MEITRACK Trackids GPRS Protocol

Change History

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Contents

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><*Checksum>\r\n

- GPRS command sent from the tracker to the server:

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

Note: Real-time data is in AAA format, while buffer data is in CCC format.

1.2 Tracker Command Format

Data has two formats: AAA and CCC.

Real-time data is in AAA format, which is as follows:

$$<Data identifier><Data length>,<IMEI>,AAA,<Event code><Latitude><Longitude><Date and time><Positioning status><Number of satellites><GSM signal strength><Speed><Direction><Horizontal positioning accuracy><Altitude><Mileage><Total time><Base station info><I/O port status><Analog input value><Geo-fence number/System flag><*Checksum>\r\n

Buffer data is in CCC format, which is as follows:

$$<Data identifier><Data length>,<IMEI>,CCC,<Protocol version><Longitude and latitude packet length><Number of remaining caches><Longitude and latitude packet 1>……<Longitude and latitude packet n><*Checksum>\r\n

Note:

1. A comma (,) is used to separate data characters. The character type is the American Standard Code for Information Interchange (ASCII). (Hexadecimal is represented as 0x2C.)

2. Do not use special characters such as < and > in a command.

3. Size of a GPRS data packet: 91–976 bytes.

4. The maximum number of longitude and latitude packets is 18. When the number of tracker caches exceeds 18, a maximum of 18 cache data packets can be uploaded. The minimum number of data packages is 1. When there is only one cache or a piece of scheduled data, the data will be sent immediately. The command format of a longitude and latitude packet is as follows:

   <Event code><Latitude><Longitude><Date and time><Positioning status><Number of satellites><GSM signal strength><Speed><Direction><Horizontal positioning accuracy><Altitude><Mileage><Total time><Base station info><I/O port status><Analog input value><Geo-fence number/System flag>

Example 1: If a piece of real-time positioning data is generated, the data will be sent immediately. The data format is as follows:

$$<Data identifier><Data length>,<IMEI>,AAA,<Event code><Latitude><Longitude><Date and time><Positioning status><Number of satellites><GSM signal strength><Speed><Direction><Horizontal positioning accuracy><Altitude><Mileage><Total time><Base station info><I/O port status><Analog input value><Geo-fence number/System flag><*Checksum>\r\n

Example 2: If three pieces of cache data exist in the tracker, these data will be uploaded in CCC compression mode. The data format is as follows:

$$<Data identifier><Data length>,<IMEI>,CCC,<Protocol version><Longitude and latitude packet length><Number of remaining caches><Event code><Latitude><Longitude><Date and time><Positioning Status><Number of satellites><GSM signal strength><Speed><Direction><Horizontal positioning accuracy><Altitude><Mileage><Total time><Base station info><I/O port status><Analog input value><Geo-fence number/System flag><Event code><Latitude><Longitude><Date and time><Positioning status><Number of satellites><GSM signal strength><Speed><Direction><Horizontal positioning accuracy><Altitude><Mileage><Total time><Base station info><I/O port status><Analog input value><Geo-fence number/System flag><Event code><Latitude><Longitude><Date and time><Positioning status><Number of satellites><GSM signal strength><Speed><Direction><Horizontal positioning accuracy><Altitude><Mileage><Total time><Base station info><I/O port status><Analog input value><Geo-fence number/System flag><*Checksum>\r\n

5.   After receiving CCC data from the tracker, the server sends a command for responding. You can delete data that has been uploaded to release disk space and then continue data uploading.

The format of the server response command is as follows:

@@<Data identifier><Data length>,<IMEI>,CCC,<Quantity of deleted data><*Checksum>\r\n

The data identifier in the command format must be consistent with that uploaded by the tracker. Otherwise, the response fails.

