 or -114.057200.</p> <p>Enter Geo-fence alert: The parameter value is 0 or 1. 0: An alert will not be generated when the device enters the geo-fence. 1: An alert will be generated when the device enters the geo-fence.</p> <p>Exit Geo-fence alert: The parameter value is 0 or 1. 0: An alert will not be generated when the device exits the geo-fence. 1: An alert will be generated when the device exits the geo-fence.</p> <p>If the command only contains the parameter Geo-fence number, related geo-fences will be deleted.</p> <p>If the geo-fence is circular, the command to be sent is B11,Geo-fence number,Latitude,Longitude,Radius (meter),Enter Geo-fence alert,Exit Geo-fence alert.</p>
Example	
GPRS Sending	@@I113,353358017784062,B11,1,22.913231,114.079882,22.913191,114.079784,22.912131,114.075882,22.913191,114.079882,1,1*3A\r\n
GPRS Reply	\$\$I28,353358017784062,B11,OK*F5\r\n

3.36 Turning off the LED Indicator – B31

GPRS Sending	B31,A
GPRS Reply	B31,OK
Description	When the value of A is 0 , the device's LED indicator is turned on (default). Users can query

	<p>the device's running status according to the indicator status.</p> <p>A = 1: The device's LED indicator is turned off.</p> <p>B = 0: The buzzer's sound is enabled (default).</p> <p>B = 1: The buzzer's sound is disabled.</p>
Example	
GPRS Sending	@@J28,353358017784062,B31,10*F7\r\n
GPRS Reply	\$\$J28,353358017784062,B31,OK*F8\r\n

3.37 Setting a Log Interval – B34

GPRS Sending	B34,Log interval
GPRS Reply	B34,OK
Description	<p>Set the interval for recording data to device's memory when the GPS signal is valid. When there is no GPS signal, data will not be recorded.</p> <p>Log interval = 0: function disabled (default).</p> <p>Log interval = [1...65535]: function enabled. Set the log interval. Unit: second.</p>
Example	
GPRS Sending	@@N28,353358017784062,B34,60*03\r\n
GPRS Reply	\$\$N28,353358017784062,B34,OK*FF\r\n

3.38 Setting the SMS Time Zone – B35

GPRS Sending	B35,SMS minute
GPRS Reply	B35,OK
Description	<p>The default time zone of the device is GMT 0. Users can send the B35 command to change the time zone of an SMS report to the local time zone. The time zone of SMS reports is different from that of GPRS data packets.</p> <p>SMS minute = 0: The time zone is GMT 0.</p> <p>SMS minute = [-720...780]: Set time zones.</p>
Example	
GPRS Sending	@@O29,353358017784062,B35,480*3C\r\n
GPRS Reply	<p>\$\$O28,353358017784062,B35,OK*01\r\n</p> <p><i>After the above command is sent successfully, the device's SMS time zone will be changed to UTC+08:00 (China time zone).</i></p>

3.39 Setting the GPRS Time Zone – B36

GPRS Sending	B36,GPRS minute
GPRS Reply	B36,OK
Description	<p>GPRS minute = 0: The time zone is GMT 0 (default). The MS03 platform can automatically detect users' time zone, so that the GPRS time zone does not need to be changed. If the</p>

	GPRS time zone is changed, data will be inaccurate. GPRS minute = [-720...780]: Set time zones.
Example	
GPRS Sending	@@P29,353358017784062,B36,480*3E\r\n
GPRS Reply	\$\$P28,353358017784062,B36,OK*03\r\n <i>After the above command is sent successfully, the GPRS time zone will be changed to UTC+08:00 (China time zone).</i>

3.40 Setting the Audio File – B47

GPRS Sending	B47,X,Time
GPRS Reply	B47,X,Time
Description	X: Indicates the audio file name; contains a maximum of 32 bytes (spaces included). Time: Indicates the playing times of the audio file. If this parameter is not set, the audio file plays only once.
Example	
GPRS Sending	@@P33,353358017784062,B47,1.MP3,1*2B\r\n
GPRS Reply	\$\$\$P33,353358017784062,B47,1.MP3,1*F3\r\n

