MEITRACK GPRS Protocol

Applicable Model: MT90/MVT100/MVT340/T355/

MVT380/MVT800/MVT600/T1/T3/

T333/TC68S/T322X/T311

Change History

File Name	MEITRACK GPRS Protocol		Created By	Renny Lee
Project	MT90/MVT100/MVT340/T355/ MVT380/MVT800/MVT600/T1/T3/ T333/TC68S/T322X/T311		Creation Date Update Date	2010-07-31 2015-11-23
Subproject	GPRS Protocol		Total Pages	40
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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

1.2 Tracker Command Format

$$<Data identifier><Data length>,<IMEI>,<Command type>,<Event code>,<(-)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>,<RFID>/<Picture name>/<Geo-fence number>/<Temperature sensor No./<Assisted event info>,<Customized data>,<Protocol version>,<Fuel percentage>,<Temperature sensor 1 value|Temperature sensor 2 value|……Temperature sensor n value><*Checksum>\r\n

Note:

- 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.)
- Do not use special characters such as < and > in a command.
- All multi-byte data complies with the following sequence: High bytes are prior to low bytes.
- The size of a GPRS data packet is about 160 bytes.

Descriptions about GPRS packets 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	25
IMEI	Indicates the tracker IMEI number. The number type is ASCII. It has 15 digits generally.	353358017784062
Command type	Hexadecimal For details, see chapter 2 and chapter 3.	AAA
Event code	Decimal For details, see section 1.3 "Event Code."	1
Latitude (-)yy.dddddd	Unit: degree Decimal	22.756325 -23.256438

	When a minus (-) exists, the tracker is in the southern hemisphere. When no minus (-) exists, the tracker is in the northern hemisphere. **yy** indicates the degree. **dddddd** indicates the decimal part.	
Longitude (-)xxx.dddddd	Unit: degree Decimal When a minus (-) exists, the tracker is in the western hemisphere. When no minus (-) exists, the tracker is in the eastern hemisphere. **xxx** indicates the degree. **dddddd** indicates the decimal part.	114.752146 -114.821453
Date and time yymmddHHMMSS	**yy** indicates year. **mm** indicates month. **dd** indicates date. **HH** indicates hour. **MM** indicates minute. **SS** indicates second. Decimal	091221102631
Positioning status	Indicates the GPS signal status. **A** = Valid **V** = Invalid	A
Number of satellites	Indicates the number of received GPS satellites. Decimal	5
GSM signal strength	Value: 0–31 Decimal	12
Speed	Unit: km/h Decimal	58
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. Decimal	45 90
Horizontal positioning accuracy	The value ranges from 0.5 to 99.9. The smaller the value is, the more the accuracy is. Decimal When the accuracy value is **0**, the signal is invalid. 1 Perfect 2–3 Wonderful 4–6 Good 7–8 Medium 9–20 Below average 21–50 Poor	5
Altitude	Unit: meter Decimal	118
Mileage	Unit: meter Decimal	564870

		The value is the accumulative mileage value. The maximum value is 4294967295m. If the value exceeds the maximum value, the value is automatically cleared.	
Run time		Unit: second Decimal The value is the accumulative duration value. The maximum value is 4294967295 seconds. If the value exceeds the maximum value, the value is automatically cleared.	2546321
Base station info		The base station information includes: MCC|MNC|LAC|CI The MCC and MNC are decimal, while the LAC and CI are hexadecimal. Note: Base station information in an SMS is empty.	460|0|E166|A08B
I/O port status		Hexadecimal 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.	0421 (hexadecimal) = 0000 0100 0010 0001
Analog input value		Separated by |. Hexadecimal AD1|AD2|AD3|Battery analog|External power analog Note: Analog input values in an SMS report are empty. **Voltage formula of analog AD (AD1, AD2, and AD3):** MVT340/MVT380: (AD x 6)/1024 T1/T3/MVT600/MVT800/MVT100: (AD x 3.3 x 2)/4096 T322X/T333/T355: AD/100 **Voltage formula of battery analog (AD4):** MVT340/MVT380: (AD4 x 3 x 2)/1024 MT90/T1/T3/MVT100/MVT600/MVT800/TC68S: (AD4 x 3.3 x 2)/4096 T311/T322X/T333/T355: AD4/100 **Voltage formula of external power supply (AD5):** MVT340/MVT380: (AD5 x 3 x 16)/1024 T1/T3/MVT100/MVT600/MVT800/TC68S: (AD5 x 3.3 x 16)/4096 T311/T322X/T333/T355: AD5/100	123|456|235|1456|222 (Hexadecimal)
Assisted event info	Geo-fence number	32-bit unsigned Only available by GPRS event code 20 or 21.	02 00 00 00 (indicates geo-fence 2)
	Time spent of this trip	32-bit unsigned Unit: second Indicates the driving duration between engine start and engine stop. Value: 0–4294967295 Only available by GPRS event code 145.	E0 04 00 00 (indicates 1248 seconds)

	Vehicle stealing trigger source	32-bit unsigned Trigger code of a vhecle stealing event Flag generated by event 58	01 00 00 00
	Average driving speed	32-bit unsigned Unit: km/h Average driving speed = Mileage of a trip/Time Only available by GPRS event code 145.	7B 00 00 00 (indicates 123 km/h)
	Max speed per hour	32-bit unsigned Unit: km/h Only available by GPRS event code 145.	C9 00 00 00 (indicates the 201 km/h)
	Mileage of a trip	32-bit unsigned Unit: meter When data contains FF, the mileage of a trip does not exist. Only available by GPRS event code 145.	66 1F B8 F2 (indicates 4072152934m)
RFID		Indicates the IC card identity code. Hexadecimal Only available by GPRS event code 37.	42770680 (hexadecimal)
Picture name		Only available by GPRS event code 39.	0918101221_C2E03
Temperature sensor No.		The temperature sensor No. is set by command C40. Format: two hexadecimal characters Note: The number is only available by event code 50 or 51.	08 (indicates temperature sensor 8)
Customized data		Reserved A separator still exists.	
Protocol version		Decimal 1–50: Used for all general Meitrack protocols. 50–99: Used for OBD. When the protocol is compatible with the old tracker, the value is empty or is 0 by default.	1
Fuel percentage		Format: four hexadecimal characters. A high byte indicates the integer bit of the percentage. A low byte indicates the decimal of the percentage. When the fuel sensor type is **0**, the sensor is not connected and the value is empty.	241E (indicates the fuel percentage is 36.30%.)
Temperature sensor No. and value		Format: six hexadecimal characters. The highest byte is the sensor No. The middle byte is the integer of temperature (-127 to +127). The lowest byte is the decimal part of temperature.	011A09|021A15|061E20 (indicates three temperature sensors. Their numbers are 1, 2, and 6, and temperature is 26.09°C, 26.21°C, and 30.32°C respectively.)
*		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	BE

	(excluding the checksum and ending mark). It is a hexadecimal character. Example: _$$<Data identifier><Data length>,<IMEI>,<Command type>,<Command><*Checksum>_\r\n	
\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 (At Most 16 Bytes)
1	**SOS Pressed**	SOS
2	**Input 2 Active**	Ignition On: MVT100&MVT340&T322X Door Open: MVT380&MVT600&T1&MVT800&T333&T3 In2 Active: Other models
3	**Input 3 Active**	Ignition On: MVT600&T1&T333 &T3 Door Open: MVT800&T322X In3 Active: other models
4	**Input 4 Active**	Ignition On: MVT380&MVT800 In4 Active: other models
5	**Input 5 Active**	In5 Active
9	**Input 1 Inactive**	In1 Inactive
10	**Input 2 Inactive**	Ignition Off: MVT100&MVT340&T322X Door Close: MVT380&MVT600&T1&MVT800&T333&T3 In2 Inactive: other models
11	**Input 3 Inactive**	Ignition Off: MVT600&T1&T333&T3 Door Close: MVT800&T322X In3 Inactive: other models
12	**Input 4 Inactive**	Ignition Off: MVT380&MVT800 In4 Inactive: other models
13	**Input 5 Inactive**	In5 Inactive: other models
17	**Low Battery**	Low Battery
18	**Low External Battery**	Low Ext-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)
22	**External Battery On**	Ext-Battery On Tracker connected: TC68S
23	**External Battery Cut**	Ext-Battery Cut Tracker removed: TC68S
24	**Lose GPS Signal**	Lose GPS Signal
25	**GPS Signal Recovery**	GPS Recovery
26	**Enter Sleep**	Enter Sleep