For example, when the server makes a response that the tracker needs to delete three pieces of received data, the command format is as follows:

@@<Data identifier><Data length>,<IMEI>,CCC,3<* Checksum>\r\n

Descriptions about GPRS messages from the tracker are as follows:

Parameter	Description	Example
@@	Indicates the GPRS data packet header from the server to the tracker. The header type is ASCII. (Hexadecimal is represented as 0x40.)	@@
$$	Indicates the GPRS data packet header from the tracker to the server. The header type is ASCII. (Hexadecimal is represented as 0x24.)	$$
Data identifier	Has one byte. The type is the ASCII, and its value ranges from 0x41 to 0x7A.	Q
Data length	Indicates the length of characters from the first comma (,) to \r\n. Decimal. Example: $$<Data identifier><Data length>,<IMEI>,<Command type>,<Command><* Checksum>\r\n	970
IMEI	Indicates the tracker IMEI number. The number type is ASCII. It has 15 digits generally.	369800013220020
Command type	Hexadecimal 3 bytes For details, see chapter 2 and chapter 3.	CCC
Protocol version	Indicates the data compression protocol version. The default protocol version is 0x0102 (hexadecimal and little-endian).	0201
Longitude and latitude packet length	Contains two bytes and is hexadecimal and little-endian (default: 0x3400). The length of each longitude and latitude packet is 52.	34 00

Number of remaining caches	Indicates the total number of tracker GPRS caches, including the number of cache data packets that are sent at the moment. If the tracker sends only one scheduled data packet, the number of remaining caches is 1. Four bytes, hexadecimal, and little-endian	54 00 00 00
Event code	One byte and hexadecimal For details, see section 1.3 "Event Code."	1F That is, event 31
Latitude	Unit: millionth of a degree Hexadecimal Four bytes Little-endian	0E 88 57 01 22513678 /1000000 = 22.513678°
Longitude	Unit: millionth of a degree Hexadecimal Four bytes Little-endian	22 5F CC 06 114056994 /1000000 = 114.056994°
Date and time	Hexadecimal Four bytes Little-endian Unit: second Calculate the date and time by the mktime mode. The start point is 0:00:00 on January 1, 2000.	F5 74 A4 19 That is, 430208245 seconds.
Positioning status	Indicates the GPS signal status. **A** = Valid **V** = Invalid One byte and hexadecimal	A The GPS is valid.
Number of satellites	Indicates the number of received GPS satellites. Hexadecimal and one byte	05 Five GPS satellites are received.
GSM signal strength	Its value ranges from 0x00 to 0x1F (that is, 0 to 31) Hexadecimal and one byte	14 The signal strength is 20.
Speed	Unit: km/h Hexadecimal, two bytes, and little-endian	58 00 The speed is 88 km/h.
Direction	Indicates the driving direction. The unit is degree. When the value is **0**, the direction is north. The value ranges from 0 to 359. Hexadecimal, two bytes, and little-endian	2D 00 45 degree, indicating the location is at northeast. 5A 00 90 degree, indicating the location is at east.
Horizontal positioning accuracy	Unit: 1/10. The smaller the value is, the more the accuracy is. Hexadecimal, two bytes, and little-endian The value ranges from 0.5 to 99.9. When the accuracy value is **0**, the signal is invalid. 1 Perfect	12 00 18/10 = 1.8