3.41 Setting Parameters for Downloading FTP Audio Files – B66

GPRS Sending	B66,H,Username,Password,Host,Port,Path
GPRS Reply	B66,OK
Description	H: The parameter value is 0 , 1 , or 2 . 0 : Disable the FTP downloading function. 1 : Enable the FTP downloading function. 2 : Clear existing parameters. Username: Indicates the user name; contains at most 50 bytes. Password: Indicates the password; contains at most 50 bytes. Host: Indicates the domain name; contains at most 50 bytes. Port: Indicates the port number; contains at most 5 bytes. Path: Indicates the domain name; contains at most 100 bytes. If you do not want to change the parameters, the commas in this command need to be remained. If you want to read the command settings, send B66 .
Example	
GPRS Sending	@@P27,353358017784062,B66,2*D5\r\n
GPRS Reply	\$\$P28,353358017784062,B66,OK*06\r\n

3.42 Setting Audio File Operation Parameters – B67

GPRS Sending	B67,H,File name
GPRS Reply	B67,H,PARAM
Description	H: The parameter value ranges from 0 to 4 . H = 0: Download the audio file. File name: Indicates the name of the audio file to be downloaded. GPRS reply: B67,0,File name,Result

	<p>Result: The parameter value ranges from 1 to 5. 1: The file is downloaded successfully. 2: The memory space is not enough. 3: The file fails to be downloaded. 4: The number of files to be downloaded exceeds the upper limit. 5: The file has already existed.</p> <p>H = 1: Delete the audio file. File name: Indicates the name of the audio file to be deleted. GPRS reply: B67,1,File name,Result</p> <p>Result: The parameter value is 1 and 2. 1: The file is deleted successfully. 2: The file fails to be deleted.</p> <p>H = 2: Obtain the memory size. GPRS reply: B67,2,Total memory size,Memory left Unit: byte</p> <p>H = 3: Obtain the audio file list. GPRS reply: B67,4,File name 1(Size of file 1),...File name N(Size of file N)</p> <p>H = 4: Update the audio file. GPRS reply: B67,4,File name,Result</p> <p>Result: The parameter value ranges from 1 to 4. 1: The file is downloaded successfully. 2: The memory space is not enough. 3: The file fails to be downloaded. 4: The number of files to be downloaded exceeds the upper limit.</p> <p>Note:</p> <ol style="list-style-type: none"> 1. The file name contains a maximum of 32 bytes. 2. The parameter * indicates that all audio files are deleted. When the value of parameter H is 2, 3, or 4, the parameter * does not exist.
Example	
GPRS Sending	@@P33,353358017784062,B67,0,1.MP3*2C\r\n
GPRS Reply	\$\$P235,353358017784062,B67,0,1.MP3,1*85\r\n

3.43 Setting SMS Event Characters – B91

GPRS Sending	B91,SMS event code,SMS header
GPRS Reply	B91,OK
Description	Header: Contains a maximum of 16 bytes.
Example	
GPRS Sending	@@R31,353358017784062,B91,1,SOS*F0\r\n
GPRS Reply	\$\$R28,353358017784062,B91,OK*06\r\n
	After the above command is sent successfully and the SOS button (input 1) is pressed, the device will send an SMS alert whose header is SOS to preset authorized phone numbers.