27	Exit Sleep	Exit Sleep
28	GPS Antenna Cut	GPS Antenna Cut
29	Device Reboot	Power On
31	Heartbeat	/
32	Heading Change	Heading Change
33	Distance Interval Tracking	Distance
34	Reply Current (Passive)	Now
35	Time Interval Tracking	Interval
36	Tow	Tow
37	RFID	(only for GPRS)
39	Picture	(only for GPRS)
40	Power Off	Power Off
41	Stop Moving	Stop moving
42	Start Moving	Start Moving
44	GSM Jammed	GSM Jammed
50	Temperature High	Temp High
51	Temperature Low	Temp Low
52	Fuel Fulled	Fuel Full
53	Fuel Empty	Fuel Empty
54	Fuel Stolen	Fuel Steal
56	Armed	Armed
57	Disarmed	Disarmed
58	Stealing	Stealing
63	GSM No Jamming	GSM No Jamming
65	Press Input 1 (SOS) to Call	/
66	Press Input 2 to Call	/
67	Press Input 3 to Call	/
68	Press Input 4 to Call	/
69	Press Input 5 to Call	/
70	Reject Incoming Call	/
71	Get Location by Call	/
72	Auto Answer Incoming Call	/
73	Listen-in (Voice Monitoring)	/
79	Fall	Fall
80	Install	Install
81	Drop Off	Drop Off
139	Maintenance Notice	Maintenance

2 Command List

Command	Command Description	Applicable Model
A10	Real-Time Location Query	All
A11	Setting a Heartbeat Packet Reporting Interval	All
A12	Track by Time Interval	All
A13	Setting the Direction Change Report Function	All
A14	Track by Distance	All
A15	Setting the Parking Scheduled Tracking Function	MVT100/MVT340/MVT380/MVT600/ T1/MVT800/T333/T3
A16	Enabling the Parking Scheduled Tracking Function	MVT100/MVT340/MVT380/MVT600/ T1/MVT800/T333/T3
A17	Enabling or Disabling the RFID Control OUT1 Function	MVT600/T1/T333/T3
A19	3D-Shake Wake Up	MT90
A21	Setting GPRS Parameters	All
A22	Setting the DNS Server IP Address	All (excluding T322X/T355)
A23	Setting the Standby GPRS Server	All (excluding T322X)
A70	Reading All Authorized Phone Numbers	All
A71	Setting a Combined Function Phone Number	All
A72	Setting a Listen-in Phone Number	All (excluding T355/T311/MVT340)
A73	Setting the Smart Sleep Mode	All
AAA	Automatic Event Report	All
AFF	Deleting a GPRS Event in the Cache Zone	All
B05	Setting a Geo-Fence	All
B06	Deleting a Geo-Fence	All
B07	Setting the Speeding Alarm Function	All
B08	Setting the Towing Alarm Function	All (excluding T311/T355)
B21	Setting the Anti-Theft Function	MVT100/MVT340/MVT380/MVT600/ T1/T68S/T333/T3/T355/T311
B31	Turning Off the Indicator	All (excluding T322/T355)
B34	Setting a Log Interval	All (excluding T322X/MVT340/T355)
B35	Setting the SMS Time Zone	All
B36	Setting the GPRS Time Zone	All (excluding T355)
B60	Checking the Engine First to Determine Tracker Running Status	MVT100/340/380/600/T1/MVT800/T333/T3
B91	Setting SMS Event Characters	All

B92	Setting a GPRS Event Flag	All
B93	Reading a GPRS Event Flag	All
B96	Setting a Photographing Event Flag	MVT600/T1/T333/T3
B97	Reading a Photographing Event Flag	MVT600/T1/T333/T3
B99	Setting Event Authorization	All
C01	Output Control	MVT100/340/380/600/T1/MVT800/T333/T3
C02	The GPRS Platform Control Device Sends an SMS	All
C03	Setting a GPRS Event Transmission Mode	All (excluding T322/T355)
C13	GPRS Information Display (LCD Display)	MVT600/T1/T333/T3
C40	Registering a Temperature Sensor Number	T1/MVT600/MVT800/T333/T3
C41	Deleting a Registered Temperature Sensor	T1/MVT600/MVT800/T333/T3
C42	Reading the Temperature Sensor SN and Number	T1/MVT600/MVT800/T333/T3
C43	Setting a Temperature Value for the High/Low Temperature Alarm and Logical Name	T1/MVT600/MVT800/T333/T3
C44	Reading Temperature Sensor Parameters	T1/MVT600/MVT800/T333/T3
C46	Checking Temperature Sensor Parameters	T1/MVT600/MVT800/T333/T3
C47	Setting Fuel Parameters	T1/MVT600/MVT800/T333/T3
C48	Reading Fuel Parameters	T1/MVT600/MVT800/T333/T3
C49	Setting a Fuel Theft Alarm	T1/MVT600/MVT800/T333
D00	Obtaining a Picture	MVT600/T1/T333/T3
D01	Obtaining the Picture List	MVT600/T1/T333/T3
D02	Deleting a Picture	MVT600/T1/T333/T3
D03	Timely Photograghing	MVT600/T1/T333/T3
D10	Authorizing an RFID Card	MVT600/T1/T333/T3
D11	Authorizing RFID Cards in Batches	MVT600/T1/T333/T3
D12	Checking Whether a RFID Is Authorized	MVT600/T1/T333/T3
D13	Reading an Authorized RFID	MVT600/T1/T333/T3
D14	Deleting an Authorized RFID	MVT600/T1/T333/T3
D15	Deleting Authorized RFIDs in Batches	MVT600/T1/T333/T3
D16	Checking the Checksum of the Authorized RFID Database	MVT600/T1/T333/T3
D65	Setting the Maintenance Mileage	TC68S
D66	Setting Maintenance Time	TC68S
E91	Reading the Tracker Firmware Version and SN	All

F01	Restarting the GSM Module	All
F02	Restarting the GPS Module	All
F08	Setting the Mileage and Run Time	All
F09	Deleting SMS/GPRS Cache Data	All
F11	Restoring Initial Settings	All

3 Command Details

3.1 Real-Time Location Query (GPRS) – 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.
Applicable Model	All
Example	
GPRS Sending	@@Q25,353358017784062,A10*6A\r\n
GPRS Reply	$$Q128,353358017784062,AAA,34,22.543176,114.078448,100313093738,A,5,22,2,205,5,-14,0,60,0|0|10133|4110,0000,149|153|173|2707|914,*91\r\n

3.2 Setting a Heartbeat Packet Reporting Interval (GPRS) – A11

GPRS Setting	A11,Interval
GPRS Reply	A11,OK
Description	The heartbeat packet function is used to keep the Transmission Control Protocol (TCP) connection open when the interval of scheduled GPRS reporting is long. When the interval is **0**, the heartbeat packet function is disabled (default). When the interval is greater than 0, the function is enabled. Value range: 1–65535; unit: minute. The heartbeat packet function is only available for the deep sleep mode. When the device enters deep sleep mode, it will send heartbeat packets at the specified interval. The function is used to keep the platform connection smooth, but GPS positioning data is invalid.
Applicable Model	All
Example	
GPRS Sending	@@S28,353358017784062,A11,10*FD\r\n
GPRS Reply	$$S28,353358017784062,A11,OK*FE\r\n *After the above command is run successfully, the tracker will send the following GPRS heartbeat packet to the platform every 10 minutes in sleep mode:* *$$a131,353358017784062,AAA,31,22.913458,114.083183,080229123628,V,9,23,21,83,*