	2–3 Wonderful 4-6 Good 7-8 Medium 9-20 Below average 21-50 Poor	
Altitude	Unit: m Two bytes, hexadecimal, and little-endian	28 00 The altitude is 40m.
Mileage	Unit: meter Hexadecimal, four bytes, and little-endian The value is the accumulative mileage value.	12 39 0C 00 The mileage is 801042m.
Run time	Unit: second Hexadecimal, four bytes, and little-endian The value is the accumulative duration value.	81 08 00 00 The run time is 2177 seconds.
Base station info	Eight bytes and big-endian The base information includes: MCC|MNC|LAC|CI The MCC and MNC are hexadecimal, while the LAC and CI are decimal. Note: No base station information exists in a SMS.	CC 01 00 00 62 30 54 46 The base station information is 460|0|3062|4654.
I/O port status	Two bytes, hexadecimal, and big-endian Status values of eight input ports and eight output ports Bit0 to Bit7 corresponds to status of output ports 1 to 8. Bit8 to Bit15 corresponds to status of input ports 1 to 8.	04 21 Equal to 0000 0100 0010 0001
Analog input value	Six bytes, hexadecimal, and little-endian Analog<AD1>|Battery analog<AD4>|External power analog<AD5> **Voltage formula of battery analog (AD4):** AD4/100 **Voltage formula of external power (AD5)** AD5/100	00 00 79 01 00 00 AD4/100 = 377/100 = 3.77 V
Geo-fence number	Four bytes, hexadecimal, and little-endian Only available for GPRS event code 21. The normal number is 0.	00 00 00 00
*	Separates commands from checksums. One byte and ASCII (Hexadecimal is represented as 0x2A)	*
Checksum	Two bytes. The parameter indicates the sum of all data packets (excluding the checksum and ending mark). It is a hexadecimal character. Example: $$<Data identifier><Data length>,<IMEI>,<Command type>,<Command><* Checksum>$$\r\n	5B
\r\n	Two bytes. The parameter is an ending character. The type is ASCII. (Hexadecimal is represented as 0x0d 0x0a.)	\r\n

1.3 Event Code

Event Code	Event	Default SMS Header (Max 16 Bytes)	Default GPRS Flag	Default SMS Flag
1	SOS Pressed	SOS	Y	Y
17	Low Battery	Low Battery	Y	N
19	Speeding	Speeding	Y	N
20	Enter Geo-fence	Enter Fence	Y	N
21	Exit Geo-fence	Exit Fence	Y	N
24	Lose GPS Signal	Lose GPS Signal	N	N
25	GPS Signal Recovery	GPS Recovery	N	N
26	Enter Sleep	Enter sleep	N	N
27	Exit Sleep	Exit sleep	N	N
29	Device Reboot	Turn on	Y	N
31	Heartbeat	(only available for GPRS)	Y	N
32	Heading Change	Heading Change	Y	N
33	Distance Interval Tracking	Distance	Y	N
34	Reply Current (Passive)	Now	A/A	A/A
35	Time Interval Tracking	Interval	A/A	A/A
40	Power Off	Turn off	Y	N

Note:

1. Data in the above figure is the default settings before delivery.
2. **Y** indicates that a parameter is set. **N** indicates that a parameter is not set. **N/A** indicates that a parameter is unavailable or reserved. **A/A** indicates that a parameter cannot be changed and will be always showed.

2 Command Details

2.1 Real-Time Location Query – A10

GPRS Setting	A10
GPRS Reply	AAA,34,(-)*Latitude*,(-)*Longitude*,*Date and time*,*Positioning status*,*Number of satellites*,*GSM signal strength*,*Speed*,*Direction*,*Horizontal positioning accuracy*,*Altitude*,*Mileage*,*Run time*,*Base station info*,*I/O port status*,*Analog input value*
Description	**34**: indicates the GPRS command event code. For more information about the event flag, see section 1.3 "Event Code." Note: This command type replied by the tracker is AAA, not A10. Except for A10, the command type sent is the same as that relied from the tracker to the server.
Example	
GPRS Sending	@@u25,369800014040182,A10*7E\r\n
GPRS Reply	$$u125,369800014040182,AAA,34,22.514820,114.052942,140428022549,A,5,22,0,0,17,59,380,147,460|1|252f|3e02,0200,000c|||01a1|0000*bf\r\n

