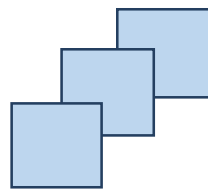


FIFOTRACK COMMAND LIST




Model: A100

Version: V1.1

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Document History

Version	Revision Date	Author	Detail
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1 GPRS Command Format

GPRS uplink (i.e.: Data is sent from terminal to platform) command format:

\$\$<pack-len>,<ID>,<work-no>,<cmd-code>,<cmd-para>*<checksum>\r\n

GPRS downlink (i.e.: Data is sent form platform to terminal) command format:

##<pack-len>,<ID>,<work-no>,<cmd-code>,<cmd-para>*<checksum>\r\n

Remarks:

- ⦿ Comma (,) is used to separate data field, and it is necessary. There is no space before or after comma.
- ⦿ pack-len: Package Length, decimal string format, the field of *pack-len* is {,<ID>,<work-no>,<cmd-code>,<cmd-para>}, be careful, comma(,) in front of *ID* included.
- ⦿ ID: Terminal ID, default IMEI.
- ⦿ work-no: working number, hexadecimal string format, cyclic accumulation from 1 to 0xFFFF.
- ⦿ cmd-code: Command code, or specification of data type.
- ⦿ cmd-para: parameter or description of *cmd-code*, which is described in the following chapter.
- ⦿ checksum: checksum of package, 2 bytes hexadecimal string format, XOR of {<pack-len>,<ID>,<work-no>,<cmd-code>,<cmd-para>}.
- ⦿ \r\n: End of package, i.e. <CR><LF>.
- ⦿ Without specification, multi-byte binary data in *cmd-para* uses big endian format, i.e. Most Significant Byte first.

2 SMS Command Format

Sending SMS (from mobile to tracker) command format:

<password>,<cmd-code>,<cmd-para>

Reply SMS (from tracker to mobile) data format:

<cmd-code>,<proc-result>

01 password: SMS password, 6 digits, default "000000".

02 cmd-code: command code, the same as cmd-code filed in GPRS command.

03 cmd-para: command parameter, the same as cmd-para filed in GPRS command.

04 proc-result: command process result

OK – Succeed.

05 SMS command with invalid password, or with incorrect format, no reply will be sent.

3 Serial port (COM) Command Format

Setting command format:

#<cmd-code>,<cmd-para><CR><LF>

Reply data format:

#<cmd-code>,<proc-result><CR><LF>

cmd-code, cmd-para: the same as corresponding filed of GPRS/SMS command.

proc-result: SMS command procession result

OK – Succeed.

UNSUPPORT – Command not supported.

FAILED –Procession failed.

4 Command Writing Specification

- ⦿ Comma (,) is used to separate multi-filed, there is no space before and after comma.
- ⦿ For command with multi parameters, filed(s) can be empty, the corresponding parameter is set to default.
- ⦿ The following chapters describe cmd-code and cmd-para.
- ⦿ The “Retrieve” row in the following chapters describes the corresponding query command.

5 Command List

B00 – Setting GPRS Parameters	
Source	GPRS/COM/SMS
Description	<p>B00,<svr_type>,<net_addr>,<net_port></p> <p>01 svr_type: server selection, 1--main server, 2--backup server; When the connection to main server cannot be reached, tracker will automatically connect to the backup server. This avoids data losses.</p> <p>02 net_addr: server IP or domain.</p> <p>03 net_port: server port.</p>
Reply	<p>B00,<err_code></p> <p>01 err_code: procession error code.</p> <p>OK – Succeed.</p> <p>UNSUPPORT – Command not supported.</p> <p>FAILED – Procession failed.</p>
Example	<p>B00,1, 47.88.35.165,10502</p> <p>01 Set main server: IP-47.88.35.165, port-10502.</p>
Retrieve	<p>C04,B00,<svr_type></p> <p>01 svr_type: server selection, the same as <u>svr_type</u> field in setting command.</p>