*1,18,1350,127,0|0|10133|4110,0000,169|181|184|2714|919,*60*

3.3 Tracking by Time Interval (GPRS) – A12

GPRS Setting	A12,*Interval*
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. 6 x 10 seconds are recommended.
Applicable Model	All
Example	
GPRS Sending	@@V27,353358017784062,A12,6*D5\r\n
GPRS Reply	$$V28,353358017784062,A12,OK*02\r\n *After the above command is run successfully, the tracker will send the following GPRS data packet to the platform every 1 minute:* *$$W129,353358017784062,AAA,35,22.540113,114.076141,100313094354,A,5,22,1,174,4,129,0,435,0|0|10133|4110,0000,166|224|193|2704|916,*BE\r\n*

3.4 Setting the Direction Change Report Function (GPRS) – 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 direction change report function is disabled (default). When the angle is greater than 0, the function is enabled. Value range: 1–359. **30** is recommended.
Applicable Model	All
Example	
GPRS Sending	@@X29,353358017784062,A13,120*37\r\n
GPRS Reply	$$X28,353358017784062,A13,OK*05\r\n *After the above command is run successfully, if the direction change angle is greater than 120 degree, the tracker will send the following GPRS data pakcet to the server:* *$$Y129,353358017784062,AAA,32,22.540968,114.077455,100313094534,A,4,22,1,166,3,175,0,534,0|0|10133|4110,0000,141|138|159|2691|904,*D9\r\n*
Applicable Model	All

3.5 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.
	300 is recommended.
Applicable Model	All
Example	
GPRS Sending	@@D30,353358017784062,A14,1000*4A\r\n
GPRS Reply	$$D28,353358017784062,A14,OK*F2\r\n
	After the above command is run successfully, if the driving distance reaches 1000m, the tracker will send a data packet to the server.
	*$$D131,353358017784062,AAA,33,22.547271,114.047405,080310080929,A,8,21,13,89 ,1,12,8525,561,0|0|10133|4110,0000,163|185|186|2712|939,*31\r\n*

3.6 Setting the Parking Scheduled Tracking Function (GPRS) – A15

GPRS Setting	A15,*Interval*
GPRS Reply	A15,OK
Description	The function is available for vehicle trackers only. With the function, the number of GPRS messages is reduced, and thus GPRS traffic is saved.
	After the A15 function is set, the A16 function is automatically enabled. For details about engine status, see section 3.7 "Enabling the Parking Scheduled Tracking Function (GPRS) – A16."
	The interval is in unit of 10 seconds.
	When the interval is **0**, the GPRS scheduled reporting function is disabled.
	The maximum interval is 65535 x 10 seconds.
	Note: If data needs to be sent at the specified interval after the vehicle starts or stops, the function needs to work with the A12 function.
Applicable Model	MVT100/MVT340/MVT380/MVT600/T1/MVT800/TC68S/T333/T3
Example	
GPRS Sending	@@E27,353358017784062,A15,6*C7\r\n
GPRS Reply	$$E28,353358017784062,A15,OK*F4\r\n

3.7 Enabling the Parking Scheduled Tracking Function (GPRS) – A16

GPRS Setting	A16,*Status*
GPRS Reply	A16,OK
Description	**The function is available for vehicle trackers only. The first positive input port (high level) of a vehicle tracker must connect to engine status detection. Otherwise, the function is unavailable. The first positive input port of vehicle trackers are as follows:**

Vehicle Tracker	First Positive Input Port
MVT100	Input port 2
MVT340	Input port 2
MVT380	Input port 4
MVT600	Input port 3
T1/T333/T3	Input port 3

When the activation status is **1**, the parking scheduled tracking function is enabled; when the activation status is **0**, the function is disabled. GPRS data is sent at the following interval:
- Interval of the A12 function when the engine is on
- Interval of the A15 function when the engine is off

Note: The TC68S can determine whether the engine is activated based on vehicle battery voltage.

Applicable Model	MVT100/MVT340/MVT380/MVT600/T1/MVT800/TC68S/T333/T3
Example	
GPRS Sending	@@F27,353358017784062,A16,0*C3\r\n
GPRS Reply	$$F28,353358017784062,A16,OK*F6\r\n

3.8 Enabling/Disabling the RFID Control OUT1 Function (MVT600/T1) – A17

GPRS Setting	A17,X
GPRS Reply	A17,OK
Description	When *X* is **1**, the RFID control OUT1 function is enabled. Ensure that the engine must connect to input 3 and the RFID has been authorized. When *X* is **0**, the RFID control OUT1 function is disabled (default). For example, after swiping the authorized RFID card, you must start the engine within 1 minute. If the time expires, you need to swipe the card again to start the engine. Input 3 is used to detect engine status. When input 3 detects that the engine status is ACC ON, the engine is not activated. When input 3 detects that the engine is stopped, swipe the card within 1 minute to start the engine. For details about how to authorize a RFID, see commands D10–D15.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@T27,353358017784062,A17,1*D3\r\n
GPRS Reply	$$T28,353358017784062,A17,OK*05\r\n

3.9 3D-Shake Wake Up (MT90) – A19

GPRS Setting	A19,X
GPRS Reply	A19,OK
Description	When wakeup is not required in the sleep mode, *X* is set to **0**.

	When vibration and wakeup are required in the deep sleep mode, *X* is set to **1** (default value).
Applicable Model	MT90
Example	
GPRS Sending	@@H27,353358017784062,A19,1*C9\r\n
GPRS Reply	$$H28,353358017784062,A19,OK*F8\r\n

3.10 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. When the connection mode is **2**, the GPRS function is enabled, and the UDP 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.
Applicable Model	All
Example	
GPRS Sending	@@H48,353358017784062,A21,1,67.203.13.26,8800,,,*C9
GPRS Reply	$$H28,353358017784062,A21,OK*F4\r\n

3.11 Setting the DNS Server IP Address – A22

GPRS Setting	A22,*DNS server IP address*
GPRS Reply	A22,OK
Description	An incorrect DNS server IP address may lead to GPRS data reporting failures after the A21 command is used. Use the A22 command to set the DNS server IP address (confirm the IP address with your domain name provider.). Then use the A21 command to reset the domain name. DNS server IP address: a maximum of 16 bytes
Applicable Model	Excluding T322X/T355
Example	
GPRS Sending	@@K38,353358017784062,A22,75.127.67.90*FD\r\n
GPRS Reply	$$K28,353358017784062,A22,OK*F8\r\n

3.12 Setting the Standby GPRS Server – A23

GPRS Setting	A23,*IP address,Port*

GPRS Reply	A23,OK
Description	IP address: a maximum of 32 bytes Port: a maximum of 5 digits When the tracker fails to send data to the active server set by command A21, data is automatically sent to the standby server to prevent data loss.
Applicable Model	Excluding T322X
Example	
GPRS Sending	@@S43,353358017784062,A23,67.203.13.26,8800*F0
GPRS Reply	$$S28,353358017784062,A23,OK*01\r\n

3.13 Reading All Authorized Phone Numbers – A70

GPRS Setting	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.
Applicable Model	All
Example	
GPRS Sending	@@T25, 353358017784062,A70*93\r\n
GPRS Reply	$$T85,353358017784062,A70,13811111111,13822222222,13833333333,13844444444, 13855555555*21\r\n

3.14 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. Phone number 1: Set the phone number to the SOS phone number. When you call the tracker by using the phone number, the tracker will reply an SMS with the location and send geo-fence alarms and low power alarms. 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	All
Example	
GPRS Sending	@@U61,353358017784062,A71,13811111111,13822222222,13833333333*7D\r\n
GPRS Reply	$$U28,353358017784062,A71,OK*06\r\n