2.2 Tracking by Time Interval – A12

GPRS Setting	A12,*Interval*,*Number of reporting times*
GPRS Reply	A12,OK
Description	The interval is in unit of 10 seconds. When the interval is **0**, the scheduled GPRS reporting function is disabled. The maximum time interval is 65535 x 10 seconds. When the number of reporting times is 0, data has being reported (generally for platform positioning). When the number of reporting times is a value ranging from 1 to 65535, set the number of reporting times. When the number of reporting times reaches the preset value, reporting stops. *Note:* 1. *The data uploading interval is 1 minute by default.* 2. *Data is uploaded in CCC format. For more information about the data uploading format, see the CCC command description.*
Example	
GPRS Sending	@@A29,369800014040182,A12,6,0*0E\r\n
GPRS Reply	$$A28,369800014040182,A12,OK*dd\r\n *After the above command is run successfully, the tracker will send the following GPRS data packet to the platform every 1 minute (data format: see the example in section 1.2).* $$U86,369800013320014,CCC, 02 01 34 00 01 00 00 00 **23** 41 87 57 01 9B 5F CC 06 EA 3E 3C 1A 01 0A 1F 00 00 00 00 09 00 37 00 99 C1 08 00 05 AB 0E 00 CC 01 00 00 92 27 89 0E 02 00 13 00 A8 01 00 00 00 00 00 00 *A4\r\n

2.3 Setting the Heading Change Report Function – A13

GPRS Setting	A13,*Angle*
GPRS Reply	A13,OK
Description	When the driving angle exceeds the preset value, the tracker will send an updated location report to the server through GPRS, which ensures a smoother route on the platform. When the angle is **0**, the heading change report function is disabled (default). When the angle is greater than 0, the function is enabled. Value range: 1–359.
Example	
GPRS Sending	@@u29,369800014040182,A13,120*44\r\n
GPRS Reply	$$u28,369800014040182,A13,OK*12\r\n *After the above command is run successfully, if the heading change angle is greater than 120 degree, the tracker will send a GPRS data packet about the heading change report (event code 32) to the server.*

2.4 Tracking by Distance – A14

GPRS Setting	A14,*Distance*
GPRS Reply	A14,OK
Description	When the driving distance is **0**, the distance tracking function is disabled (default).
	When the driving distance is greater than 0, the function is enabled. Value range: 1–4294967295; unit: meter.
	Note: If the GPRS scheduled tracking and distance tracking functions are both set, reporting complies with the "first reach first report" rule, and both the time interval and distance will be reset to 0 until the next report.
Example	
GPRS Sending	@@Z30,369800014040182,A14,1000*50\r\n
GPRS Reply	$$Z28,369800014040182,A14,OK*f8\r\n
	After the above command is run successfully, if the driving distance reaches 1000m, the tracker will send a GPRS data packet about GPRS distance tracking (event code 33) to the server.

2.5 3D-Shake Wake Up – A19

GPRS Setting	A19,*Enable/Disable 3D-shake wake up flag*
GPRS Reply	A19,OK
Description	When wakeup is not required in the sleep mode, *Enable/Disable 3D-shake wake up flag* is set to **0**.
	When vibration and wakeup are required in the deep sleep mode, *Enable/Disable 3D-shake wake up flag* is set to **1**.
	The default value is **1**.
Example	
GPRS Sending	@@H55,369800014040182,A19,1*6B\r\n
GPRS Reply	$$H55,369800014040182,A19,OK*E4\r\n

2.6 Setting GPRS Parameters – A21

GPRS Setting	A21,*Connection mode,IP address,Port,APN,APN user name,APN password*
GPRS Reply	A21,OK
Description	When the connection mode is **0**, the GPRS function is disabled.
	When the connection mode is **1**, the GPRS function is enabled, and the TCP/IP reporting mode is used.
	IP address: IP address or domain name. A maximum of 32 bytes are supported.
	Port: a maximum of 5 digits.
	APN/APN user name/APN password: a maximum of 32 bytes respectively.
	If no user name and password are required, leave them blank.
Example	
GPRS Sending	@@H55,369800014040182,A21,1,server.meigps.com,8800,CMNET,,*8B\r\n

GPRS Reply	$$H28,369800014040182,A21,OK*E4\r\n

2.7 Reading All Authorized Phone Numbers – A70

GPRS Setting	A70
GPRS Reply	A70,*Authorized phone number 1,Authorized phone number 2, Authorized phone number 3*
Description	Read all authorized phone numbers.
Applicable Model	Trackids
Example	
GPRS Sending	@@K25,369800014040182,A70*5A\r\n
GPRS Reply	$$K61,369800014040182,A70,13811111111,13811112222,13811113333*1e\r\n