B01 – Setting GPRS APN Parameters	
Source	GPRS/COM/SMS
Description	<p>B01,<apn_name>,<apn_usr>,<apn_pwd></p> <p>01 apn_name: APN name.</p> <p>02 apn_usr: APN user name.</p> <p>03 apn_pwd: APN password.</p> <p>04 Leave <u>apn_usr</u>, <u>apn_pwd</u> field empty, if no APN username and APN password exist.</p> <p>05 Contact to local ISP for APN detail.</p>
Reply	<p>B01,<err_code></p> <p>01 err_code: procession error code.</p> <p>OK – Succeed.</p> <p>UNSUPPORT – Command not supported.</p> <p>FAILED – Procession failed.</p>
Example	<p>B01,cmnet</p> <p>01 Set APN name to “cmnet”, APN login username and password empty.</p>
Retrieve	C04,B01

B02 – Setting GPRS Link Protocol

Source	GPRS/COM/SMS
Description	B02,<link_type> 01 link_type: Link protocol, value TCP or UDP. 02 default TCP protocol.
Reply	B02,<err_code> 01 err_code: procession error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED – Procession failed.
Example	B02,TCP 01 Set link protocol to TCP.
Retrieve	C04,B02

B03 – Setting Tracking Time Interval

Source	GPRS/COM/SMS
Description	B03,<basic_tmr>,<accoff_tmr>,<parking_tmr> 01 basic_tme: normal time interval, unit s. 02 accoff_tmr: time interval when ACC OFF, unit s, default 0s. 03 parking_tmr: time interval when parking, unit s, default 0s. 04 When ACC is connected, tracker uses <u>accoff_tmr</u> priority, <u>parking_tmr</u> is ignored.
Reply	B03,<err_code> 01 err_code: procession error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED – Procession failed.
Example	B03,30 01 Set timing tracking interval to 30s, tracker uploads position data every 30s.
Retrieve	C04,B03

B04 – Setting Roaming Tracking Time Interval

Source	GPRS/COM/SMS
Description	B04,<roam_tmr> 01 roam_tmr: roaming time interval, unit s, default 0s. 02 When both B03 and B04 are set, tracker uses <u>basic_tmr</u> and <u>roam_tmr</u> for data uploading under different network condition, <u>accoff_tmr</u> and <u>parking_tmr</u> are ignored.
Reply	B04,<err_code> 01 err_code: procession error code.



	<p>OK – Succeed.</p> <p>UNSUPPORT – Command not supported.</p> <p>FAILED – Procession failed.</p>
Example	<p>B04,3600</p> <p>01 Set timing tracking interval to 3600s while roaming.</p>
Retrieve	C04,B04

B05 – Setting Distance Tracking Interval

Source	GPRS/COM/SMS
Description	<p>B05,<basic_dst></p> <p>01 basic_dst: Distance tracking interval, unit meter.</p> <p>02 Distance Tracking is independent from timing tracking.</p>
Reply	<p>B05,<err_code></p> <p>01 err_code: procession error code.</p> <p>OK – Succeed.</p> <p>UNSUPPORT – Command not supported.</p> <p>FAILED – Procession failed.</p>
Example	<p>B05,100</p> <p>01 Set distance tracking to 100m.</p>
Retrieve	C04,B05

B07 – Setting the Direction Change Upload

Source	GPRS/COM/SMS
Description	<p>B07,<course></p> <p>01 course: direction change angle, unit degree, range 1--359, default 0.</p> <p>02 When <u>course</u> is set to 0, direction change upload is disabled.</p> <p>03 When driving direction change exceeds the setting value, tracker will upload a position data for supplement.</p>
Reply	<p>B07,<err_code></p> <p>01 err_code: procession error code.</p> <p>OK – Succeed.</p> <p>UNSUPPORT – Command not supported.</p> <p>FAILED – Procession failed.</p>
Example	<p>B07,30</p> <p>01 Set direction change angle to 30°.</p>
Retrieve	C04,B07

B08 – Setting Speeding Alarm	
Source	GPRS/COM/SMS
Description	B08,<speeding> 01 speeding: speed, unit km/h, range 0--300, default 0. 02 When parameter is set to 0, speeding alarm is disabled.
Reply	B08,<err_code> 01 err_code: procession error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED – Procession failed.
Example	B08,90 01 Set speed limit to 90km/h.
Retrieve	C04,B08

B10 – Setting SMS Password	
Source	GPRS/COM/SMS
Description	B10,<sms_pwd> 01 sms_pwd: SMS password, 6 digits, default “000000”.
Reply	B10,<err_code> 01 err_code: procession error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED – Procession failed.
Example	B10,472627 01 Set SMS password to “472627”. B10,47262A 01 Invalid command, because SMS password needs to be a 6 digits string.
Retrieve	C04,B10

B11 – Setting SOS Number	
Source	GPRS/COM/SMS
Description	B11,<sos_num1>,<sos_num2>,<sos_num3> 01 sos_num1, 2, 3: SOS numbers to be set; 3 numbers can be set at most. 02 Refer to B23 for the function of SOS number(s).
Reply	B11,<err_code> 01 err_code: procession error code. OK – Succeed. UNSUPPORT – Command not supported.