3.44 Setting Event Authorization – B99

GPRS Sending	<p>B99,<SMS>/<0>,<Phone number location>/<Authorized phone number>,<Operation code>,[Event code 1]...[Event code n]</p> <p>B99,<CALL>/<1>,<Phone number location>/<Authorized phone number>,<Operation code>,[Event code 1]...[Event code n]</p> <p>B99,<GPRS>/<2>,<Operation code>,[Event code 1]...[Event code n]</p> <p>B99,<CAMERA>/<3>,<Operation code>,[Event code 1]...[Event code n]</p> <p>B99,<BUZZER>/<4>,<Operation code>,[Event code 1]...[Event code n].</p>
GPRS Reply	<p>B99,<SMS>/<0>,<Phone number location>,<Authorized phone number>,[Event code 1]...[Event code n]</p> <p>B99,<CALL>/<1>,<Phone number location>,<Authorized phone number>,[Event code 1]...[Event code n]</p> <p>B99,<GPRS>/<2>,[Event code 1]...[Event code n]</p> <p>B99,<CAMERA>/<3>,[Event code 1]...[Event code n]</p> <p>B99,<BUZZER>/<4>,[Event code 1]...[Event code n]</p>
Description	<p>Fields SMS, CALL, GPRS, CAMERA, and BUZZER can be presented by 0–4 in decimal string. Operation codes GET, SET, ADD, and DEL can be presented by 0–3 in decimal string. These characters are not case-sensitive.</p> <p>Note: Before using the B99 command to set the SMS or CALL event code, ensure that an authorized phone number is set in advance by using the A71 command or the parameter configuration tool. The device will compare the authorized phone number included in the B99 command with the authorized phone number (excluding +86 characters) set before. If the phone numbers are the same, the new event code will be stored. If not, an SMS with error information will be sent.</p>

Example

GPRS Sending	@@B34,863070010825791,B99,gprs,get*BC\r\n
GPRS Reply	\$\$B33,863070010825791,B99,1,17,18*B5\r\n

3.45 Setting whether the device is automatically switched on/off when charging– BC8

GPRS Sending	BC8,X
GPRS Reply	BC8,OK
Description	<p>X: 0, power on after charging;</p> <p>X: is 1, power off when charged;</p> <p>X: Is 2. Charging does not change the state of the device.</p> <p>This function can be set through the command, the default power on after charging.</p> <p>To turn on the charging shutdown function, press the auxiliary key once to connect MM configuration each time.</p>
Example	
GPRS Sending	@@P33,353358017784062,BC8,1*2B\r\n
GPRS Reply	\$\$\$P33,353358017784062,BC8,OK*F3\r\n

3.46 Setting Avoid Voicemail Box Mode – BC9

GPRS Sending	BC9,A,B
GPRS Reply	BC9,OK
Description	<p>1 A:0 Normal mode (default)</p> <p>2. Reject Voicemail Box</p> <p>3 B=0: after triggering SOS, call all authorized numbers, loop until the last one is not respond, and continue to start from the beginning</p> <p>B=1: after triggering SOS, call the authorized numbers and loop until the last one is not respond, then send ' Emergency, please call back soon!!!', and enter automatic answer mode</p>
Example	
GPRS Sending	@@P33,353358017784062, BC9,A,B*2B\r\n
GPRS Reply	\$\$P33,353358017784062,BC9,OK*F3\r\n

3.47 Notifying the Device of Sending an SMS – C02

GPRS Sending	C02,X,Phone number,Content
GPRS Reply	C02,OK
Description	<p>This command is used for the platform to notify the device of sending an SMS to a mobile phone.</p> <p>X = 0: The TEXT encoding mode is used.</p> <p>X = 1: The Unicode encoding mode is used.</p> <p>Phone number: Contains a maximum of 16 digits.</p> <p>Content: Contains a maximum of 140 characters.</p> <p>After receiving this message, the device will send the Content parameter to the specified phone number.</p>
Example	
GPRS Sending	@@f47,353358017784062,C02,0,15360853789
GPRS Reply	\$\$f28,353358017784062,C02,OK*13\r\n

3.48 Setting a GPRS Event Transmission Mode – C03

GPRS Sending	C03,X
GPRS Reply	C03,OK
Description	<p>X = 0: auto event report (default value: CCE)</p> <p>X = 1: Before another event can be transmitted, existing event reports need to be confirmed and deleted on the server by the CFF command.</p>
Example	
GPRS Sending	@@f27,353358017784062,C03,0*E1\r\n
GPRS Reply	\$\$f28,353358017784062,C03,OK*14\r\n