3.15 Setting a Listen-in Phone Number – A72

GPRS Setting	A72,*Listen-in phone number 1,Listen-in phone number 2*
GPRS Reply	A72,OK

Description	When you call the tracker by using the authorized listen-in phone number, the tracker will answer the call automatically and enter the listen-in state. In this way, the tracker will not make any sound. A maximum of two phone numbers can be set. Each phone number has a maximum of 16 digits. If no phone numbers are set, leave them blank. Phone numbers are empty by default. If no phone numbers are set and commas are remained, phone numbers set before will be deleted.
Applicable Model	Excluding T322X/T355/MVT340
Example	
GPRS Sending	@@V49,353358017784062,A72,13844444444,13855555555*55\r\n
GPRS Reply	$$V28,353358017784062,A72,OK*08\r\n

3.16 Setting the Smart Sleep Mode – A73

GPRS Setting	A73,*Sleep level*
GPRS Reply	A73,OK
Description	Set the automatic smart sleep mode when the tracker is idle. When the sleep level is **0**, the sleep mode is disabled (default). When the sleep level is **1**, the tracker enters the normal sleep mode. The GSM module always works, and the GPS module occasionally enters the sleep mode. The tracker works 25% longer in the normal sleep mode than that in the normal working mode. This mode is not recommended for short interval tracking; this will affect the route precision. When the sleep level is **2**, the tracker enters deep sleep mode. If no event is triggered after five minutes, the GPS module will stop and the GSM module will enter sleep mode. Once an event is triggered, the GPS and GSM modules will be woken up. A heartbeat event will be triggered only in the deep sleep mode, which will be uploaded every one hour by default. Triggering events include: SOS alarm, low internal/external battery, external power status, GPS antenna cutoff alarm, towing alarm, high temperature, low temperature, fuel stealing, vehicle stealing, ACC ON, (button) changes on any input port, vibration, incoming call, SMS receiving, call, and heartbeat event (The GPS is disabled during heartbeat wakeup.). Note: ● T355 is in deep sleep mode by default. If no event (drop/incoming call/SMS/vibration) is triggered after five minutes, the tracker will enter deep sleep mode. In this way, a triggering event (drop/incoming call/SMS/vibration) can wake the device up, and then the device will enter working mode. In deep sleep mode, if no event (drop/incoming call/SMS/vibration) is triggered within 25 minutes, the device will automatically enter super power-saving mode. In this mode, only a drop or vibration event can wake the device up. GPS and GSM modules can be enabled intelligently based on vehicle driving status, which saves power.

	● The MT90 can enter sleep mode under vibration, and vibration cannot wake the MT90 up from sleep mode. If the A19 command is enabled, the MT90 can be woken up. By default, MT90 cannot be woken up by vibration.
	● In any condition, you can use an SMS or a GPRS command to disable the sleep mode, and then the tracker exits the sleep mode and returns back to the normal working mode.
Applicable Model	All
Example	
GPRS Sending	@@W27,353358017784062,A73,2*D9\r\n
GPRS Reply	$$W28,353358017784062,A73,OK*0A\r\n

3.17 Automatic Event Report – AAA

GPRS Event Report	AAA,*Command type,(-)Latitude,(-)Longitude,Date and time,Positioning status,Number of satellites,GSM signal strength,Speed,Direction,Horizontal positioning accurancy,Altitude,Mileage,Run time,Base station info,I/O port status,Analog input value*
Description	When an event occurs, the tracker automatically reports the event to the server.
Applicable Model	Excluding T322X
Example	
GPRS Reply	*When you press the SOS button, the tracker will send the following information to the server:* *$$G127,353358017784062,AAA,1,22.538169,114.075958,100313095653,A,3,21,4,46,5, 581,0,148,0|0|10133|4172,0000,166|204|205|2709|878,*77\r\n*

3.18 Deleting a GPRS Event in the Cache Zone – AFF

GPRS Setting	AFF,*Number of deleted GPRS events*
GPRS Reply	AFF,*Number of remaining caches,Command type, (-)Latitude,(-)Longitude,Data 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	Number of deleted GPRS events: hexadecimal string. The default value is **1**. Number of remaining caches: indicates the number of events in internal flash memory. Hexadecimal string.
Applicable Model	Excluding T322X
Example	
GPRS Sending	@@h27,353358017784062,AFF,1*0B\r\n
GPRS Reply	$$h28,353358017784062,AFF,OK*3D\r\n

3.19 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.
Applicable Model	All
Example	
GPRS Sending	@@H57,353358017784062,B05,1,22.913191,114.079882,1000,0,1*96\r\n
GPRS Reply	$$H28,353358017784062,B05,OK*F7\r\n
	When the tracker exits the geo-fence (latitude: 22.913191; longitude: 114.079882; radiu: 1000m), it will send the following GPRS data packet to the server:
	*$$J132,353358017784062,AAA,21,22.918046,114.089726,080229123812,A,10,22,12,32, 1,21,6667,847,0|0|10133|4110,0000,124|181|183|2714|922,*5A\r\n*

3.20 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.
Applicable Model	All
Example	
GPRS Sending	@@J27,353358017784062,B06,1*C8\r\n
GPRS Reply	$$J28,353358017784062,B06,OK*FA\r\n
	After the command is run successfully, the first geo-fence will be deleted.

3.21 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.
Applicable Model	All
Example	
GPRS Sending	@@P28,353358017784062,B07,60*05\r\n
GPRS Reply	$$P28,353358017784062,B07,OK*01\r\n
	When the tracker driving speed reaches 60 km/h, it will send the following information to the server:
	$$k134,353358017784062,AAA,19,22.916675,114.088813,080229123718,A,10,22,61,31 ,1,21,
	*6635,395,460|0|10133|4110,0000,164|185|181|2712|915,*F7\r\n*

3.22 Setting the Towing Alarm Function – B08

GPRS Setting	B08,*Vibration duration*
GPRS Reply	B08,OK
Description	When the tracker's vibration duration exceeds the preset value, the tracker will send an alarm to an authorized phone number or the server. Before using the towing alarm function, ensure that the smart sleep level is set to **2** by using the A73 command and the consecutive vibration duration is set by using the B08 command. Otherwise, the towing alarm function is unavailable.
	When the consecutive vibration duration is **0**, the towing alarm function is disabled (default).
	When the consecutive vibration duration is greater than 0, the function is enabled. Value range: 1–255; unit: second.
Applicable Model	Excluding T322X/T355
Example	
GPRS Sending	@@I27,353358017784062,B08,3*CB\r\n
GPRS Reply	$$I28,353358017784062,B08,OK*FB\r\n
	When the tracker vibrates for more than consecutive 3 seconds, it will send the following information to the server:
	*$$K133,353358017784062,AAA,36,22.916675,114.088813,080229123718,A,10,22,61,3 1,1,21,6635,395,460|0|1013|4110,0000,164|185|181|2712|915,*A2*

3.23 Setting the Anti-Theft Function – B21

GPRS Setting	B21,*Status*
GPRS Reply	B21,OK

Description	When the activation status is **1** (default value), the anti-theft function is enabled. An alarm is generated when the first negative input and first positive input of vehicle trackers excluding SOS are activated. For example, an alarm is generated when input 3 or 4 of the MVT800 is activated or input 2 or 3 of the T322X is activated.
	When the activation status is **0**, the anti-theft function is disabled. No alarm is generated when the first negative input and first positive input of vehicle trackers excluding SOS are activated.
	Note: The function is only available for MVT series, T1, and T322X vehicle trackers. The following lists inputs of trackers:

Tracker	Negative Input	Positive Input
MVT100	-	Input 2
MVT340	-	Input 2
MVT380	Input 2	Input 4
MVT600	Input 2	Input 3
T1/T333/T3	Input 2	Input 3
MVT800	Input 3	Input 4