	FAILED – Procession failed.
Example	B11,15698210011,,15698210200 01 Set sos_num1 to 15698210011, sos_num2 to empty, sos_num3 to 15698210200.
Retrieve	C04,B11

B12 – Output Control

Source	GPRS/COM/SMS
Description	B12,<index>,<action>,<safe_speed> 01 index: out port selection, value 1, 2, 3... etc.. 02 action: Output control, 0--output low level, 1--output high level. 03 safe_speed: speed limit, unit km/h, range 1–300; when this parameter is set to 0, or this filed is empty, output control takes effect immediately; Other value, set the speed limit for output control. When the driving speed is lower than the speed limit, the output control takes effect.
Reply	B12,<err_code> 01 err_code: error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED –Processing failed.
Example	B12,1,1,20 01 Set out-1 to output high level when speed less than 20km/h.
Retrieve	UNSUPPORT

B13 – Pulse Output Control

Source	GPRS/COM/SMS
Description	B13,<index>,<on_time>,<off_time>,<pls_cnt> 01 index: out port specification, value 1, 2, 3... etc.. 02 on_time: Duration of high level, unit ms. 03 off_time: Duration of low level, unit ms. 04 pls_cnt: Pulse number.
Reply	B13,<err_code> 01 err_code: error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED –Processing failed.
Example	B13,1,1000,1000,10 01 Set out-1 to output 10 pulse, whose high level duration 1000ms, low level duration 1000ms.
Retrieve	UNSUPPORT

B14 – Setting SMS Time Zone

Source	GPRS/COM/SMS
Description	<p>B14,<tzone></p> <p>01 tzone: time zone, range [-12, 12].</p> <p>02 Default value of <i>tzone</i> is 0.</p> <p>03 When SMS time zone is set, all tracking/alarm SMS use <i>tzone</i> for date & time.</p> <p>04 GPRS data uploading uses UTC-0 time zone.</p>
Reply	<p>B14,<err_code></p> <p>01 err_code: procession error code.</p> <p style="padding-left: 40px;">OK – Succeed.</p> <p style="padding-left: 40px;">UNSUPPORT – Command not supported.</p> <p style="padding-left: 40px;">FAILED – Procession failed.</p>
Example	B14,-8
Retrieve	C04,B14

B15 – Setting Sleep Mode

Source	GPRS/COM/SMS
Description	<p>B15,<slp_mode>,<slp_wait_tmr></p> <p>01 slp_mode: sleep mode, 0—sleep is disabled, 1--normal sleep, 2--deep sleep.</p> <p>02 slp_wait_tmr: waiting time to sleep mode, unit s, default 300s.</p> <p>03 Normal sleep: turn off all the power except GSM module, terminal will be waked up by IO trigger, moving, incoming phone-call or SMS.</p> <p>04 Deep sleep: turn off all the power supply, only wake up by IO trigger or moving.</p>
Reply	<p>B15,<err_code></p> <p>01 err_code: error code.</p> <p style="padding-left: 40px;">OK – Succeed.</p> <p style="padding-left: 40px;">UNSUPPORT – Command not supported.</p> <p style="padding-left: 40px;">FAILED –Processing failed.</p>
Example	<p>B15,1</p> <p>01 Enable normal sleep mode, and waiting time to sleep mode is the default 300s.</p>
Retrieve	C04,B15

B16 – Setting Initial Mileage and Initial Runtime

Source	GPRS/COM/SMS
Description	<p>B16,<init_mile>,<init_runtime></p> <p>01 init_mile: initial mileage, unit meter, default 0m.</p> <p>02 init_runtime: initial runtime, unit s, default 0s.</p>
Reply	B16,<err_code>

	01 err_code: error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED –Processing failed.
Example	B16 01 Set both initial mileage and runtime to 0
Retrieve	C04,B16 01 The retrieved value is current mileage and current runtime, not the setting ones.

