[AT Command] UART Server

(NA11x &NB114&NS1&NT1)

(Serial Port ⇌ Ethernet)

Chengdu Ebyte Electronic Technology Co.,Ltd.

Contents

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1 “The Basic Functions” AT Command

The general AT Commands is an instruction set available for MOD firmware and IOT firmware. MOD instruction set is supported by MOD firmware and IOT instruction set is supported by IOT firmware.

1. Enter the AT command mode: the serial port to send + + +, send the AT again within 3 seconds, the device back to display + OK, then enter the AT command mode;
2. This instruction manual supports serial port servers of NA111-A, NA111, NB114, NS1, NS1-TB, NT1, NT1, NT1-TB;
3. The following text appears "<CR> <LF>" and "\ r \ n" representing different text formats, actually H EX (0x 0D and 0x 0A);
4. "9013-2-xx" version, hereinafter referred to as "integrated firmware";
5. 2The V 1 instruction M above only applies to Integrated Firmware;
6. For the MOD Firmware (Modbus-v1.0) and the IOT Firmware (IOT-v1.0), use the NA11x & NT & NS-AT Command Set _V1.1.

Error code table:

Error code	Explain
-1	Invalid command format
-2	Invalid command
-3	Undefined for the time being
-4	Invalid parameter
-5	Undefined for the time being

1.1 Summary of The Basic AT Commands

Instruct	Description
A T+EXAT	Exit the A T configuration mode
A T+MODEL	unit type
AT+NAME	device name
A T+SN	equipment ID
AT+REBT	Restart the device
AT+RES TORE	factory data reset
AT+VER	Query firmware version
AT+UART	Serial port parameters
A T+MAC	Device M AC address
AT+WAN	Device network parameters
AT+LPORT	Device port
A T+SOCK	Working mode and target network parameters
AT+LINKSTA	Connection state feedback
AT+UARTCLR	Connect to the serial port cache mode
AT+REGMOD	Registration package mode
AT+REGINFO	Registration package content
AT+HEARTMOD	Heartbeat pack mode
AT+HEARTINFO	Heartbeat package content

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A T+SHORTM	Short connection
AT+TMORST	Timeout restart
A T+TMOLINK	Restart the network
AT+WEBCFGPORT	Web configuration port

1.2 Enter AT Commands

Instruct	AT
function	Go into the AT instruction mode
transmit by radio	AT
return	<CR><LF>+OK<CR><LF>/<CR><LF>+OK =AT e n able <CR><LF>
remarks	Return with no connection and configuration: + OK=AT enable Return with a connection: + OK

[Example]

Send + + + without changing the line first

Also don't have to change lines when sending an A T

Received: \ r \ n + OK \ r \ n or \ r \ n + OK =AT enable \ r \ n

1.3 Exit AT Commands

Instruct	AT+EXAT
function	Go into the AT instruction mode
transmit by radio	AT+EXAT <CR><LF>
return	<CR><LF>+OK<CR><LF>

[Example]

Send to: A T + EXAT \ r \ n

Received: \ r \ n + OK \ r \ n

Wait for the device to restart.

1.4 Query Model

Instruct	AT+MODEL
function	Query model
transmit by radio	AT+MODEL<CR><LF>
return	<CR><LF>+OK=<M odel String><CR><LF>
remarks	Modelstring:NA111 NA111-A NA112 NA112-A NS1 NT1 NT1-B

[Example]

Send to: A T + MODEL \ r \ n

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Received: \ r \ n + OK=NA111-A \ r \ n

1.5 Query / Set Name

Instruct	AT+NAME
function	Query, set the name
Send (query)	AT+NAME<CR><LF>
Return (query)	<CR><LF>+OK=<N ame String><CR><LF>
Send (Settings)	AT + NAME = <N ame String> <CR> <LF> (limit of 10 bytes)
Return (Settings)	<CR><LF>+OK<CR><LF>

[Example]

query:

Send to: A T + NAME \ r \ n

Received: \ r \ n + OK=A0001 \ r \ n

set up:

Send to: A T + NAME=001 \ r \ n

Received: \ r \ n + OK \ r \ n

1.6 Query / Set ID

Instruct	AT+SN
function	Query, set the ID
Send (query)	AT+SN<CR><LF>
Return (query)	<CR><LF>+OK=<SN String><CR><LF>
Send (Settings)	AT + SN = <SN String> <CR> <LF> (limit of 24 bytes)
Return (Settings)	<CR><LF>+OK<CR><LF>

[Example]

query:

Send to: A, T + SN, \ r \ n

Received: \ r \ n + OK=0001 \ r \ n

set up:

Send to: A T + SN=111 \ r \ n

Received: \ r \ n + OK \ r \ n

1.7 Restart

Instruct	AT+REBT
function	restart
transmit by radio	AT+REBT<CR><LF>
return	<CR><LF>+OK<CR><LF>

[Example]

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Send to: A T + REBT \ r \ n

Received: \ r \ n + OK \ r \ n

Wait for the restart to complete

1.8 Factory Data Reset

Instruct	AT+RESTORE
function	factory data reset
transmit by radio	AT+RESTORE<CR><LF>
return	<CR><LF>+OK<CR><LF>

[Example]

Send to: A T + RESTORE \ r \ n

Received: \ r \ n + OK \ r \ n

Wait for the restart to complete.

1.9 Query Version Information

Instruct	AT+VER
function	Query version information
transmit by radio	AT+VER<CR><LF>
return	<CR><LF>+OK<CR><LF>

[Example]

Send to: A T + VER \ r \ n

The I OT-v1.0 Firmware was received from: \ r \ n + OK =9013-0-xx \ r \ n

The Modbus-v1.0 Firmware was received from: \ r \ n + OK =9013-1-xx \ r \ n

The Integrated Firmware is received from: \ r \ n + OK =9013-2-xx \ r \ n

1.10 Query / Set up the serial port

Instruct	AT+UART
function	Query, set up the serial port
Send (query)	AT+UART<CR><LF>
Return (query)	<CR><LF>+OK=<B aud , Data, Stop, P arity, Flow><CR><LF>
Send (Settings)	AT+UART=< B aud , Data, Stop, P arity, Flow ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	B au d (Porter rate): 1200,2400,4800,9600,19200,38400,57600,115200,230400; Data (data bit): 8,7,6,5 Stop (stop bit): 1,2 P arity (check bit): NONE, O DD, E VEN, M ARK, and S PACE Flow (flow control): NONE, CTS / RTS, DSR / DTR, XON / XOFF

[Example]

query:

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Send to: A T + UART \ r \ n

Received: \ r \ n + OK =115200,8,1, NONE, NONE \ r \ n

set up:

Send to: A T + UART=115200,8,1, NONE, NONE \ r \ n

Received: \ r \ n + OK \ r \ n

1.11 Query the MAC address

Instruct	AT+MAC
function	Query the MAC address
transmit by radio	AT+MAC<CR>
return	<CR><LF>+OK=<MAC ><CR><LF>
remarks	Returns the data format "xx-xx-xx-xx-xx-xx"

[give an example]

Send to: A T + MAC \ r \ n

Receive: \ r \ n + OK =84-C2-E4-36-05-A2 \ r \ n

1.12 Query / Set the network parameters

Instruct	AT+WAN
function	Query and set the network parameters
Send (query)	AT+WAN<CR><LF>
Return (query)	<CR><LF>+OK=<Mode , Address , M ask, G ateway, DNS ><CR><LF>
Send (Settings)	AT+WAN=<Mode , Address , M ask, G ateway, DNS ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	Mode: DHCP/STATIC Addr ess: Native I P address M ask: Subnet mask G ateway: The gateway DNS: The DNS Server

[Example]

query:

Send to: A T + WAN \ r \ n

Received: \ r \ n + OK = STATIC, 192.168.3.7,255.255.255.0,192.168.3.1,114.114.114.114 \ r \ n

Settings: (Dynamic IP)

Send to: A T + WAN=DHCP, 192.168.3.7,255.255.255.0,192.168.3.1,114.114.114.114 \ r \ n

Received: \ r \ n + OK \ r \ n

Setting up: (Static IP)

Sent: A T + WAN=STATIC, 192.168.3.7,255.255.255.0,192.168.3.1,114.114.114.114 \ r \ n

Received: \ r \ n + OK \ r \ n

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1.13 Query / set the local port number

Instruct	AT+LPORT
function	Query, and set the local port number
Send (query)	AT+LPORT<CR>
Return (query)	<CR><LF>+OK=<Va lue ><CR><LF>
Send (Settings)	AT+LPORT=<Va lue ><CR>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	Va lue (port number): 0-65535,0 (the client mode uses the random port, and the server mode needs to use the "non-0" parameter otherwise the device server opening fails);

[Example]

query:

Send to: A T + LPORT \ r \ n

Received: \ r \ n + OK =8887 \ r \ n

set up:

Send to: A T + LPORT =8883 \ r \ n

Received: \ r \ n + OK \ r \ n

1.14 Query / Set the local working mode and the target equipment network parameters

Instruct	AT+SOCK
function	Query and set the network protocol parameters
Send (query)	AT+SOCK<CR><LF>
Return (query)	<CR><LF>+OK=<Model , R e mote IP, R e mote P ort><CR><LF>
Send (Settings)	AT+SOCK=<Model , R e mote IP, R e mote P ort ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	Model (working mode): TCPC, TCPS, UDPC, UDPS, MQTTC, HTTPC; Remote I P (target I P / domain name): a maximum of 128-character domain name; Remote P ort (target port): 1-65535;

[Example]

query:

Send to: A T + SOCK \ r \ n

Received: \ r \ n + OK =TCPC, 192.168.3.3,8888 \ r \ n

set up:

Send to: AT + SOCK=TCPC, 192.168.3.100,8886 \ r \ n

Received: \ r \ n + OK \ r \ n

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1.15 Query the network link status

Instruct	AT+LINKSTA
function	Query the network link status
transmit by radio	AT+LINKSTA<CR><LF>
return	<CR><LF>+OK=<STA ><CR><LF>
remarks	STA : Connect/Disconnect

[Example]

Send to: A T + LINKSTA \ r \ n

Received: \ r \ n + OK =Disconnect \ r \ n

1.16 Query / Set the serial port cache cleanup status

Instruct	AT+UARTCLR
function	Query, set the serial port cache cleaning state
Send (query)	AT+UARTCLR<CR><LF>
Return (query)	<CR><LF>+OK=<STA ><CR><LF>
Send (Settings)	AT+UARTCLR=<STA ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	STA: ON (enable connection empty cache) OFF (Disable the connection to empty the cache)

[Example]

query:

Send to: A T + UARTCLR \ r \ n

Received: \ r \ n + OK =ON \ r \ n

set up:

Send: A T + UARTCLR=OFF \ r \ n

Received: \ r \ n + OK \ r \ n

1.17 Query / Set the registration package mode

Instruct	AT+REGMOD
function	Query and set the registration package mode
Send (query)	AT+REGMOD<CR><LF>
Return (query)	<CR><LF>+OK=<S t atus><CR><LF>
Send (Settings)	AT+REGMOD=<S tatus><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	Status: OFF-Disable OLMAC-First connection Send MAC OLCSTM-First Connection Send Custom EMBMAC-Send a MAC per package EMBCSTM-Send a custom per package

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[Example]

query:

Send to: A T + REGMOD \ r \ n

Receive: \ r \ n + OK =OFF \ r \ n

set up:

Send to: A T + UARTCLR=OLMAC \ r \ n

Received: \ r \ n + OK \ r \ n

1.18 Query / Set up the custom registration package content

Instruct	REGINFO
function	Query and set up the custom registration package content
Send (query)	AT+HEARTINFO<CR><LF>
Return (query)	<CR><LF>+OK=<M ode><Data ><CR><LF>
Send (Settings)	AT+HEARTINFO=<M ode><D ata><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	M od e: Data Format (H EX) 16 decimal system, (S TR) string; D ata data: ASCII limit 40 bytes, HEX limit 20 bytes;

[Example]

query:

Send to: A T + REGINFO \ r \ n

Received: \ r \ n + OK =STR, regist msg \ r \ n

set up:

Send: A T + REGINFO =STR, EBTYE TEST \ r \ n

Received: \ r \ n + OK \ r \ n

1.19 Query / Set the heartbeat packet mode

Instruct	AT+HEARTMOD
function	Query, set the heartbeat package mode
Send (query)	AT+ HEARTMOD<CR><LF>
Return (query)	<CR><LF>+OK=<M ode><T ime ><CR><LF>
Send (Settings)	AT+HEARTMOD=<M ode><T ime ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	Mode: NONE (off), UART (serial port heartbeat), NET (network heartbeat); T ime: Time 0-65535s, 0 (close the heartbeat);

[Example]

query:

Send to: A T + HEARTMOD \ r \ n

Received: \ r \ n + OK =NONE, 0 \ r \ n

Send: A T + HEARTMOD =NET, 50 \ r \ n

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Received: \ r \ n + OK \ r \ n

1.20 Query / Set up the heartbeat data

Instruct	AT+HEARTINFO
function	Query and set up the heartbeat packet data
Send (query)	AT+HEARTINFO<CR><LF>
Return (query)	<CR><LF>+OK=<M ode><D ata ><CR><LF>
Send (Settings)	AT+HEARTINFO=<M ode><D ata><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	M ode: Data Format (H EX) 16 decimal system, (S TR) string; D ata data: ASCII limit 40 bytes, HEX limit 20 bytes;