3.49 Setting the Positioning Mode – C67

GPRS Sending	<i>C67,Positioning mode</i>
GPRS Reply	C67,ok
Description	Positioning mode: The parameter value ranges from 0 to 2 . Decimal. Positioning mode = 0: GPS + GLONASS positioning (default) Positioning mode = 1: GLONASS positioning Positioning mode = 2: GPS positioning
Example	
GPRS Sending	@@f27,353358017784062,C67,2*ED\r\n
GPRS Reply	\$\$f28,353358017784062,C67,OK*1E\r\n

3.50 Setting the Microphone and Speaker – C69

GPRS Sending	<i>C69,Microphone volume,Speaker volume</i>
GPRS Reply	C69,OK
Description	Microphone volume: decimal. The parameter value ranges from 0 to 8 . When the parameter value is 0 , the microphone will be muted. Speaker volume: decimal. The parameter value ranges from 0 to 5 . When the parameter value is 0 , the speaker will be muted.
Example	
GPRS Sending	@@f29,353358017784062,C69,1,1*4D\r\n
GPRS Reply	\$\$f28,353358017784062,C69,OK*20\r\n

3.51 Powering Off the Device by a Command – C76

GPRS Sending	C76
GPRS Reply	C76,OK
Description	The device will be turned off automatically after receiving the command.
Example	
GPRS Sending	@@f25,353358017784062,C76*8D\r\n
GPRS Reply	\$\$f28,353358017784062,C76,OK*1E\r\n

3.52 Setting the Power-off Function of the Power Button – C77

GPRS Sending	<i>C77,Value</i>
GPRS Reply	C77,OK
Description	Value = 1: Users can turn off the device by its power button. Value = 0: Users cannot turn off the device by its power button.
Example	
GPRS Sending	@@f27,353358017784062,C77,1*ED\r\n
GPRS Reply	\$\$f28,353358017784062,C77,OK*ED\r\n

3.53 Filtering GPS Data of a Heartbeat Packet – C78

GPRS Sending	C78,X,Y
GPRS Reply	C78,OK
Description	X: Indicates the number of GPS satellites. Y: Indicates the GPS HDOP. Unit: x0.1.
Example	
GPRS Sending	@@f29,353358017784062,C78,4,1*50\r\n
GPRS Reply	\$\$f28,353358017784062,C78,OK*20\r\n

3.54 Obtaining Device Hardware Functions –C83

GPRS Sending	C83
GPRS Reply	C03, <i>Function version</i>
Description	This command is used to check the hardware version (F0 or F1).
Example	
GPRS Sending	@@f25,353358017784062,C83*8B\r\n
GPRS Reply	\$\$f28,353358017784062,C83,OK*1C\r\n

3.55 Deleting an Event in the Buffer – CFF

GPRS Sending	CFF, <i>Quantity of deleted data</i>
GPRS Reply	CFF, <i>CFF data packet</i>
Description	Quantity of deleted data: hexadecimal. In general, the parameter value is 1 . The data identifiers from the device and server must be consistent. Otherwise, data will not be deleted from the device. If data is transmitted in CFF format, send CFF,FFFF to delete all cache records and ensure that the data packet number sent from the server is consistent with that sent from the device. CFF is generally used to send data with some important event alarm and UDP to ensure that the server has received the data;

3.56 Allocating GPRS Cache and GPS Log Storage Space – D73

GPRS Sending	D73,X,Y
GPRS Reply	D73,OK
Description	X: Set the storage percentage of GPRS cache. The parameter value is a decimal character. Y: Set the storage percentage of GPS logs. The parameter value is a decimal character. The sum of X and Y must be 100.
Example	
GPRS Sending	@@W31,353358017784062,D73,50,50*9B\r\n
GPRS Reply	\$\$f28,353358017784062,Dd73,OK*80\r\n

3.57 Reading Device's Firmware Version and SN – E91

GPRS Sending	E91
GPRS Reply	E91,Version,SN
Description	This command is used to read the device's firmware version and SN.
Example	
GPRS Sending	@@W25,353358017784062,E91*7D\r\n
GPRS Reply	\$\$W38,353358017784062,FWV1.00,12345678*1C\r\n