B17 – Clear Blind Data

Source	GPRS/COM/SMS
Description	B17,<data_type> 01 data_type: blind data type. 1 – GPRS Blind. 2 – SMS blind. 3 – Both GPRS and SMS blind.
Reply	B17,<err_code> 01 err_code: procession error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED – Procession failed.
Example	B17,3 01 Clear both GPRS and SMS blind data.
Retrieve	UNSUPPORT

B18 – Setting in-port Working Mode

Source	GPRS/COM/SMS
Description	B18,<input>,<valid_mode> 01 input: in-port selection, 1--input1, 2--input2, etc.. 02 valid_mode: valid trigger mode, 0--low level valid, 1--high level valid.
Reply	B18,<err_code> 01 err_code: error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED –Processing failed.
Example	B18,3,1 01 Set IN3 to high level valid mode.
Retrieve	C04,B18,<input> 01 input: in-port selection, the same as <i>input</i> field in setting command.

B19 – Setting Circle geo-fence

Source	GPRS/COM/SMS
Description	<p>B19,<index>,<flag>,<radius>,<lat>,<lon></p> <p>01 index: fence index, value 1~8, i.e.: 8 geo-fence can be set at most.</p> <p>02 flag: alarm flag</p> <p style="padding-left: 20px;">flag=1: Trigger alarm when exit fence.</p> <p style="padding-left: 20px;">flag=2: Trigger alarm when enter fence.</p> <p style="padding-left: 20px;">flag=3: Trigger alarm both enter and exit fence.</p> <p>03 radius: radius of circle geo-fence, unit meter.</p> <p>04 lat: latitude of center point, decimal string format.</p> <p>05 lon: longitude of center point, decimal string format.</p> <p>06 When <u>lat</u> and <u>lon</u> are empty, current latitude and longitude is used, while GPS valid signal is needed.</p> <p>07 When <u>flag</u>, <u>radius</u>, <u>lat</u>, <u>lon</u> are empty, delete geo-fence specified by <u>index</u>; When <u>index</u>=0 or empty, delete all.</p>
Reply	<p>B19,<err_code></p> <p>01 err_code: procession error code.</p> <p style="padding-left: 20px;">OK – Succeed.</p> <p style="padding-left: 20px;">UNSUPPORT – Command not supported.</p> <p style="padding-left: 20px;">FAILED – Procession failed.</p>
Example	<p>B19,1,3,200</p> <p>01 Set the first circle geo-fence, centre point: current location, radius: 200m, output alarm both enter and exit fence.</p>
Retrieve	<p>C04,B19,<index></p> <p>01 index: fence index, value 1~8, the same as <u>index</u> field in setting command.</p>

B21 – Setting Fatigue Driving

Source	GPRS/COM/SMS
Description	<p>B21,<drowsy_time>,<rest_time></p> <p>01 drowsy_time: Fatigue driving time, unit s, default 14400s.</p> <p>02 rest_time: Minimum rest time after fatigue driving, unit s, default 1200s.</p> <p>03 When <u>drowsy_time</u> is set to 0, fatigue driving alarm is disabled.</p> <p>04 The field <u>rest_time</u> can be empty, while the default value is used.</p> <p>05 When <u>drowsy_time</u> and <u>rest_time</u> are empty, both values are set to default.</p>
Reply	<p>B21,<err_code></p> <p>01 err_code: procession error code.</p> <p style="padding-left: 20px;">OK – Succeed.</p> <p style="padding-left: 20px;">UNSUPPORT – Command not supported.</p> <p style="padding-left: 20px;">FAILED – Procession failed.</p>
Example	B21

	01 Set fatigue driving time to the default value 14400s, and minimum rest time to the default value 1200s.
Retrieve	C04,B21

B22 – Setting Maximum Parking Time

Source	GPRS/COM/SMS
Description	B22,<time> 01 time: Maximum parking time, unit s, default 0s, i.e. parking overtime alarm is disabled. 02 When parking time exceeds preset value, a parking overtime alarm triggered.
Reply	B22,<err_code> 01 err_code: error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED –Processing failed.
Example	B22,1200 01 Set maximum parking time to 1200s.
Retrieve	C04,B22