	Note: The TC68S can determine whether the engine is activated based on vehicle battery voltage.
	When the T322X/MVT800 is in arming state and input 3 is triggered, a vehicle stealing alarm will be generated, the buzzer makes a sound, and the tracker makes a call and sends an SMS to the authorized phone number. In this way, if T322X input 2/MVT800 input 4 is triggered, output 1 is activated and the tracker makes a call and sends an SMS to the authorized phone number.
Applicable Model	MVT100/MVT340/MVT380/MVT600/T1/MVT800/T333/TC68S/T3/T311
Example	
GPRS Sending	@@C27,353358017784062,B21,1*BE\r\n
GPRS Reply	$$C28,353358017784062,B21,OK*F0\r\n

3.24 Turning Off the Indicator – B31

GPRS Setting	B31,A
GPRS Reply	B31,OK
Description	When A is **00**, the tracker's indicator is turned on (default). You can query the device's running status according to the indicator status.
	When A is **10**, the tracker's indicator is turned off.
Applicable Model	Excluding T322X/T355
Example	
GPRS Sending	@@J28,353358017784062,B31,10*F7\r\n
GPRS Reply	$$J28,353358017784062,B31,OK*F8\r\n

3.25 Setting a Log Interval – B34

GPRS Setting	B34,*Log interval*
GPRS Reply	B34,OK
Description	Set the log interval when the GPS is valid. Recorded logs can only be read by GPSLog or Meitrack Manager software. When the log interval is **0**, the recorder function is disabled (default). When the log interval is greater than 0, the function is enabled. Value range: 1–65535; unit: second.
Applicable Model	Excluding T322X/MVT340/T355
Example	
GPRS Sending	@@N28,353358017784062,B34,60*03\r\n
GPRS Reply	$$N28,353358017784062,B34,OK*FF\r\n

3.26 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 -32768 to 32767, set time zones.
Applicable Model	All
Example	
GPRS Sending	@@O29,353358017784062,B35,480*3C\r\n
GPRS Reply	$$O28,353358017784062,B35,OK*01\r\n *After the command is run successfully, the tracker SMS time zone is changed to UTC+08:00 (China time zone).*

3.27 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 -32768 to 32767, set time zones.
Applicable Model	Excluding T355
Example	
GPRS Sending	@@P29,353358017784062,B36,480*3E\r\n
GPRS Reply	$$P28,353358017784062,B36,OK*03\r\n *After the command is run successfully, the GPRS time zone is changed to UTC+08:00*

(China time zone).

3.28 Checking the Engine First to Determine Tracker Running Status – B60

GPRS Setting	B60,X
GPRS Reply	B60,OK
Description	When **X** is **1**, check the engine first to determine whether the tracker is moving or stops. This prevents static drift. When **X** is **0**, you do not need to check the engine to determine whether the tracker is moving or stops (default). The first positive input of the tracker connects to engine detection by default.
Applicable Model	MVT100/MVT380/MVT600/T1/MVT800/TC68S/T333/T3
Example	
GPRS Sending	@@U27,353358017784062,B60,1*D3\r\n
GPRS Reply	$$U28,353358017784062,B60,OK*05\r\n

3.29 Setting SMS Event Characters – B91

GPRS Setting	B91,*Event SMS code*,*SMS header*
GPRS Reply	B91,OK
Description	Header: a maximum of 16 bytes
Applicable Model	Excluding T322X
Example	
GPRS Sending	@@R31,353358017784062,B91,1,SOS*F0\r\n
GPRS Reply	$$R28,353358017784062,B91,OK*06\r\n *After you press the SOS button (input 1), the tracker will send an alarm SMS whose header is SOS to a preset authorized phone number.*

3.30 Setting a GPRS Event Flag – B92

GPRS Setting	B92,*GPRS event flag*
GPRS Reply	B92,OK
Description	Set one or multiple GPRS event flags. 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).
Applicable Model	All
Example	
GPRS Sending	@@q42,353358017784062,B92,1234567890ABCDEF*62\r\n
GPRS Reply	$$q28,353358017784062,B92,OK*26\r\n

3.31 Reading a GPRS Event Flag – B93

GPRS Setting	B93
GPRS Reply	B93,*GPRS event code flag*
Description	Read a GPRS event code flag.
Applicable Model	All
Example	
GPRS Sending	@@V25,353358017784062,B93*7B\r\n
GPRS Reply	$$V42,353358017784062,B93,00000007E01C001F*B5\r\n

3.32 Setting a Photographing Event Flag (MVT600/T1/T333/T3) – B96

GPRS Setting	B96,*Photographing event flag*
GPRS Reply	B96,OK
Description	Set one or multiple photographing events. When a preset event ocuurs, a photo is taken and then saved in the Micro SD card.
	By default, after you press the SOS button, a photo will be taken and then saved into the Micro SD card. You can use command D00/D01 to read photos.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@A42,353358017784062,B96,0000000000000001*95\r\n
GPRS Reply	$$A28,353358017784062,B96,OK*FA\r\n

3.33 Reading a Photographing Event Flag (MVT600/T1/T333) – B97

GPRS Setting	B97
GPRS Reply	B97,*Photographing event flag*
Description	To know which event has enabled the function for taking photos.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@C25,353358017784062,B97*6C\r\n
GPRS Reply	$$C42,353358017784062,B97,0000000000000001*60\r\n

3.34 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*]
	0000,B99,*<CAMERA>/<3>,<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,<CAMERA>/<3>,[*Event code 1*]......[*Event code n*]
	B99,<BUZZER>/<4>,[*Event code 1*]......[*Event code n*]
Description	Fields SMS, CALL, CAMERA, 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	All
Example	
GPRS Sending	@@B34,863070010825791,B99,gprs,get*BC\r\n
GPRS Reply	$$B33,863070010825791,B99,1,17,18*B5\r\n

3.35 Output Control – C01

GPRS Setting	C01,*Speed*,ABCDE
GPRS Reply	C01,OK
Description	When the speed is **0**, no speed limit exists. That is, when the tracker receives a command, the output control takes effect immediately.
	When the speed is a value ranging from 1 to 255 (unit: km/h), set the speed limit for output control. When the driving speed is lower than the speed limit, the output control takes effect.
	A=0, close output (OUT1) - open drain
	A=1, open output (OUT1) - connect to GND
	A=2, remain previous status.
	B=0, close output (OUT2) - open drain
	B=1, open output (OUT2) - connect to GND
	B=2, remain previous status.
	C=0, close output (OUT3) - open drain
	C=1, open output (OUT3) - connect to GND
	C=2, remain previous status.
	D=0, close output (OUT4) - open drain
	D=1, open output (OUT4) - connect to GND
	D=2, remain previous status.
	E=0, close output (OUT5) - open drain

	E=1, open output (OUT5) - connect to GND
	E=2, remain previous status.
Applicable Model	MVT100/MVT340/MVT380/MVT600/T1/MVT800/T333/T3
Example	
GPRS Sending	@@M34,353358017784062,C01,20,10122*18\r\n
GPRS Reply	$$M28,353358017784062,C01,OK*F9\r\n

3.36 The GPRS Platform Control Device Sends an SMS – C02

GPRS Setting	C02, X,*Phone number*,*Content*
GPRS Reply	C02,OK
Description	Used for the platform control device to send an SMS to a mobile phone.
	X = 0: in TEXT mode
	X = 1: in Unicode mode
	Phone number: a maximum of 16 digits
	Content: a maximum of 140 characters
	After receiving the message, the tracker sends Content information to specified phone numbers.
Applicable Model	All
Example	
GPRS Sending	@@f47,353358017784062,C02,0,15360853789,Meitrack*B1\r\n
GPRS Reply	$$f28,353358017784062,C02,OK*13\r\n

3.37 Setting a GPRS Event Transmission Mode – C03

GPRS Setting	C03, X
GPRS Reply	C03,OK
Description	X = 0: automatic event report (default)
	X = 1: Before another event can be transmitted, existing event reports need to be confirmed and deleted on the server by the AFF command. Select this mode when GPRS uses UDP.
Applicable Model	Excluding T322X
Example	
GPRS Sending	@@f27,353358017784062,C03,0*E1\r\n
GPRS Reply	$$f28,353358017784062,C03,OK*14\r\n

3.38 GPRS Information Display (LCD Display) – C13

GPRS Setting	C13,*Level*,*Type*,*Content*
GPRS Reply	C13,OK
Description	**The command is used to display GPRS platform information on the LCD display.**
	Level: Level 0 indicates normal information, while level 1 indicates urgent information.

