

Power bank Charging Communication Protocol

1 , 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 packet header { “ packet end ” } \r\n

(Where \r\n is line feed)

Device number :

IMEI (IMEI for the GPRS module is unique, each GPRS module has a different IMEI, a total of 15)

2 ,Command word description

CH The device sends heartbeat packet command data to the server, and the server does not need to answer.

CQ The server sends a request to query the device status command to the device side.

AQ The device responds to the device status command to the server.

CC The server issues a loan to the device.

MQ The device sends a query if the device number belongs to the system command to the server.

RQ Whether the server response device number belongs to the system command to the device side.

MC The device initiates a lend or succeeds in a successful command to the server.

AM The server answers the success or the success of the command to the device.

MR The device initiates a lend failure or also returns a failed command to the server.

AR The server answers the lender failure or also fails to command the device side.

3 ,Data description

STROEID : Rechargeable treasure warehouse number, range 1-3

DEVID : Charging device number

BW : Charge the treasure to lend the command data

FU : Charger full charge

NF : Charger is not full

EM : Charging treasure no electricity

ER : Charging fault

CRC16 : 16-bit data check code

4 ,Packet command

1 ,Heartbeat package command

Command format

{ "IMEI ,CH .. CRC16 " }

Command field : CH

Command data : NO

Data direction : The device is sent to the server

2 , Query the device status request command

Command format :

{ "IMEI ,CQ .. CRC16 " }

Command field : CQ

Command data : NO

Data direction : The server is sent to the device

3 , Query the device status answer command

Command format

{ "IMEI ,AQ ,1.FU .XXXXXXXXXX;2NF XXXXXXXXXXXX;3.ER;;CRC16 " }

Command field : AQ

Command data :

1. FU.XXXXXXXXXX No. 1 charge treasure state for the FU, full power

The device number is XXXXXXXXXXXX

2. NF.XXXXXXXXXX No. 2 charge treasure status for the NU, dissatisfied

The device number is XXXXXXXXXXXX

3. ER No. 3 charge treasure status for the ER, failure

Data direction : The device is sent to the server

4 , Lend the charge to the request

Command format :

{ "IMEI ,CC .BW.STROEID .DEVID. CRC16 " }

Command field : CC

Command data :

BW Charge the treasure to lend the command data

STROEID Rechargeable treasure warehouse number, range 1-3

DEVID Charging device number

Data direction : The server is sent to the device

5 ,Whether the query device number belongs to the system request command

Command format :

{ "IMEI ,MQ .STROEID .DEVID. CRC16 " }

Command field : MQ

Command data :

STROEID Rechargeable treasure warehouse number, range 1-3

DEVID Charging device number

Data direction : The device is sent to the server

6 ,The query device number belongs to the system response command

Command format :

{ "IMEI ,RQ .T.STROEID .DEVID. CRC16 " }

Command field : RQ

Command data :

T The charging treasure belongs to the system command data

STROEID Rechargeable treasure warehouse number, range 1-3

DEVID Charging device number

Data direction : The server is sent to the device

7 ,The query device number does not belong to the system response command

Command format :

{ "IMEI ,RQ .F.STROEID .DEVID. CRC16 " }

Command field : RQ

Command data :

F Charges are not part of the system command data

STROEID Rechargeable treasure warehouse number, range 1-3

DEVID Charging device number

Data direction : The server is sent to the device

8 ,Lend a charge to the success of the request

Command format :

{ "IMEI ,MC .BO.STROEID .DEVID. CRC16 " }

Command field : MC

Command data :

BO Lend the success of the charge data

STROEID Rechargeable treasure warehouse number, range 1-3

DEVID Charging device number

Data direction : The device is sent to the server

9 ,Lend a successful answer

Command format :

{ "IMEI ,AM.BO.STROEID .DEVID. CRC16 " }

Command field : AM

Command data :

BO Lend the success of the charge data

STROEID Rechargeable treasure warehouse number, range 1-3

DEVID Charging device number

Data direction : The server is sent to the device

10 ,Return to the success of the request

Command format :

{ "IMEI ,MC.RO.STROEID .DEVID. CRC16 " }

Command field : MC

Command data :

RO Return the success of the charge data

STROEID Rechargeable treasure warehouse number, range 1-3

DEVID Charging device number

Data direction : The device is sent to the server

11 ,Return the successful confirmation of the charge

Command format :

{ "IMEI ,AM.RO.STROEID .DEVID. CRC16 " }

Command field : AM

Command data :

RO Return the success of the charge data

STROEID Rechargeable treasure warehouse number, range 1-3

DEVID Charging device number

Data direction : The server is sent to the device

12 ,Lend out the charge of the treasure failed to request the order

Command format :

{ "IMEI ,MR.BF.STROEID .DEVID. CRC16 " }

Command field : MR

Command data :

BF Borrowing the charge Po failed to command data

STROEID Rechargeable treasure warehouse number, range 1-3

DEVID Charging device number

Data direction : The device is sent to the server

13 ,Borrowing the charge of the treasure failed to answer the order

Command format :

{ "IMEI ,AR.BF.STROEID .DEVID. CRC16 " }

Command field : AR

Command data :

BF Borrowing the charge Po failed to command data

STROEID Rechargeable treasure warehouse number, range 1-3

DEVID Charging device number

Data direction : The server is sent to the device

14 , Return the charge of the charge request order

Command format :

{ "IMEI ,MR.BF.STROEID .DEVID. CRC16 " }

Command field : MR

Command data :

BF Borrowing the charge Po failed to command data

STROEID Rechargeable treasure warehouse number, range 1-3

DEVID Charging device number

Data direction : The device is sent to the server

15 ,Return the charge of the charge

Command format :

{ "IMEI ,AR.RF.STROEID .DEVID. CRC16 " }

Command field : AR

Command data :

RF Return the success of the charge data

STROEID Rechargeable treasure warehouse number, range 1-3

DEVID Charging device number

Data direction : The server is sent to the device

5 ,Borrowing the successful process of charging treasure

1 ,The server sends (4, lends the charging treasure request command) to the device side.

2 The device sends (12, lends the charge to the successful request) to the server.

3 The server sends (9, lends the charge to the successful reply command) to the device side.

6 ,Borrowing the charge of the failure of the process

1,The server sends (4, lends the charging treasure request command) to the device side

2 ,The device sends (12, lends the charge to the failed request) to the server.

3 ,The server sends (13, lends the charge to the failed response command) to the device side.

7 ,Return the successful process of charging treasure

1, the device side to send (5, query whether the device number belongs to the system request command) to the server

2, the server to send (6, query equipment number is a system response command) to the device side

3, the device side to send (10, return to the success of the call to call the command) to the server

4, the server to send (11, return the successful answer to the charge of the charge) to the device side

8 ,Return charge of the failure of the process

Case 1

1, the device side to send (5, query whether the device number belongs to the system request command) to the server

2, the server to send (7, query equipment does not belong to the system response command) to the device side

Case 2

1, the device side to send (5, query whether the device number belongs to the system request command) to the server

2, the server to send (6, query equipment number is a system response command) to the device side

3, the device side to send (14, return to the charge of the failure of the request) to the server

4, the server to send (15, return the successful answer to the charge of the charge) to the equipment side

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