B23 – Setting Alarm Action

Source	GPRS/COM/SMS
Description	B23,<alm-code>,<GPRS><SMS><two-way-call><monitor-call><photo><AN-idx> 01 alm-code: Alarm type, refer to Appendix –A. 02 GPRS: Disable/enable GPRS uploading. 03 SMS: Disable/enable SMS to SOS number. 04 two-way-call: Disable/enable SOS number dialing under two-way conversation. 05 monitor-call: Disable/enable SOS number dialing under monitor mode. 06 photo: Disable/enable photographing. For A100, photographing is not supported. 07 AN-idx: Complicated action, value 1~6, which corresponds to <i>index</i> field in B24 command; AN is composed of a serial command sets, performing user define operations; Refer to B24 command for detail. 08 When both <i>two-way-call</i> and <i>monitor-call</i> are set, <i>monitor-call</i> is valid, while <i>two-way-call</i> ignored. 09 <i>two-way-call</i> or <i>monitor-call</i> is valid when SOS number set, refer to B11 command for SOS number(s) setting.
Reply	B23,<err_code> 01 err_code: procession error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED – Procession failed.

Example	<p>B23,2,110102</p> <p>01 Set action when SOS triggered:</p> <ul style="list-style-type: none"> a Sending GPRS alarm data to platform. b Sending alarm SMS with C01 format to SOS number. c Dial SOS numbers under monitor mode. d Perform operations which is defined by B24
Retrieve	<p>C04,B23,<alm-code></p> <p>01 alm-code: Alarm type, refer to Appendix –A. The same as <u>alm-code</u> field in setting command.</p>

B24 – Setting Complicated Alarm Action

Source	GPRS/COM/SMS
Description	<p>B24,<AN-idx>,'#oper-1',<delay_t>,'#oper-2',....</p> <p>01 The command defines complicated alarm action, “AN” for short; AN is used associated with B23 setting. When both “<u>AN-idx</u>” field in B23 command, and AN detail in B24 are set, operation can be performed then.</p> <p>02 AN-idx: AN index, value 1~6, corresponds to 1~6 operation sets; It can be selected by <u>AN-idx</u> field in B23 command.</p> <p>03 #oper-[1,2...]: Operation instruction, composed of a serial command(s). Maximum length of 64 bytes.</p> <p>04 delay_t: Delay time between adjoining operation, unit second. It means, tracker performs operations defined by <u>opera-1</u>, delay <u>delay_t</u> seconds, then perform <u>opera-2</u></p> <p>05 The writing rule of B24:</p> <ul style="list-style-type: none"> a Single quotes in front of and behind <u>oper-x</u> are needed, which is used to define operation start b <u>oper-x</u> is composed of commands sets, it is written in “SMS Command Format”. For example, '#B12,1,1' c <u>delay_t</u> is written in digital directly, there is no single quote in front or behind <p>06 The operation flow of AN action</p> <ul style="list-style-type: none"> a Tracker detects alarm occurring. b Tracker checks whether <u>AN-idx</u> is selected in B23, and whether AN detail is set in B24. c When both B23 and B24 is set, tracker performs operation defined by B24.
Reply	<p>B24,<err_code></p> <p>01 err_code: procession error code.</p> <ul style="list-style-type: none"> OK – Succeed. UNSUPPORT – Command not supported. FAILED – Procession failed.
Example	<p>B23,2,100003</p> <p>B24,3,'#B12,1,1',3,'#B12,1,0'</p> <p>01 Tracker will upload GPRS package, and perform AN3 when SOS detected.</p> <p>02 When SOS detected, tracker uploads GPRS alarm package, set OUTPUT1 high level,</p>

	delay 3s, and then set OUTPUT1 low level.
Retrieve	C04,B24,< AN-idx > 01 AN-idx: AN index, the same as <i>AN-idx</i> field in setting command

B26 – Setting Alarm SMS Head String

Source	GPRS/COM/SMS
Description	B26,<alm-code>,<sms_string> 01 alm-code: Alarm type, refer to Appendix –A. 02 sms_string: SMS head string, 16 bytes length at most. 03 Refer to Appendix-A for default string.
Reply	B26,<err_code> 01 err_code: error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED –Processing failed.
Example	B26,2,HELP 01 Set SMS head string of SOS to “HELP”.
Retrieve	C04,B26,<alm-code> 01 alm-code: Alarm type, refer to Appendix –A. The same as <i>alm-code</i> field in setting command.