2.8 Setting a Combined Function Phone Number – A71

GPRS Setting	A71,*Phone number 1,Phone number 2,Phone number 3*
GPRS Reply	A71,OK
Description	Phone number: A phone number has a maximum of 16 bytes. If no phone numbers are set, leave them blank. Phone numbers are empty by default. After you set phone numbers, some events will be set by default. When an event is generated, the tracker will send an SMS report to phone numbers. These events includes: SOS Pressed, Speeding, Enter Geo-fence, and Exit Geo-fence. When the SOS button is pressed, the tracker will dial phone numbers 1, 2, and 3 in sequence. The tracker stops dialing when a phone number responds.
Applicable Model	Trackids
Example	
GPRS Sending	@@p61,369800014040182,A71,13811111111,13811112222,13811113333*7C\r\n
GPRS Reply	$$p28,369800014040182,A71,OK*11\r\n

2.9 Setting APN Parameters – A81

GPRS Setting	A81,APN,APN-USNAME,APN-PASSWD
GPRS Reply	A81,OK
Description	APN: max 32 bytes APN-USNAME: indicates the APN user name; max 32 bytes APN-PASSWD: indicates the APN password; max 32 bytes For example: "0000,A81,CMNET,," indicates that the APN is CMNET, and the user name and password are blank. Note: You must enter a complete command (3 commas are a must). If there is a parameter after a comma, it means that the parameter is changed. If not, the parameter set before is cleared.
Applicable Model	Trackids

Example	
GPRS Sending	@@X41,369800013220016,A81,CMNET,NAME,0000*65\r\n
GPRS Reply	$$X28,369800013220016,A81,OK*ee\r\n

2.10 Setting a Geo-Fence – B05

GPRS Setting	B05,*Geo-fence number,Latitude,Longitude,Radius,In geo-fence alarm,Out geo-fence alarm*
GPRS Reply	B05,OK
Description	Geo-fence number: 1–8. A maximum of eight geo-fences can be set. Latitude: latitude of the geo-fence center; decimal; accurate to 6 digits after the decimal point. If there are only 4 digits after the decimal point, add two digits 0. Otherwise, the command cannot be used successfully. Longitude: longitude of the geo-fence center; decimal; accurate to 6 digits after the decimal point. If there are only 4 digits after the decimal point, add two digits 0. Otherwise, the command cannot be used successfully. Radius: The value ranges from 1 to 4294967295. The unit is meter. When the In Geo-fence alarm is **0**, the alarm function is disabled. When the In Geo-fence alarm is **1**, the alarm function is enabled. When the Out Geo-fence alarm is **0**, the alarm function is disabled. When the Out Geo-fence alarm is **1**, the alarm function is enabled.
Example	
GPRS Sending	@@n57,369800013220016,B05,1,22.513701,114.056915,1000,1,1*99\r\n
GPRS Reply	$$n28,369800013220016,B05,OK*08\r\n*If the tracker enters or exits the geo-fence (latitude: 22.513701; longitude: 114.079882; radius: 1000m), it will send a GPRS data packet about the in or out geo-fence alarm to the server.*

2.11 Deleting a Geo-Fence – B06

GPRS Setting	B06,*Geo-fence number*
GPRS Reply	B06,OK
Description	Geo-fence number: 1–8. Only one geo-fence can be deleted each time by SMS or GPRS command.
Example	
GPRS Sending	@@s27,369800013220016,B06,1*DC\r\n
GPRS Reply	$$s28,369800013220016,B06,OK*0e\r\n *After the command is run successfully, the first geo-fence will be deleted.*

2.12 Setting the Speeding Alarm Function – B07

GPRS Setting	B07,*Driving speed*
GPRS Reply	B07,OK

Description	When the driving speed is **0**, the speeding alarm function is disabled (default).
	When the driving speed is greater than 0, the function is enabled. Value range: 1–255; unit: km/h. When the driving speed reaches the preset value, a speeding alarm will be generated.
Example	
GPRS Sending	@@W28,369800013220016,B07,60*F7\r\n
GPRS Reply	$$W28,369800013220016,B07,OK*f3\r\n
	After the command is run successfully, if the tracker driving speed reaches 60 km/h, it will send a GPRS data packet (event code 19) about the speeding alarm to the server.

