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1. GPRS uploading data format

<data head><protocol version>,<device IMEI>,<device name>,<GPRS real-time/stored data flag>,<date>,<time>,<GPS fix flag>,<latitude>,<N/S>,<longitude>,<W/E>,<used satellite number of BDS>,<used satellite number of GPS>,<used satellite number of GLONASS>,<HDOP>,<speed>,<course>,<altitude>,<mileage>,<MCC>,<MNC>,<LAC>,<Cell ID>,<GSM signal strength>,<digital input>,<digital output>,<analog input 1>,<analog input 2>,<analog input 3>,<temperature sensor 1>,<temperature sensor 2>,<RFID>,<external accessories status>,<battery percent>,<alert event type>;<checksum><data tail>

2. GPRS uploading data example

\$MGV002,860719020193193,,S,050123,054156,V,2238.26167,N,11401.99217,E,00,00,00,99.9,,,,,460,08,262C,FFC,15,,,,,,,,,100,100,Timer,bc5ff67daf8f:38|9289179f1d46:46|0071cc32f67f:59|a41a3a6ab665:72|ec26ca48faa5:72|a61a3a5ab665:73|fcd733e2c310:75|48a74e34ac58:85|3436543ec64e:85|c8bf4c074f92:87,;!'

3. GPRS uploading data analysis

Name	Description	Example
<data head>	Fixed character '\$'.	\$
<protocol version>	"MG" is fixed character string; "V002" is the changeable version.	MGV002
,	Separator.	,
<IMEI>	IMEI of device fixed in 15 bytes.	860719020193193
<device name>	Device name the user set, range: 0~15 bytes. Note: device name only consist of letters and digits.	DeviceName
<GPRS real-time/stored data flag>	'R' means this GPRS data is real-time data, 'S' means this GPRS data is stored data.	R
<date>	System date, format: DDMMYY (date month year).	240214
<time>	System time, format: HHMMSS (hour minute second).	104742
<GPS fix flag>	'A' means GPS fix successfully, 'V' means GPS can not fix.	A
<latitude>	Latitude value (format of degrees & minutes), format: DDMM.MMMM.	2238.20471
<N/S>	North/South indicator.	N
<longitude>	Longitude value (format of degrees & minutes), format: DDDMM.MMMMM.	11401.97967
<W/E>	West/East indicator.	E
<used satellite number of BDS>	The number of BDS satellite used to fix, range: 00~99.	00
<used satellite number of GPS>	The number of GPS satellite used to fix, range: 00~99.	03
<used satellite number of GLONASS>	The number of GLONASS satellite used to fix, range: 00~99.	00
<HDOP>	Horizontal dilution of precision.	1.20
<speed>	Speed over ground, unit: knot.	0.462
<course>	Course over ground, unit: degree.	356.23
<altitude>	Altitude, unit: meter.	137.9
<mileage>	Mileage, unit: Km.	1.5
<MCC>	Mobile country code.	460
<MNC>	Mobile network code.	07
<LAC>	Location area code.	262C
<Cell ID>	Cell ID.	0F54
<GSM signal strength>	GSM signal strength, range: 00~99.	25
<digital input>	Status of digital input, example shows four digital inputs ('0' means the low level, '1' means the high level). (only used for vehicle tracker)	0000
<digital output>	Status of digital output, example shows four digital outputs ('0' means disable the output, '1' means enable the output).(only used for vehicle tracker)	0000
<analog input 1>	Detected value of analog input 1, range: 0~4096. (only used for vehicle tracker)	0
<analog input 2>	Detected value of analog input 2, range: 0~4096. (only used for vehicle tracker)	0
<analog input 3>	Detected value of analog input 3, range: 0~4096. (only used for vehicle tracker)	0
<temperature sensor 1>	Detected value of temperature sensor 1, unit: degree. (only used for vehicle tracker)	28.5
<temperature sensor 2>	Detected value of temperature sensor 2, unit: degree. (only used for vehicle tracker)	28.3
<RFID>	RFID information (reserved). (only used for vehicle tracker)	
<external accessories status>	Charging flag ('0' means not charging, '1' means charging) Belt status ('0' means no belt is connected, '1' means the first belt is connected, '2'	100

	means the second belt is connected, '3' means the first and second belts are all connected)	
	Soaking state (0 means not soaking water, 1 means soaking water)	
<battery percent>	Battery percent, range: 000~100.	100
<alert event type>	Alert event type, see alert event type table .	Timer
<WIFI data >	WIFI Address: Signal strength WIFI Address: Signal strength WIFI Address: Signal strength...	bc5ff67daf8f:38 9289179f1d46:46 0071cc32f67f:59 a41a3a6ab665:72 ec26ca48faa5:72 a61a3a5ab665:73 fcd733e2c310:75 48a74e34ac58:85 3436543ec64e:85 c8bf4c074f92:87
	: is the separator, which separates the WIFI address from the signal strength. is the separator, which separates multiple WIFI data. Note: There is a maximum of 10 WIFI data.	
;	End mark.	;
<checksum>	Checksum (reserved).	
<data tail>	Fixed character '!'. !	!

4. Alert event type table

Type name	Description	Example
Restart	Device restart by hardware.	Restart
PowerOn	Device power on by software.	PowerOn
PowerOff	Device power off by software.	PowerOff
Sos	SOS emergency alert.	Sos
Timer	Sending GPRS data by interval.	Timer
CallForSms	Sending SMS by making a call (only for SMS).	CallForSms
LowBattery	Low battery alert.	LowBattery
GeoX(GeoName) In	Going into the geo-fence, 'X' is the sequence of geo-fence, range: 1~5, "GeoName" is the name user set for geo-fence, range: 0~9 bytes.	Geo1(home) In
GeoX(GeoName) Out	Going out of the geo-fence, 'X' is the sequence of geo-fence, range: 1~5, "GeoName" is the name user set for geo-fence, range: 0~9 bytes.	Geo1(home) Out
BeltOn	Belt is connected.	BeltOn
BeltOff	Belt is disconnected.	BeltOff
Error	Alert type error.	Error
Detect Water	Bubble water alarm	Detect Water