B27 – Setting Parameters of Harsh Acceleration Alarm

Source	GPRS/COM/SMS
Description	B27,<speed_var>,<time_lmt> 01 speed_var: maximum acceleration speed, unit km/h, default 0. 02 time_lmt: hard acceleration detection time, unit s, default 0. 03 Refer to Appendix –A for <i>alm-code</i> of harsh accelerate
Reply	B27,<err_code> 01 err_code: procession error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED – Procession failed.
Example	B27,40,2 01 Set hard acceleration parameters: 40km/h speed variation within 2s.
Retrieve	C04,B27

B28 – Setting Parameters of Harsh Braking Alarm

Source	GPRS/COM/SMS
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Description	B28,<speed_var>,<time_lmt> 01 speed_var: maximum decrease speed, unit km/h, default 0. 02 time_lmt: hard braking detection time, unit s, default 0. 03 When driving speed decrease beyond <i>speed var</i> , tracker triggers hard braking alarm. 04 Refer to Appendix –A for <i>alm-code</i> of harsh brake
Reply	B28,<err_code> 01 err_code: procession error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED – Procession failed.
Example	Refer to example in B27
Retrieve	C04,B28

B31 – Setting SOS Number Attribute

Source	GPRS/COM/SMS
Description	B31,<sos-num>,<two-way-call>,<monitor>,<pos-sms> 01 Set SOS number attribute, refer to B11 command for SOS number setting. 02 sos-num: SOS index, value 1, 2, 3, which corresponds to SOS number set by B11 command. 03 two-way-call: attribute of two-way conversation. 04 monitor: attribute of monitor-mode conversation. 05 pos-sms: attribute of position SMS. 06 Description of attribute: two-way-call: tracker picks up incoming phone-call in two-way conversation mode. monitor: tracker picks up incoming phone-call in monitor mode. pos-sms: Tracker sends position SMS after incoming phone-call ends. Refer to C01 command for SMS format. 07 When both <i>two-way-call</i> and <i>monitor</i> are set, monitor is valid, i.e.: tracker picks up phone-call in monitor mode. 08 When the command string has only <i>sos-num</i> field, default attribute is set to corresponding SOS number. 09 Default attribute of SOS number: <i>two-way-call</i> and <i>pos-sms</i> .
Reply	B31,<err_code> 01 err_code: procession error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED – Procession failed.
Example	B31,1,1,1,1 01 Set attribute of the first SOS number: tracker automatically picks up incoming phone-call under monitor mode, reply a position SMS.
Retrieve	C04,B31,<sos-num>

	01 sos-num: SOS index, value 1, 2, 3. The same as <u>sos-num</u> field in setting command.
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B33 – Setting Maximum Idle Time

Source	GPRS/COM/SMS
Description	<p>B33,<idle_time></p> <p>01 idle_time: maximum idle time, unit: s, default 0s. This parameter should be greater than 300s.</p> <p>02 idle definition: ACC ON, but no speed, which means engine running under idle mode.</p> <p>03 When idle mode detected, tracker starts idle time counter, and triggers <u>Idling Alarm</u> (<u>alm_code=35</u>), if counter exceeds <u>idle_time</u>.</p>
Reply	<p>B33,<err_code></p> <p>01 err_code: procession error code.</p> <p>OK – Succeed.</p> <p>UNSUPPORT – Command not supported.</p> <p>FAILED – Procession failed.</p>
Example	<p>B33,600</p> <p>01 Set maximum idle time to 600s</p>
Retrieve	C04,B33

B90 – Reset Tracker or Module

Source	GPRS/COM/SMS
Description	<p>B90,< select ></p> <p>01 select: option</p> <p>=1: Reset tracker.</p> <p>=2: Reset GPS module.</p> <p>=3: Reset GSM module.</p>
Reply	<p>B90,<err_code></p> <p>01 err_code: procession error code.</p> <p>OK – Succeed.</p> <p>UNSUPPORT – Command not supported.</p> <p>FAILED – Procession failed.</p>
Example	<p>B90,1</p> <p>01 Reset tracker.</p>
Retrieve	UNSUPPORT

B91 – Setting Parameters to Default

Source	GPRS/COM/SMS
Description	B91

	01 After command is set, all system parameters (except SMS password) are set to default.
Reply	B91,<err_code> 01 err_code: procession error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED – Procession failed.
Example	B91
Retrieve	UNSUPPORT