2.13 Setting the SMS Time Zone – B35

GPRS Setting	B35,*SMS minute*
GPRS Reply	B35,OK
Description	The default time zone of the tracker is GMT 0. You can run the B35 command to change the SMS report time zone to the local time zone. The SMS report time zone is different from the GPRS data packet time zone.
	When **SMS minute** is **0**, the time zone is **GMT 0**.
	When **SMS minute** is a value ranging from -720 to 780, set time zones.
Example	
GPRS Sending	@@O29,369800013220016,B35,480*27\r\n
GPRS Reply	$$O28,369800013220016,B35,OK*EC\r\n
	After the command is run successfully, the tracker SMS time zone is changed to UTC+08:00 (China time zone).

2.14 Setting the GPRS Time Zone – B36

GPRS Setting	B36,*GPRS minute*
GPRS Reply	B36,OK
Description	When **GPRS minute** is **0**, the time zone is **GMT 0** (default). The MS02 can automatically detect the user time zone, so that the GPRS time zone does not need to be changed. Otherwise, inaccurate data occurs.
	When **GPRS minute** is a value ranging from -720 to 780, set time zones.
Example	
GPRS Sending	@@P29,369800013220016,B36,480*29\r\n
GPRS Reply	$$P28,369800013220016,B36,OK*EE\r\n
	After the command is run successfully, the GPRS time zone is changed to UTC+08:00 (China time zone).

2.15 Setting SMS Event Characters – B91

GPRS Setting	B91,*Event code,SMS header*

GPRS Reply	B91,OK
Description	Event code: See section 1.3 "Event Code."
	SMS header: at most 16 bytes. See section 1.3 "Event Code."
	Note: only English characters can be sent.
Example	
GPRS Sending	@@t42,369800013220016,B91,2,input2 active*24\r\n
GPRS Reply	$$t28,369800013220016,B91,OK*14\r\n

2.16 Setting a GPRS Event Flag – B92

GPRS Setting	B92,*GPRS event flag*
GPRS Reply	B92,OK
Description	Set one or multiple GPRS event flags.
	For more information about event flags, see section 1.3 "Event Code."
	GPRS event flag: 16 hexadecimal strings (64 bits).
	High bit: indicates the 64th event flag (bit 63).
	Low bit: indicates 1st event (SOS) flag (bit 0).
Example	
GPRS Sending	@@t42,369800013220016,B92,0380000FD9DF0707*24\r\n
GPRS Reply	$$t28,369800013220016,B92,OK*14\r\n

2.17 Reading a GPRS Event Flag – B93

GPRS Setting	B93
GPRS Reply	B93,*GPRS event code flag*
Description	Read a GPRS event code flag.
Example	
GPRS Sending	@@M25,369800013220016,B93*5D\r\n
GPRS Reply	$$M42,369800013220016,B93,0380000fd9df0707*46\r\n

2.18 Setting Event Authorization – B99

GPRS Setting	B99,<SMS>/<0>,<Phone number location>/<Authorized phone number>,<Operation code>, [Event code 1]……[Event code n]
	B99,<CALL>/<1>,<Phone number location>/<Authorized phone number>,<Operation code>, [Event code 1]……[Event code n]
	B99,<GPRS>/<2>,<Operation code>, [Event code 1]……[Event code n]
	B99,<BUZZER>/<4>,<Operation code>, [Event code 1]……[Event code n].
GPRS Reply	B99,<SMS>/<0>,<Phone number location>,<Authorized phone number>, [Event code 1]……[Event code n]
	B99,<CALL>/<1>,<Phone number location>,<Authorized phone number>, [Event code 1]……[Event code n]