	Type: indicates the encoding mode. E = ASCII. U = UNICODE2.
	Content: indicates the information text and has a maximum of 150 bytes.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@m42,013777001338688,C13,0,E,Test Message*08
GPRS Reply	$$m28,013777001338688,C13,OK*1C

3.39 Registering a Temperature Sensor Number (MVT600/T1/T333/T3/MVT800) – C40

GPRS Setting	C40,SN1 & number 1,SN2 & number 2,…,SNn & number n
GPRS Reply	C40,SN1 & number 1 & result, SN2 & number 2 & result,…SNn & number n & result
Description	Commands C40 to C46 are used to read or set a temperature sensor.
	Installation steps:
	1) Check whether the temperature sensor number in AAA GPRS data is 0.
	2) If the number is 0, the temperature sensor is not numbered. Then send the C42 command to read the mappings of sensor SNs and numbers.
	3) Use the C40 command to index all sensors and bind information in the database, such as the IMEI number, SN, number, and customized name.
	4) If a high or low temperature alarm is required, send the C43 command to set the temperature value and customize a name. You are advised to use the installation path as the name and save the name to the database.
	5) If the sensor is pulled out or replaced when the device is online, use the C46 command to check the sensor. If data is inconsistent, use the C40 and C43 commands to set data.
	The device uploads current temperature data by the AAA event. If the number in temperature data is 0, the temperature sensor is not registered. The platform automatically sends the C42 command to obtain the temperature sensor SN and number list. Find out the sensor whose number is 0, and register it.
	n: The maximum value is 8.
	SN: unique number to identify a temperature sensor. Eight bytes. Hexadecimal string. The SN is displayed on the platform like 28 1B D5 23 04 00 00 57, which is the same as that on the sensor label.
	Number: one byte. Hexadecimal. The value ranges from 1 to 254.
	Registration result: 0x01, 0x02, 0x03, and 0x04
	0x01: The registration is successful.
	0x02: The number or SN already exists.
	0x03: All sensors are registered.
	0x04: Registration failed. Hexadecimal.
Applicable Model	MVT600/T1/T333/MVT800/T3
Example (ASCII is used to display examples because hexadecimal characters cannot be displayed.**)**	
GPRS Sending	@@q35,012896001078259,C40,(1BD5#040000W02*50\r\n
GPRS Reply	$$q36,012896001078259,C40,(1BD5#040000W0201*1B \r\n

3.40 Deleting a Registered Temperature Sensor (MVT600/T1/T333/MVT800/T3) – C41

GPRS Setting	C41,*Number 1,Number 2,…Number n*
GPRS Reply	C41,*Number 1,Result,Number 2,Result,…Number n,Result*
Description	Number: indicates the registered sensor number; hexadecimal. The value ranges from 1 to 254. Result: Decimal. **1** indicates deletion succeeded. **2** indicates that the number does not exist. **3** indicates deletion failed. To delete all registered temperature sensors, send command C41 only. If deletion is successful, **OK** is returned. If not, **Error** is returned.
Applicable Model	MVT600/T1/T333/MVT800/T3
Example	
GPRS Sending	@@n28,012896001078259,C41,01*19\r\n
GPRS Reply	$$n30,012896001078259,C41,01,1*37\r\n

3.41 Reading the Temperature Sensor SN and Number (MVT600/T1/T333/MVT800/T3) – C42

GPRS Setting	C42
GPRS Reply	C42,SN1 and number 1,SN2 and number 2,…SNn and number n
Description	SNn: indicates the n(th) sensor SN, and has eight bytes in hexadecimal format. Number n: indicates the n(th) sensor number, and has one byte in hexadecimal format. The value ranges from 0 to 255. If the value is **0**, the temperature sensor is not registered.
Applicable Model	MVT600/T1/T333/MVT800/T3
Example (ASCII is used to display examples because hexadecimal characters cannot be displayed.)	
GPRS Sending	@@m25,012896001078259,C42*89\r\n
GPRS Reply	$$t45,012896001078259,C42,(B4v#040000R00,(1BD5#040000W00*13\r\n

3.42 Setting a Temperature Value for the High/Low Temperature Alarm and Logical Name (MVT600/T1/T333/MVT800/T3) – C43

GPRS Setting	C43,*Number 1/SN1/High temperature value 1/Low temperature value 1/High temperature alarm 1/Low temperature alarm 1/Logical name 1/…Number n/SNn/High temperature value n/Low temperature value n/High temperature alarm 1/Low temperature alarm 1/Logical name n*
GPRS Reply	C43,*Number 1/Result 1/Number 2/Result 2…/Number n/Result n*
Description	n: The maximum value is 8. Number: one byte in hexadecimal format. SN: indicates the temperature sensor SN, and has eight bytes in hexadecimal format. High/Low temperature value: two bytes in hexadecimal format. The first byte is the integer part. When the high bit is **1**, the first byte is a negative integer. When the high bit is **0**, the first byte is a positive integer. The second byte is the decimal part.

	High temperature alarm: one byte in hexadecimal format.
	Low temperature alarm: one byte in hexadecimal format.
	Logical name (customized name): 16 bytes in hexadecimal format. If the name length is less than 16 bytes, add 0x00. There are 15 English characters, and # is located at the end of English characters to distinguish the Unicode and English characters. A maximum of eight Chinese characters can be supported. Chinese characters must be the Unicode.
	Result: one byte in hexadecimal format. **0x01** indicates setting succeeded. **0x02** indicates that the number is not located. **0x03** indicates that setting failed due to wrong parameters.
	Note: Separators (/) are not required between parameters.
Applicable Model	MVT600/T1/T333/MVT800/T3
Example (ASCII is used to display examples because hexadecimal characters cannot be displayed.)	
GPRS Sending	@@o57,012896001078259,C43,01(1BD5#040000W<0005000101T1#000000000000000 00000000000*3F
GPRS Reply	$$o28,012896001078259,C43,0101*85

3.43 Reading Temperature Sensor Parameters (MVT600/T1/ T333/MVT800/T3) – C44

GPRS Setting	C44
GPRS Reply	C44,*Number 1/SN1/High temperature value 1/Low temperature value 1/High temperature alarm 1/Low temperature alarm 1/Logical name 1/…Number n/SNn/High temperature value n/Low temperature value n/High temperature alarm 1/Low temperature alarm 1/Logical name n*
Description	n: The maximum value is 8.
	Number: one byte in hexadecimal format.
	SN: indicates the temperature sensor SN, and has eight bytes in hexadecimal format.
	High/Low temperature value: two bytes in hexadecimal format. The first byte is the integer part. When the high bit is **1**, the first byte is a negative integer. When the high bit is **0**, the first byte is a positive integer. The second byte is the decimal part.
	High temperature alarm: one byte in hexadecimal format.
	Low temperature alarm: one byte in hexadecimal format.
	Logical name (customized name): 16 bytes in hexadecimal format. If the name length is less than 16 bytes, add 0x00. There are 15 English characters, and # is located at the end of English characters to distinguish the Unicode and English characters. A maximum of eight Chinese characters can be supported. Chinese characters must be the Unicode.
	Note: Separators (/) are not required between parameters.
Applicable Model	MVT600/T1/T333/MVT800/T3
Example (ASCII is used to display examples because hexadecimal characters cannot be displayed.)	
GPRS Sending	@@r25,012896001078259,C44*90\r\n
GPRS Reply	$$r274,012896001078259,C44,01(B4v#040000R0000000000000000000000 00000000000000000000000002(1BD5#040000W00000000000000000000000 00000000000000000000000000000000000000000000000000000000000000 0000000000000000000000000000000000000000000000000000000000000000