B94 – Turn on/off LED Display

Source	GPRS/COM/SMS
Description	B94,<led-on> 01 led-on: 1--turn on LED, 0--turn off LED. 02 Default, <u>led-on</u> =1.
Reply	B94,<err_code> 01 err_code: procession error code. OK – Succeed. UNSUPPORT – Command not supported. FAILED – Procession failed.
Example	B94 01 Set LED to default: turn on.
Retrieve	C04,B94

C01 – Retrieve Position Information

Source	COM/SMS/GPRS
Description	C01 01 After command is set, tracker sends a position message. 02 When alarm detected, tracker sends alarm SMS with C01 format automatically, to all SOS number(s). 03 When command is sent via GPRS, tracker replies normal position data.
Reply	When command is sent via GPRS, the replied data is normal position package. When command is sent via SMS/COM <string_head>,yyyy-MM-dd hh:mm:ss, <spd>KM/h,<gprs_st>,<gps_fix>,EXPW:<PST> <a href="http://maps.google.com/maps?f=q&hl=en&q=loc:<Latitude>,<Longitude>">http://maps.google.com/maps?f=q&hl=en&q=loc:<Latitude>,<Longitude> a string_head: SMS head string, for normal position data, <u>string head</u> is empty, for alarm data, refer to Appendix-A for default string. b yyyy-MM-dd hh:mm:ss: current date & time, which is effected by B14 command setting.



	<p>c spd: current speed, unit km/h.</p> <p>d gprs_st: GPRS link status, value: "Connected" or "Disconnected".</p> <p>e gps_fix: GPS signal status, 'A'-fixed, 'V'-not fixed.</p> <p>f PST: Status of ext-power input, "ON" -- ext-power is connected, "OFF" -- ext-power is disconnected.</p> <p>g Latitude, Longitude: Latitude and longitude of last position point.</p>
Example	C01
Retrieve	UNSUPPORT

C02 – Retrieve Firmware/Hardware Version, SN, IMEI

Source	GPRS/COM/SMS
Description	C02
Reply	<p>Uploading data format:</p> <p>C02,<IMEI>,<SN>,<fw_ver>,<hw_ver></p> <p>01 IMEI: IMEI of tracker.</p> <p>02 SN: Serial number of tracker.</p> <p>03 fw_ver: Firmware version.</p> <p>04 hw_ver: Hardware version.</p>
Example	C02
Retrieve	UNSUPPORT

C03 – Retrieve Supply Power Status

Source	GPRS/COM/SMS
Description	C03
Reply	<p>Uploading data format:</p> <p>C03,<extp_v>,<bat_v>,<bat_percentage></p> <p>01 extp_v: Voltage of ext-power, unit V. Charge supplier voltage for handheld tracker.</p> <p>02 bat_v: Voltage of internal battery.</p> <p>03 bat_percentage: Percentage of internal battery capacity.</p>
Example	C03
Retrieve	UNSUPPORT

C04 – Retrieve Parameter Setting

Source	GPRS/COM/SMS
Description	<p>C04,<cmd-code>,<query_para></p> <p>01 cmd-code: Command code to be retrieved.</p> <p>02 query_para: Query parameter; refer to chapters above for detail.</p>
Reply	C04,<cmd>,<cmd-para>

	01 cmd-code: The same as sending command. 02 cmd-para: Retrieved parameter string, the same format as setting command described in the above chapters.
Example	Refer to chapters above.
Retrieve	UNSUPPORT

D01 – Start Firmware OTA

Source	GPRS
Description	<p>D01,<bin_file>,<data_len>,<CRC></p> <p>01 bin_file: OTA file, which contains version information.</p> <p>02 data_len: OTA data length, decimal string format, the value of <u>data_len</u> is (file length of <u>bin_file</u> - 64).</p> <p>03 CRC: CCITT CRC of OTA data, hexadecimal string format. The CRC filed is stored in BYTE[32:35] of <u>bin_file</u>.</p> <p>04 When D01 command is received, tracker saves <u>data_len</u> and <u>CRC</u> in flash, if OTA is needed.</p> <p>05 After OTA starts, tracker starts 40mins count down.</p>
Reply	<p>Tracker judges whether OTA is needed after D01 received, and replies different data: When OTA is needed, tracker uploads D02 command to fetch OTA data.</p> <p>When OTA is not needed or D01 command invalid: B94,< FAILED ></p>
Example	
Retrieve	UNSUPPORT