	B99,<GPRS>/<2>,[*Event code 1*]……[*Event code n*]
	B99,<BUZZER>/<4>,[*Event code 1*]……[*Event code n*]
Description	Fields SMS, CALL, GPRS, 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.
	Note: Ensure that an authorized phone number is set by using the A71 command or the parameter configuration tool before the B99 command is used to set the SMS/CALL event code. The tracker compares the authorized phone number issued by B99 with the authorized phone number (excluding +86 characters) of the tracker. If the phone numbers are the same, the new event code will be stored. If the phone numbers are inconsistent, an error SMS will be sent.
Applicable Model	Trackids
Example	
GPRS Sending	@@B34,863070010825791,B99,gprs,get*BC\r\n
GPRS Reply	$$B33,863070010825791,B99,1,17,18*B5\r\n

2.19 Set the Data Compression Format – CCC

GPRS Setting	CCC,<*Protocol version*><*Longitude and latitude packet length*><*Number of remaining caches*><*Longitude and latitude packet 1*>……<*Longitude and latitude packet n*>
Description	The command format of a longitude and latitude packet is as follows: <*Longitude and latitude packet length*><*Number of remaining caches*><*Event code*><*Latitude*><*Longitude*><*Date and time*><*Positioning status*><*Number of satellites*><*GSM signal strength*><*Speed*><*Direction*><*Horizontal positioning accuracy*><*Altitude*><*Mileage*><*Total time*><*Base station info*><*I/O port status*><*Analog input value*><*Geo-fence number/System flag*>.
	When an event is generated, the tracker will report the event to the server.
	After receiving the data packet in CCC format, the server needs to confirm the information. Then it can upload the subsequent data continuously. The format of the command replied is as follows:
	@@<Data identifier><Data length>,<IMEI>,CCC,<Quantity of deleted data><*Checksum>\r\n
	For details, see section 1.2 "Tracker Command Format."
	Note:
	1. Do not input special characters such as < and > when editing a command.
	2. Traffic of a GPRS data packet: 91–976 bytes.
	3. The maximum number of longitude and latitude packets is 18. When the number of tracker caches exceeds 18, a maximum of 18 cache data packets can be uploaded. The minimum number of data packages is 1. When there is only one cache or a piece of scheduled data, the data will be sent immediately.
Applicable Model	Trackids/T322X
Example	
GPRS Reply	*When scheduled event 35 is generated, the tracker will sent the following information to*

	the server:
	$$U86,369800013320014,CCC,0201340001000000**23**418757019B5FCC06EA3E3C1A010
	A1F000000000900370099C1080005AB0E00CC0100009227890E02001300A8010000000
	00000*A4\r\n

2.20 Reading the Tracker Firmware Version and SN – E91

GPRS Setting	E91
GPRS Reply	E91,*Version*,*SN*
Description	Read the tracker's firmware version and SN.
Example	
GPRS Sending	@@f25,369800013220016,E91*77\r\n
GPRS Reply	$$f44,369800013220016,E91,CV207,43232220013*fd\r\n

2.21 Clearing the Mileage and Run Time ― F06

GPRS Setting	F06,*Number*
GPRS Reply	F06,OK
Description	When the number is **1**, the mileage is cleared.
	When the number is **2**, the run time is cleared.
	When the number is **3**, the mileage and run time are cleared.
Example	
GPRS Sending	@@L27,369800013220016,F06,1*B9\r\n
GPRS Reply	$$L28,369800013220016,F06,OK*eb\r\n