00000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000
00000000000000000000*1E\r\n

3.44 Checking Temperature Sensor Parameters (MVT600/T1/T333/MVT800/T3) – C46

GPRS Setting	C46
GPRS Reply	C46,*Checksum*
Description	Checksum: two bytes in hexadecimal format. Use CRC-CCITT to calculate parameters of eight temperature sensors (in sequence: number, SN, high temperature value, low temperature value, high temperature alarm, low temperature alarm, and logical name). The calculation result is used as the temperature sensor checksum.
Applicable Model	MVT600/T1/T333/MVT800/T3
Example	
GPRS Sending	@@i25,012896001078259,C46*89\r\n
GPRS Reply	$$i28,012896001078259,C46,12_*F1\r\n

3.45 Setting Fuel Parameters (MVT600/T1/T333/MVT800/T3) – C47

GPRS Setting	C47,*Sensor type,Alarm percentage upper limit,Alarm percentage lower limit*
GPRS Reply	C47,OK
Description	Sensor type: 0, 1, 2, and 3 ● **0** indicates that any fuel sensor is not connected. ● **1** indicates that a C-type fuel sensor is connected (AD2). ● **2** indicates that a R-type fuel sensor is connected (AD2). ● **3** indicates that a V-type fuel sensor is connected (AD2). For the MVT600 and T1, the AD2 connects to the fuel sensor by default. Alarm percentage upper limit: When the value is **0**, the alarm is cleared. When the value is not 0, GPRS and SMS event flags take effect automatically. When the fuel percentage is higher than or equal to the value, an alarm is generated, and the alarm event code is 52. Alarm percentage lower limit: When the value is **0**, the alarm is cleared. When the value is not 0, GPRS and SMS event flags take effect automatically. When the fuel percentage is lower than or equal to the value, an alarm is generate, and the alarm event code is 53. If you want to modify a parameter, other parameters must be left blank and separators (,) must be remained. If you only send the C47 command, all parameters are initialized to 0 and they are decimal characters. R-type fuel sensor: resistance output fuel sensor C-type fuel sensor: capacitance output fuel sensor V-type fuel sensor: voltage output fuel sensor Fuel sensors A53 and A54 are the V type of fuel sensor.
Applicable Model	MVT600/T1/T333/MVT800/T3

Example	
GPRS Sending	@@f33,353358017784062,C47,2,90,10*0A\r\n
GPRS Reply	$$f28,353358017784062,C47,OK*1C\r\n

3.46 Reading Fuel Parameters (MVT600/T1/T333/MVT800/T3) – C48

GPRS Setting	C48
GPRS Reply	C48,*Sensor type,Alarm percentage upper limit,Alarm percentage lower limit*
Description	The format of returned parameters is the same as that set by C47. These parameters are decimal.
Applicable Model	MVT600/T1/T333/MVT800/T3
Example	
GPRS Sending	@@c25,353358017784062,C48*89\r\n
GPRS Reply	$$c33,353358017784062,C48,2,90,10*D0\r\n

3.47 Setting a Fuel Theft Alarm (T1/MVT600/MVT800/T333) – C49

GPRS Setting	C49,*Time for fuel check,Percent of fuel decrease*
GPRS Reply	C49,OK
Description	Time for fuel check: Decimal; unit: minute; default value: 3; value range: 0–255. When the value is **0**, a fuel theft alarm will be cleared. Percent of fuel decrease: Decimal; default value: 2; value range: 0–100. When the value is **0**, a fuel theft alarm will be cleared. By default, the percent of fuel decrease is 2% within 3 minutes, a fuel theft alarm will be generated (for example: **C49,3,2**). Note: The percent of fuel decrease must be over two times larger than the percent of fuel sensor accuracy. For example, if the fuel sensor accuracy is 10 mm and its height is 500 mm, the recommended percent of fuel decrease is 4% (10/500 x 2).
Applicable Model	MVT600/T1/T333/MVT800
Example	
GPRS Sending	@@c29,353358017784062,C49,3,2*4B\r\n
GPRS Reply	$$c28,353358017784062,C49,ok*5B\r\n

3.48 Obtaining a Picture (MVT600/T1/T333/T3) – D00

GPRS Setting	D00,*File name,Picture data packet start number*
GPRS Reply	D00,*File name,Number of picture data packets,Current picture data packet number,Picture data*
Description	Before obtaining a picture from the tracker, use the D01 command to obtain the picture list. File name: Got from the tracker memory card. The file name is unique. Picture data packet start number: indicates the start sequence number of a picture

	package. The minimum value is **0**, indicating that you read the picture from the first picture package. A picture can be divided into multiple packages.
	Number of picture data packages: indicates the number of packets of a picture. The minimum number is **1**.
	Current picture data packet number: which picture packet is sent.
	Picture data: hexadecimal. After all picture data is obtained, a picture will be composed automatically.
	Note: When the tracker receives the D00 command, eight picture packets will be uploaded consecutively. After 2 seconds, the server sends the D00 command to obtain picture data packets from the ninth picture data packet.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@O48,353358017784062,D00,0215080432_C2E03.jpg,0*DB\r\n
GPRS Reply	The example cannot be displayed because of hexadecimal characters.

3.49 Obtaining the Picture List (MVT600/T1/T333/T3) – D01

GPRS Setting	D01,*Picture data packet start number*
GPRS Reply	D01,*Number of picture data packets*,*Current picture data packet number*,*Picture name (1)|Picture name (2)|…|Picture name (n)|*
Description	Picture name (n): indicates picture names, which are separated by |.
	Picture data packet start number: indicates the start sequence number of a picture list. The minimum number is **0**. For example, when the value is **0**, you can obtain the picture list from the first picture package. When the value is **4**, you can obtain the picture list from the fifth picture package.
	Number of picture data packets: indicates the number of packets of a picture. The minimum number is **1**.
Example	
GPRS Sending	@@A27,353358017784062,D01,0*BB\r\n
GPRS Reply	$$A480,353358017784062,D01,3,0,0506162517_C1E03.jpg|0506162517_C1E11.jpg|0506162624_C1E03.jpg|0506162630_C1E11.jpg|0506162720_C1E03.jpg|0506162721_C1E03.jpg|0215080547_C1E03.jpg|0215080547_C1E11.jpg|0215080626_C1E03.jpg|0215080626_C1E11.jpg|0215080827_C1E03.jpg|0215080827_C1E11.jpg|0215080850_C1E03.jpg|0215080850_C1E11.jpg|0507145426_C1E03.jpg|0507145426_C1E11.jpg|0507145512_C2E03.jpg|0507145512_C2E11.jpg|0215080050_C3E03.jpg|0215080050_C3E11.jpg|0215080459_C3E03.jpg|021508050*41\r\n

3.50 Deleting a Picture (MVT600/T1/T333/T3) – D02

GPRS Setting	D02,*Picture name (1)|Picture name (2)|…|Picture name (n)|*
GPRS Reply	D02,OK
Description	Picture name (n): indicates the name of the picture to be deleted. You can delete multiple pictures. Picture names are separated by |.

Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@E110,353358017784062,D02,0506162517_C1E03.jpg|0506162517_C1E11.jpg|0506162624_C1E03.jpg|0506162630_C1E11.jpg|*4E\r\n
GPRS Reply	$$F28,353358017784062,D02,OK*F4\r\n

3.51 Taking Photos on Demand (MVT600/T1/T333/T3) – D03

GPRS Setting	D03,Camera number,Picture name,
GPRS Reply	D03, OK
Description	Camera number: The minimum value is **1**, indicating the first camera. The maximum value depends on the number of cameras connected to the tracker. The maximum value is generally **2**. Picture name: indicates the name of a picture.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@D46,353358017784062,D03,1,camera picture.jpg*E2\r\n
GPRS Reply	$$D28,353358017784062,D03,OK*F3\r\n

3.52 Authorizing an RFID Card (MVT600/T1/T333/T3) – D10

GPRS Setting	D10,RFID(1),RFID(2),…,RFID(n)
GPRS Reply	D10, OK
Description	RFID (n): indicates the authorized RFID card number. The value ranges from 1 to 4294967295. Decimal. A maximum of 50 RFID cards can be authorized at a time.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@f43,353358017784062,D10,13737431,13737461*17\r\n
GPRS Reply	$$f28,353358017784062,D10,OK*13\r\n

3.53 Authorizing RFID Cards in Batches (MVT600/T1/T333/T3) – D11

GPRS Setting	D11,*RFID card start number*,n
GPRS Reply	D11, OK
Description	RFID card start number: The value ranges from 1 to 4294967295. Decimal. n: indicates the number of batch-authorized RFID cards. Decimal. The maximum value is **128**.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@e36,353358017784062,D11,13737431,1*AA\r\n
GPRS Reply	$$e28,353358017784062,D11,OK*13\r\n

3.54 Checking RFID Authorization (MVT600/T1/T333/T3) – D12

GPRS Setting	D12,RFID
GPRS Reply	D12, n
Description	RFID: ranges from 1 to 4294967295. Decimal. n: When **n** is **0**, the RFID is not authorized.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@C34,353358017784062,D12,13737431*2A\r\n
GPRS Reply	$$C27,353358017784062,D12,0*87\r\n

3.55 Reading an Authorized RFID (MVT600/T1/T333/T3) – D13

GPRS Setting	D13,*RFID packet start number*
GPRS Reply	D13,*Number of RFID packets*,*Current RFID packet number*,RFID(1)RFID(2)…RFID(n)
Description	RFID packet start number: indicates the start sequence number of the RFID packet. The minimum value is **0**. For example, when the value is **0**, you can obtain the package list from the first RFID packet. When the value is **4**, you obtain the package list from the fifth RFID packet. Number of RFID packets: indicates the number of authorized RFID packets. One RFID packet contains a maximum of 100 RFID card numbers. The minimum value is **0**. RFID (n): has eight hexadecimal characters.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@w27,353358017784062,D13,0*F4\r\n
GPRS Reply	The example cannot be displayed because of hexadecimal characters.

3.56 Deleting an Authorized RFID (MVT600/T1/T333/T3) – D14

GPRS Setting	D14,RFID(1),RFID(2),…,RFID(n)
GPRS Reply	D14, OK
Description	RFID (n): indicates the RFID to be deleted. The value ranges from 1 to 4294967295. Decimal. A maximum of 50 RFID cards can be deleted at a time. One SMS (including protocols) cannot exceed 140 bytes.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@Q34,353358017784062,D14,13723455*3B\r\n
GPRS Reply	$$Q28,353358017784062,D14,OK*02\r\n

3.57 Deleting Authorized RFIDs in Batches (MVT600/T1/T333/T3) – D15

GPRS Setting	D15,*RFID card start number*,n
GPRS Reply	D15, OK
Description	RFID card start number: ranges from 1 to 4294967295. Decimal.
	n: indicates the number of RFID cards to be deleted in batches. Decimal. The maximum value is **128**.
	When the card start number is a value ranging from 1 to 4294967295 and **n** is greater than or equal to 65536, all authorized numbers will be deleted.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@K36,353358017784062,D15,13723455,3*97\r\n
GPRS Reply	$$K28,353358017784062,D15,OK*FD\r\n

3.58 Checking the Checksum of the Authorized RFID Database (MVT600/T1/T333/T3) – D16

GPRS Setting	D16
GPRS Reply	D15, XOR
Description	This command is used to check whether the existing authorized RFID database is consistent with that recorded in the server.
	When the tracker receives the D16 command, the XOR result of all authorized RFIDs is regarded as the database checksum for responding. After the server receives the checksum, compare with the XOR result of all authorized RFIDs recorded in the server. If the result is the same, the existing authorized RFID database is consistent with that recorded in the server. Otherwise, data errors occur in the authorized RFID database.
Applicable Model	MVT600/T1/T333/T3
Example	
GPRS Sending	@@u25,353358017784062,D16*97\r\n
GPRS Reply	$$u28,353358017784062,D16,18*F7\r\n

3.59 Setting the Maintenance Mileage (TC68S) – D65

GPRS Setting	D65,*Eight mileage points*
GPRS Reply	D65,OK
Description	Send eight mileage points.
	Eight mileage points: (Current mileage + Time interval between maintenance services x 1), (Current mileage + Time interval between maintenance services x 2), (Current mileage + Time interval between maintenance services x 3), (Current mileage + Time interval between maintenance services x 4), (Current mileage + Time interval between maintenance services x 5), (Current mileage + Time interval between maintenance services x 6), (Current mileage + Time interval between maintenance services x 7), (Current mileage + Time interval between maintenance services x 8)
Applicable Model	TC68S

Example	Set mileage points: 30000, 50000,60000,70000,80000,90000,100000,110000
GPRS Sending	@@V75,353358017784062,D65,30000,50000,60000,70000,80000,90000,100000,110000*EA\r\n
GPRS Reply	$$V28,353358017784062,D65,OK*OD\r\n

3.60 Setting Maintenance Time (TC68S) – D66

GPRS Setting	D66,*Eight time points*
GPRS Reply	D66,OK
Description	Send the time point of next eight times of maintenance services. Time point: days from January 1, 1990 to the next maintenance
Applicable Model	TC68S
Example	Set the time point. The next maintenance time is November 22, 2013. The first time point is 8726.
GPRS Sending	@@V65,353358017784062,D66,8726,8816,8906,8996,9086,9176,9266,9356*A2\r\n
GPRS Reply	$$V28,353358017784062,D66OK*E2\r\n

3.61 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.
Applicable Model	All
Example	
GPRS Sending	@@W25,353358017784062,E91*7D\r\n
GPRS Reply	$$W38,353358017784062,FWV1.00,12345678*1C\r\n

3.62 Restarting the GSM Module – F01

GPRS Setting	F01
GPRS Reply	F01,OK
Description	Restart the GSM module.
Applicable Model	All
Example	
GPRS Sending	@@j25,353358017784062,F01*88\r\n
GPRS Reply	$$j28,353358017784062,F01,OK*19\r\n

3.63 Restarting the GPS Module – F02

GPRS Setting	F02
GPRS Reply	F02,OK

Description	Restart the GPS module.
Applicable Model	All
Example	
GPRS Sending	@@Z25,353358017784062,F02*79\r\n
GPRS Reply	$$Z28,353358017784062,F02,OK*0A\r\n

3.64 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.
Applicable Model	All
Example	
GPRS Sending	@@D40,353358017784062,F08,0,4825000*51\r\n
GPRS Reply	$$D28,353358017784062,F08,OK*FA\r\n

3.65 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.
Applicable Model	All
Example	
GPRS Sending	@@E27,353358017784062,F09,1*CA\r\n
GPRS Reply	$$E28,353358017784062,F09,OK*FC\r\n

3.66 Restoring Initial Settings – F11

GPRS Setting	F11
GPRS Reply	F11,OK
Description	Restore initial settings except the SMS password.

Applicable Model	All
Example	
GPRS Sending	@@[25,353358017784062,F11*7A\r\n
GPRS Reply	$$[28,353358017784062,F11,OK*0B\r\n

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