D02 – Retrieve OTA Data

Source	GPRS
Description	<p>D02,<bin_file>,<pack_no>,<pack_len></p> <p>01 bin_file: OTA file, the same as <u>bin_file</u> field in D01 command.</p> <p>02 pack_no: package index of OTA data, decimal string format.</p> <p>03 pack_len: Package length of OTA data, decimal string format. The value of <u>pack_len</u> should be fixed for an OTA procession. The suggestion value of <u>pack-len</u> is 512 or 1024.</p> <p>04 When D02 command is received, the platform reads OTA data from <u>bin_file</u>, at <u>offset=64+pack_no*pack_len</u>, length <u>pack_len</u>, and sends to tracker.</p> <p>05 When OTA data is not received, tracker will re-send D02 command to fetch OTA data every 10s.</p>
Reply	<p>Reply data format from platform: D02,<pack_no>,<pack_len>,<bin_data></p> <p>01 pack_no: package index of OTA data, decimal string format, the same as <u>pack_no</u> filed</p>



	in uplink package. 02 pack_len: Length of <i>bin_data</i> , decimal string format. 03 bin_data: OTA data content, hexadecimal format.
Example	
Retrieve	UNSUPPORT

D03 – Abort OTA

Source	GPRS
Description	D03,<option> 01 option: String format, description of aborting reason, the field can be empty.
Reply	D03,OK
Example	
Retrieve	UNSUPPORT

D04 – Notification of OTA Result

Source	GPRS
Description	D04,<result>,[FW],[HW] 01 result: result of OTA, decimal string format. 1 – OTA succeed 0 – OTA failed 02 FW: Current firmware version, which can be empty. 03 HW: Current hardware version, which can be empty.
Reply	D04,OK
Example	
Retrieve	UNSUPPORT

Appendix A – Alarm code and alarm parameter

The following table describes the relationship of *alm-code* and *alm-para* in GPS Position/Alarm data:

alm-code	alm-para	Description	SMS Head String
1	NULL	Distance tracking	Distance
2	NULL	Input1 active	SOS
3	NULL	Input1 inactive	IN1 Inactive
4	NULL	Input2 active	IN2
5	NULL	Input2 inactive	IN2 Inactive
6	NULL	Input3 active	IN3
7	NULL	Input3 inactive	IN3 Inactive
14	Ext-power voltage, unit V	Ext-power low	Low Ext-Power
15	NULL	Ext-power lost	Ext-Power Cut
16	NULL	Ext-power re-connect	Ext-Power On
17	Battery voltage, unit V	Internal battery low	Low Battery
18	NULL	Speeding alarm	Speeding
20	NULL	GPS antenna cut	GPS Antenna Cut
23	NULL	Harsh accelerate	Harsh Accelerate
24	NULL	Harsh braking	Harsh Braking
25	NULL	Enter sleep	Enter Sleep
26	NULL	Exit sleep	Wake Up
27	NULL	Fatigue driving	Fatigue Driving
28	NULL	Fatigue relieve	Fatigue Relieve
29	NULL	Parking overtime	Parking Overtime
30	NULL	Wireless communication jamming	GSM Jamming
32	NULL	GPS jamming	GPS Jamming
33	Hexadecimal character: bit[7:4]: geo-fence type: 0 - Circle fence 1 - Polygon fence bit[3:0]: index of fence	Exit geo-fence	Exit Fence
34	The same as "Exit geo-fence"	Enter geo-fence	Enter Fence
35	NULL	Idling Alarm	Idling Alarm

Appendix B – Structure of OTA bin file

Byte index	Size/bytes	Description
Byte[0 --15]	16	File flag, fix as "FIFOTrack.Co.", invalid file if flag error.
Byte 16 – 31	16	Tracker model, such as A100.
Byte 32 – 47	16	The first 4 bytes: CCITT CRC of OTA data; The rest data is set to 0. Byte[32] -- CRC[31:24]. Byte[33] --CRC[23:16]. Byte[34] --CRC[15:8]. Byte[35] --CRC[7:0].
Byte 48 -- 63	16	Reserved, set to 0.
Byte 64--	N	OTA data, which is sent to tracker when OTA starts; CCITTCRC is calculated within this field.