2.22 Setting the Mileage and Run Time ― F08

GPRS Setting	F08,*Run time*,*Mileage*
GPRS Reply	F08,OK
Description	Run time:
	● Value range: [0, 4294967295]
	● Decimal
	● Unit: second
	If you do not want to set the parameter, leave it blank.
	Mileage:
	● Value range: [0, 4294967295]
	● Decimal
	● Unit: meter
	If you do not want to set the parameter, leave it blank.
Example	
GPRS Sending	@@n36,369800013220016,F08,3600,10000*92\r\n

GPRS Reply	$$n28,369800013220016,F08,OK*0f\r\n

2.23 Deleting SMS/GPRS Cache Data – F09

GPRS Setting	F09,*Number*
GPRS Reply	F09,OK
Description	If the number is **1**, SMS cache data to be sent is deleted.
	If the number is **2**, GPRS cache data to be sent is deleted.
	If the number is **3**, SMS and GPRS cache data to be sent is deleted.
Example	
GPRS Sending	@@T27,369800013220016,F09,3*C6\r\n
GPRS Reply	$$T28,369800013220016,F09,OK*f6\r\n

2.24 Restoring Initial Settings – F11

GPRS Setting	F11
GPRS Reply	F11,OK
Description	Restore initial settings except the SMS password.
Example	
GPRS Sending	@@G25,369800013220016,F11*51\r\n
GPRS Reply	$$G28,369800013220016,F11,OK*E2\r\n

If you have any questions, do not hesitate to email us at info@meitrack.com.

Appendix

Examples for scheduled data and cache data reporting:

a)   The tracker sends a piece of scheduled data:

$$U86,369800013320014,CCC, 02 01 34 00 01 00 00 00 23 41 87 57 01 9B 5F CC 06 EA 3E 3C 1A 01 0A 1F 00 00 00 00 09 00 37 00 99 C1 08 00 05 AB 0E 00 CC 01 00 00 92 27 89 0E 02 00 13 00 A8 01 00 00 00 00 00 00 00 00 *A4\r\n

The server replies the following information after receiving the above data:

@@U27,369800013320014,CCC,1*DE\r\n

b)   The tracker sends 6 pieces of cache data:

$$V346,369800013320014,CCC, 02 01 34 00 06 00 00 00 23 41 87 57 01 9B 5F CC 06 EA 3E 3C 1A 01 0A 1F 00 00 00 00 09 00 37 00 99 C1 08 00 05 AB 0E 00 CC 01 00 00 92 27 89 0E 02 00 13 00 A8 01 00 00 00 00 00 00 00 00 23 41 87 57 01 9B 5F CC 06 08 3F 3C 1A 01 0A 1F 00 00 00 00 09 00 37 00 99 C1 08 00 23 AB 0E 00 CC 01 00 00 92 27 89 0E 02 00 13 00 A8 01 00 00 00 00 00 00 00 1F 41 87 57 01 9B 5F CC 06 26 3F 3C 1A 01 0A 1F 00 00 00 00 09 00 37 00 99 C1 08 00 41 AB 0E 00 CC 01 00 00 92 27 89 0E 02 00 13 00 A8 01 00 00 00 00 00 00 00 23 41 87 57 01 9B 5F CC 06 26 3F 3C 1A 01 0A 1F 00 00 00 00 09 00 37 00 99 C1 08 00 41 AB 0E 00 CC 01 00 00 92 27 89 0E 02 00 13 00 A8 01 00 00 00 00 00 00 00 23 41 87 57 01 9B 5F CC 06 44 3F 3C 1A 01 0A 1F 00 00 00 00 09 00 37 00 99 C1 08 00 5F AB 0E 00 CC 01 00 00 92 27 89 0E 02 00 13 00 A8 01 00 00 00 00 00 00 00 23 41 87 57 01 9B 5F CC 06 63 3F 3C 1A 01 0A 1F 00 00 00 00 09 00 37 00 99 C1 08 00 7D AB 0E 00 CC 01 00 00 92 27 89 0E 02 00 13 00 A8 01 00 00 00 00 00 00 00*65\r\n

The server replies the following information after receiving the above data:

@@V27,369800013320014,CCC,6*E4\r\n