Charging Po Communication Protocol

First, the packet format

Packet header + device number + command word + data + check + packet end, between the ',' segment; all letters in the protocol are all uppercase, all symbols in English format symbols.

Data header:
{"

Packet end:
"} \ R \ n (where \ r \ n is linefeed)

Device No:
IMEI (IMEI for the GPRS module is unique, each GPRS module has a different IMEI, a total of 15)

Second, the command word Description:
CH The device sends heartbeat packet command data to the server, and the server does not need to answer

CQ server sends a request to query the device status command to the device AQ device to answer the query device status command to the server

The CC server sends the lend treasure command to the device side

MQ device sends the query device number whether it belongs to the system command to the server RQ server Answer whether the device number belongs to the system command to the device side

MC device to send a successful or successful return to the server server AM server to answer the success or return to the success of the command to the device

The MR device sends a lend or fails to a failed command to the server that the AR server answers a lent or fails to return to the device

Third, the data description:
STROEID: Rechargeable treasure position number, in the range of 1 - 3 DEVID: Charging treasure device number
BW: Charging Po Lips command data FU: Charging Po is full
NF: Charging Po is not full
EM: Charging Po is no electricity
ER: Charging Po fault
CRC16: 16-bit data check code

Fourth, the packet command:

1, heartbeat package command: Command format:
{"IMEI, CH, CRC16"}

Command field: CH Command data: none
Data direction: The device is sent to the server

2, query equipment status request command command format:
{"IMEI, CQ, CRC16"}

Command field: CQ Command data: None
Data direction: The server is sent to the device

3, query equipment status response command command format:
{"IMEI, AQ, 1.FU.XXXXXXXXXX; 2.NF.XXXXXXXXXX; 3.ER;, CRC16"}

Command field: AQ command data:
1. FU.XXXXXXXXXX No. 1 Charging Po status for FU full power, device number XXXXXXXXXX
2. NF.XXXXXXXXXX No. 2 Charger status is NU dissatisfied, device number XXXXXXXXXX
3. ER 3 charge status is ER fault data direction: the device side to send to the server

4, lend the charge treasure request command command format:
{"IMEI, CC, BW. STROEID. DEVID, CRC16"}

Command field: CC command data:
BW charging treasure lends command data
STROEID Charges are available in the range 1 - 3
DEVID Charging Device Number Data Direction: The server is sent to the device side

5, query equipment number is a system request command command format:
{"IMEI, MQ, STROEID. DEVID, CRC16"}

Command field: MQ command data:
STROEID Charges are available in the range 1 - 3
DEVID Charging Device Number Data Direction: The device is sent to the server

6, query equipment number belongs to the system response command command format:
{"IMEI, RQ, T.STROEID. DEVID, CRC16"}

Command field: RQ Command data:
T Charges are system command data

STROEID Charges are available in the range 1 - 3
DEVID Charging Device Number Data Direction: The server is sent to the device side

7, query the device number does not belong to the system response command command format:
{"IMEI, RQ, F.STROEID. DEVID, CRC16"}

Command field: RQ Command data:
F Charging Po does not belong to the system command data STROEID Charging treasure position number, the range is 1 - 3
DEVID Charging Device Number Data Direction: The server is sent to the device side

8, lend the success of the call to call the command command format:
{"IMEI, MC, BO.STROEID .DEVID, CRC16"}

Command field: MC command data:
BO borrows the successful data of the charging treasure
STROEID Charges are available in the range 1 - 3
DEVID Charging Device Number Data Direction: The device is sent to the server

9, lend the charge treasure successful answer command command format:
{"IMEI, AM, BO.STROEID .DEVID, CRC16"}

Command field: AM Command data:
BO borrows the successful data of the charging treasure
STROEID Charges are available in the range 1 - 3
DEVID Charging Device Number Data Direction: The server is sent to the device side
10, also into the charge Po successful request command order format:
{"IMEI, MC, RO.STROEID .DEVID, CRC16"}

Command field: MC command data:
RO also into the charge treasure success command data
STROEID Charges are available in the range 1 - 3
DEVID Charging Device Number Data Direction: The device is sent to the server

11, also into the charge Po successful answer command command format:
{"IMEI, AM, RO.STROEID .DEVID, CRC16"}

Command field: AM Command data:
RO also into the charge treasure success command data
STROEID Charges are available in the range 1 - 3
DEVID Charging Device Number Data Direction: The server is sent to the device side

12, lend the charge Po failed request command command format:
{"IMEI, MR, BF.STROEID .DEVID, CRC16"}

Command field: MR command data:
BF lends the charging data
STROEID Charges are available in the range 1 - 3
DEVID Charging Device Number Data Direction: The device is sent to the server

13, lend the charge Po failed to answer command command format:
{"IMEI, AR, BF.STROEID .DEVID, CRC16"}

Command field: AR Command data:
BF lends the charging data
STROEID Charges are available in the range 1 - 3
DEVID Charging Device Number Data Direction: The server is sent to the device side

14, also into the charge Po failed request command command format:
{"IMEI, MR, RF.STROEID .DEVID, CRC16"}

Command field: MR command data:
RF also enters the charge Po failed command data
STROEID Charges are available in the range 1 - 3
DEVID Charging Device Number Data Direction: The device is sent to the server

15, also into the charge Po failed to answer the command command format:
{"IMEI, AR, RF.STROEID .DEVID, CRC16"}

Command field: AR Command data:
RF also into the charge of the success of the command data
STROEID Charges are available in the range 1 - 3
DEVID Charging Device Number Data Direction: The server is sent to the device side

5, lend a treasure Po successful process:

1, the server sends [4, lend the charge treasure request command] to the device side
2, the device side to send [8, lend a successful call to call the command] to the server side
3, the server to send [9, lend a successful answer to the charging treasure] to the equipment side

6, lend the charge treasure failure process:

1, the server sends [4, lend the charge treasure request command] to the device side
2, the device side to send [12, lend the charge of the failure to request the command] to the

server
3, the server sends [13, lend the charge Po failed to answer the command] to the device side

Seven, also into the charge Po success process:

1, the device sends [5, query equipment number is a system request command] to the server
2, the server sends [6, query equipment number belongs to the system response command] to the equipment side
3, the device side to send [10, also into the charge Po successful request to the service side
4, the server sends [11, also into the charge treasure successful answer command] to the equipment side

Eight, also into the charge Bao failure process: situation 1
1, the device sends [5, query equipment number is a system request command] to the server
2, the server sends [7, query equipment number does not belong to the system response command] to the equipment side

Case 2
1, the device sends [5, query equipment number is a system request command] to the server
2, the server sends [6, query equipment number belongs to the system response command] to the equipment side
3, the device side to send [14, also into the charge Po failed to request orders] to the server
4, the server sends [15, also into the charge treasure successful answer command] to the equipment side