3.58 Restarting the GSM and GPS Modules – F00

GPRS Sending	F00,GSM,GPS
GPRS Reply	F00,OK
Description	GSM: The parameter value is 0 or 1 . 0 : no action. 1 : Restart the GSM module. GPS: The parameter value is 0 or 1 . 0 : no action. 1 : Restart the GPS module.
Example	
GPRS Sending	@@j29,353358017784062,F01,1,1*46\r\n
GPRS Reply	\$\$j28,353358017784062,F00,OK*18\r\n

3.59 Restarting the GSM Module – F01

GPRS Sending	F01
GPRS Reply	F01,OK
Description	This command is used to restart the GSM module.
Example	
GPRS Sending	@@j25,353358017784062,F01*88\r\n
GPRS Reply	\$\$j28,353358017784062,F01,OK*19\r\n

3.60 Restarting the GPS Module – F02

GPRS Sending	F02
GPRS Reply	F02,OK
Description	This command is used to restart the GPS module.
Example	
GPRS Sending	@@Z25,353358017784062,F02*79\r\n
GPRS Reply	\$\$Z28,353358017784062,F02,OK*0A\r\n

3.61 Setting the Mileage and Run Time – F08

GPRS Sending	F08,Run time,Mileage
GPRS Reply	F08,OK
Description	Run time: The parameter value ranges from 0 to 4294967295 . Decimal; unit: second. If you do not want to set the parameter, leave it blank.

	Mileage: The parameter value ranges from 0 to 4294967295 .Decimal; unit: meter. If you do not want to set the parameter, leave it blank.
Example	
GPRS Sending	@@D40,353358017784062,F08,0,4825000*51\r\n
GPRS Reply	\$\$D28,353358017784062,F08,OK*FA\r\n

3.62 Deleting SMS or GPRS Cache Data – F09

GPRS Sending	F09,Number
GPRS Reply	F09,OK
Description	Number = 1: SMS cache data to be sent is deleted. Number = 2: GPRS cache data to be sent is deleted. Number= 3: SMS and GPRS cache data to be sent is deleted.
Example	
GPRS Sending	@@E27,353358017784062,F09,1*CA\r\n
GPRS Reply	\$\$E28,353358017784062,F09,OK*FC\r\n

3.63 Restoring Initial Settings – F11

GPRS Sending	F11
GPRS Reply	F11,OK
Description	This command is used to restore initial settings except the SMS password.
Example	
GPRS Sending	@@[25,353358017784062,F11*7A\r\n
GPRS Reply	\$\$[28,353358017784062,F11,OK*0B\r\n

4 Appendix 1: Parameter ID

No.	Parameter ID	Parameter	Data Analysis	Data Type	Data Length (Byte)
1	0X01	Event code	For details, see the section 1.3 "Event Code."	BYTE	1
2	0X02	Latitude	Unit: millionth of a degree	SINT32	4
3	0X03	Longitude	Unit: millionth of a degree	SINT32	4
4	0X04	Date and time	Unit: second Starting time: 1 January, 2000, 00:00:00 am	DWORD	4
5	0X05	GPS positioning status	01: The GPS positioning is valid. 00: The GPS positioning is invalid.	BYTE	1
6	0X06	Number of satellites	Indicates the number of received GPS satellites.	BYTE	1

7	0X07	GSM signal strength	Value range: 0–31	BYTE	1
8	0X08	Speed	Unit: km/h	WORD	2
9	0X09	Driving direction	Unit: degree When the parameter value is 0 , the direction is due north. The parameter value ranges from 0 to 359 .	WORD	2
10	0X0A	HDOP	Value range: 5–999 Unit: 1/10	WORD	2
11	0X0B	Altitude	Unit: meter	SINT16	2
12	0X0C	Mileage	Indicates the total mileage. Unit: meter	DWORD	4
13	0X0D	Run time	Indicates the total time. Unit: second	DWORD	4
14	0X0E	Base station info	<MCC><MNC><LAC><CELL_ID><RX_LEVEL> MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code. MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code. LAC: 16-bit unsigned; little-endian; indicates the Location Area Code. CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID. RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength.	STRUCT	12
15	0X0F	Base station 1	<MCC><MNC><LAC><CELL_ID><RX_LEVEL> MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code. MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code. LAC: 16-bit unsigned; little-endian; indicates the Location Area Code. CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID. RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength.	STRUCT	12
16	0X10	Base station 2	<MCC><MNC><LAC><CELL_ID><RX_LEVEL> MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code. MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code. LAC: 16-bit unsigned; little-endian; indicates the Location Area Code.	STRUCT	12

			<p>CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID.</p> <p>RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength.</p>		
17	0X11	Base station 3	<p><MCC><MNC><LAC><CELL_ID><RX_LEVEL></p> <p>MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code.</p> <p>MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code.</p> <p>LAC: 16-bit unsigned; little-endian; indicates the Location Area Code.</p> <p>CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID.</p> <p>RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength.</p>	STRUCT	12
18	0X12	Base station 4	<p><MCC><MNC><LAC><CELL_ID><RX_LEVEL></p> <p>MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code.</p> <p>MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code.</p> <p>LAC: 16-bit unsigned; little-endian; indicates the Location Area Code.</p> <p>CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID.</p> <p>RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength.</p>	STRUCT	12
19	0X13	Base station 5	<p><MCC><MNC><LAC><CELL_ID><RX_LEVEL></p> <p>MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code.</p> <p>MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code.</p> <p>LAC: 16-bit unsigned; little-endian; indicates the Location Area Code.</p> <p>CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID.</p> <p>RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength.</p>	STRUCT	12
20	0X15	Input port status	<p>Indicates the status values of eight input ports.</p> <p>Bits 0–7 correspond to status of input ports 1–8.</p>	BYTE	1
21	0X1A	AD5	External power analog <AD5>	WORD	2
22	0X1B	Geo-fence number	The data is available only when the GPRS event code is 20 or 21.	BYTE	1

23	0X1C	System flag	<p>The data is available only when the GPRS event code is 35.</p> <p>Bit 0: Whether to modify the EEP2 parameter. When the parameter value is 1, the EEP2 parameter is modified.</p> <p>Bit 1: Indicates the ACC status. When the parameter value is 1, the ACC is on.</p> <p>Bit 2: Indicates the anti-theft status. When the parameter value is 1, the device is in the arming state.</p> <p>Bit 3: vibration flag. When the parameter value is 1, the device is vibrating.</p> <p>Bit 4: motion flag. When the parameter value is 1, the device is moving.</p> <p>Bit 5: Whether to connect the external power supply. When the parameter value is 1, the external power supply is connected.</p> <p>Bit 6: Whether the device is charging. When the parameter value is 1, the device is charging.</p> <p>Bit 7: Whether to enable the sleep mode. When the parameter value is 1, the sleep mode is enabled.</p> <p>Bit 8: Whether to connect the FMS. When the parameter value is 1, the FMS is connected.</p> <p>Bit 9: Whether to enable the FMS function. When the parameter value is 1, the FMS function is enabled.</p> <p>Bits 10–31: reserved.</p>	DWORD	4
24	0X1D	WiFi info 1	<p><MAC><RSSI></p> <p>MAC: Contains 6 bytes; indicates the MAC address of the WiFi network.</p> <p>RSSI: signed; 2 bytes; little-endian; indicates the WiFi signal strength.</p>	STRUCT	8
25	0X1E	WiFi info 2	<p><MAC><RSSI></p> <p>MAC: Contains 6 bytes; indicates the MAC address of the WiFi network.</p> <p>RSSI: signed; 2 bytes; little-endian; indicates the WiFi signal strength.</p>	STRUCT	8
26	0X1F	WiFi info 3	<p><MAC><RSSI></p> <p>MAC: Contains 6 bytes; indicates the MAC address of the WiFi network.</p>	STRUCT	8

			RSSI: signed; 2 bytes; little-endian; indicates the WiFi signal strength.		
27	0X20	WiFi info 4	<p><MAC><RSSI></p> <p>MAC: Contains 6 bytes; indicates the MAC address of the WiFi network.</p> <p>RSSI: signed; 2 bytes; little-endian; indicates the WiFi signal strength.</p>	STRUCT	8
28	0X21	WiFi info 5	<p><MAC><RSSI></p> <p>MAC: Contains 6 bytes; indicates the MAC address of the WiFi network.</p> <p>RSSI: signed; 2 bytes; little-endian; indicates the WiFi signal strength.</p>	STRUCT	8
29	0X22	WiFi info 6	<p><MAC><RSSI></p> <p>MAC: Contains 6 bytes; indicates the MAC address of the WiFi network.</p> <p>RSSI: signed; 2 bytes; little-endian; indicates the WiFi signal strength.</p>	STRUCT	8
30	0X4B	Network Information	<p>The network information that the device is connecting to.</p> <p><ID_Len><version><Type><DescriptorLen><Descriptor></p> <p>ID Len: 1 byte</p> <p>Version: 1 byte, 0x01 by default</p> <p>Type: The type of network being connected, 1 byte. 0: No Network, 1: Mobile Network, 2:WIFI (Reserved), 3: LAN (Reserved)</p> <p>DescriptorLen: the length of the network descriptor, 1 byte, range: 0~32</p> <p>Descriptor: Network descriptor, string</p> <p>Data type:STRUCT</p>	STRUCT	
31	0X23	WiFi info 7	<p><MAC><RSSI></p> <p>MAC: Contains 6 bytes; indicates the MAC address of the WiFi network.</p> <p>RSSI: signed; 2 bytes; little-endian; indicates the WiFi signal strength.</p>	STRUCT	8
32	0xFE36	Call record	<p>1C 01 01 31 33 32 35 30 30 36 32 37 35 31 30 00 00 00 00 09 30 14 07 08 19 10 00 00 00</p> <p>1C: The data length is 28 bytes</p> <p>01: Indicates the protocol version; contains one byte.</p> <p>01: Indicates the calling type. 01: Two-way calling. 02: Listen-in.</p>	STRUCT	

			<p>31 33 32 35 30 30 36 32 37 35 31 30 00 00</p> <p>00 00: Indicates the phone number. The data length is 16 bytes.</p> <p>09 30 14 07 08 19: Indicates the date; little-endian. Converted digits: 190807-14:30:09.</p> <p>10 00 00 00: Indicates the calling time; little-endian.</p>		
33	0xFE37	Step	<p>09 00 00 00</p> <p>The number of steps is 9.</p>	dword	4
34	0xFE39	WiFi zone	<p>05 01 31 32 33 34</p> <p>05: The data length is 5 bytes.</p> <p>01: Indicates the protocol version.</p> <p>31 32 33 34: Indicates the WiFi geo-fence name; contains a maximum of 64 bytes.</p>	STRUCT	
35	0xFE40	Alarm clock info	<p>04 01 31 32 33</p> <p>04: The data length is 5 bytes.</p> <p>01: Indicates the protocol version.</p> <p>31 32 33: Indicates the alarm clock info; contains a maximum of 32 bytes.</p>	STRUCT	
36	0xFE69	Battery percentage	<p>0x2E</p> <p>The remaining battery power is 46%.</p>	BYTE	1

5 Appendix 2: Data Type

Data Type	Description	Transmission Rule
BYTE	Unsigned; 1 byte (8 bits)	The data is transmitted as a stream of bytes.
WORD	Unsigned; 2 bytes (16 bits)	Little-endian
DWORD	Unsigned; 4 bytes (32 bits)	Little-endian
BYTE[n]	<i>n</i> bytes	The data is transmitted as a stream of bytes.
BCD[n]	BCD-8421 encoding; <i>n</i> bytes	The data is transmitted as a stream of bytes.
STRING	GBK encoding If no data is generated, leave the parameter blank.	Little-endian
SINT8	Signed; 1 byte	The data is transmitted as a stream of bytes.
SINT16	Signed; 2 bytes	Little-endian
SINT32	Signed; 4 bytes	Little-endian
STRUCT	Depend on data descriptions.	Transmit data based on a struct.

If you have any questions, do not hesitate to email us at hello@mami.co.za