[Example]

query:

Send to: AT + HEARTINFO \ r \ n

Received: \ r \ n + OK =STR, heart beat msg \ r \ n

set up:

Send: A T + HEARTINFO =STR, EBTYE HEART TEST \ r \ n

Received: \ r \ n + OK \ r \ n

1.21 Query / Set the short connection time

Instruct	AT+SHORTM
function	Query, set the short connection time
Send (query)	AT+SHORTM<CR><LF>
Return (query)	<CR><LF>+OK=<T ime><CR><LF>
Send (Settings)	AT+SHORTM=<T ime><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	T ime: limit of 2-255s, 0 is closed;

[Example]

query:

Send to: AT + SHORTM \ r \ n

Received: \ r \ n + OK =0 \ r \ n

set up:

Send to: A T + SHORTM =5 \ r \ n

Received: \ r \ n + OK \ r \ n

1.22 Query / Set the timeout restart time

Instruct	AT+TMORST

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function	Query, set the timeout restart time
Send (query)	AT+TMORST<CR><LF>
Return (query)	<CR><LF>+OK=<T ime><CR><LF>
Send (Settings)	AT + TMORST= <T ime> <CR> <LF> (Limit 60-65535s, 0 is closed)
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	T ime: 60-65535s, 0 for closed;

[Example]

query:

Send to: AT + TMORST \ r \ n

Received: \ r \ n + OK =300 \ r \ n

set up:

Send to: A T + SHORTM =350 \ r \ n

Received: \ r \ n + OK \ r \ n

1.23 Query / Set the time and number of disconnected reconnections

Instruct	AT+TMOLINK
function	Query and set the time and number of network disconnection and reconnection
Send (query)	AT+TMOLINK<CR><LF>
Return (query)	<CR><LF>+OK=<T imes, N um><CR><LF>
Send (Settings)	AT+TMOLINK=<T imes, N um><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	Times (disconnection reconnection time): limit 1-255,0 is closed; Num (number of reconnection): 1-60 times;

[Example]

query:

Send to: AT + TMOLINK \ r \ n

Received: \ r \ n + OK =5,5 \ r \ n

set up:

Send to: A T + TMOLINK =10,10 \ r \ n

Received: \ r \ n + OK \ r \ n

1.24 Web configuration port

Instruct	AT+WEBCFGPORT
function	Query and set up the web page configuration port
Send (query)	AT+WEBCFGPORT <CR><LF>
Return (query)	<CR><LF>+OK=<PORT><CR><LF>
Send (Settings)	AT+TMOLINK=<PORT ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>

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remarks	PORT: 2-65535

[Example]

query:

Send to: AT + WEBCFGPORT \ r \ n

Receive: \ r \ n + OK =80 \ r \ n

set up:

Send to: A T + WEBCFGPORT =80 \ r \ n

Received: \ r \ n + OK \ r \ n

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2 The Modbus Functions AT Commands

2.1 The Modbus Commands

Instruct	Description
A T+MODWKMOD	Modbus pattern
A T+MOD PTCL	protocol conversion
AT+MODGTWYTM	Storage Gateway instruction Storage time and query interval
AT+MODCMDEDIT	The Mod bus RTU instructions are prestored

2.2 Query the Modbus mode, and the commands timeout time

Instruct	AT+MODWKMOD
function	Query, set the Modbus working mode
Send (query)	AT+MODWKMOD <CR><LF>
Return (query)	<CR><LF>+OK=<Mode ><T ime out ><CR><LF>
remarks	Mode: NONE (disable MODBUS) SIMPL (simple protocol conversion) MULIT (Multihost mode) STORE (storage-type gateway) CONFIG (a configurable gateway) AUTOUP (active upload mode) T imeout :0-65535；

query:

Send to: AT + MODWKMOD \ r \ n

Received: \ r \ n + OK =SIMPL, 100 \ r \ n

set up:

Send: AT + MODWKMOD =MULIT, 1000 \ r \ n

Received: \ r \ n + OK \ r \ n

2.3 Turn on the Modbus TCP to Modbus RTU protocol conversion

Instruct	AT+MODPTCL
function	Query, setup protocol transformation (Modbus T CP <=> Modbus R TU)
Send (query)	AT+MODPTCL <CR><LF>
Return (query)	<CR><LF>+OK=<Mode ><CR><LF>
remarks	Mode: ON (Enable protocol conversion) OFF (disable protocol conversion)

query:

Send to: AT + MODPTCL \ r \ n

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Received: \ r \ n + OK =ON \ r \ n

set up:

Send to: AT + MODPTCL =ON \ r \ n

Received: \ r \ n + OK \ r \ n

2.4 Set the Modbus Gateway instruction storage time and the automatic query interval

Instruct	AT+MODGTWYTM
function	Query, configure M odbus Gateway instruction storage time and automatic query interval
Send (query)	AT+MODGTWYTM <CR><LF>
Return (query)	<CR><LF>+OK=<T ime 1><T ime2><CR><LF>
remarks	T ime 1: instruction storage time (1-255 seconds) T ime2: Automatic query interval time (1-65,535 ms)

query:

Send to: AT + MODGTWYTM \ r \ n

Receive: \ r \ n + OK =10,200 \ r \ n

set up:

Send to: AT + MODGTWYTM =5,100 \ r \ n

Received: \ r \ n + OK \ r \ n

2.5 Modbus configuration gateway prememory instruction query and edit

Instruct	AT+MODCMDEDIT
function	M odbus configuration gateway prememory instruction query and edit
Send (query)	AT+MODCMDEDIT <CR><LF>
Return (query)	<CR><LF>+OK=<Mode ><C MD ><CR><LF>
remarks	Mod e: A DD add instruction; DEL delete instruction; CLR emptying instruction; C MD: M odbus instruction (only support the standard Modbus RTU instruction, do not need to fill in the verification, only can configure the read instruction 01,02,03,04 function code), can not store the same instruction whether to return + E RR= -4;

query:

Send to: AT + MODCMDEDIT \ r \ n

Received: \ r \ n + OK = \ r \ n

1： 02 03 00 00 00 02\r\n

2： 01 03 00 05 00 00\r\n

set up:

Send: AT + MODCMDEDIT =ADD, 0103000A0003 \ r \ n (Add Instruction)

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Received: \ r \ n + OK \ r \ n

Send: AT + MODCMDEDIT =DEL, 0103000A0003 \ r \ n (delete instruction)

Received: \ r \ n + OK \ r \ n

Send: AT + MODCMDEDIT =CLR, 0103000A0003 \ r \ n (clear instruction)

Received: \ r \ n + OK \ r \ n

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3 The "Internet of Things Function" AT Commands

3.1 Summary of the Internet of Things Function instructions

Instruct	Dscription
AT+HTPREQMODE	HTTP, Request mode
AT+HTPURL	The H TTP URL path
AT+HTPHEAD	HTTP head of contracted labour
AT+MQTTCLOUD	MQTT terrace
AT+MQTKPALIVE	M Q TT heartbeat survival cycle
AT+MQTDEVID	M QTT Client ID
AT+MQTUSER	M QTT U s er Name
AT+MQTPASS	M QTT Password
AT+MQTTPRDKEY	Ali Cloud Product Key
AT+MQTSUB	The M QTT subscription theme
AT+MQTPUB	M QTT release theme

3.2 The MQTT works with the HTTP target IP or domain name configuration

Refer to "Query / Set the native working mode and target equipment network parameters".
Set the M QTT mode and the target parameters:
Send to: AT + SOCK=MQTTC, mqtt.heclouds.com ,6002\r\n
Received: \ r \ n + OK \ r \ n

Set the M QTT mode and the target parameters:
Send to: AT + SOCK=HTTPC, www.baidu.com ,80\r\n
Received: \ r \ n + OK \ r \ n

3.3 Query / Set the HTTP request mode

Instruct	AT+HTPREQMODE
function	Query, set the HTTP client mode request mode
Send (query)	AT+HTPREQMODE <CR><LF>
Return (query)	<CR><LF>+OK=<M ethod><CR><LF>
Send (Settings)	AT+HTPREQMODE =<M ethod ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	M ethod: G ET \P OST

[Example]
query:

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Send to: AT + HTPREQMODE \ r \ n

Received: \ r \ n + OK =GET \ r \ n

set up:

Send: A T + HTPREQMODE =POST \ r \ n

Received: \ r \ n + OK \ r \ n

3.4 Query / Set the HTTP URL path

Instruct	AT+HTPURL
function	Query, set the HTTP URL path
Send (query)	AT+HTPURL <CR><LF>
Return (query)	<CR><LF>+OK=<P ath><CR><LF>
Send (Settings)	AT+HTPURL =<P ath ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	P ath: HTTP Request U RL Resource Address (Length limit of 0-128 characters)

[Example]

query:

Send to: AT + HTPURL \ r \ n

Received from: \ r \ n + OK = / 1.php?\r\n

set up:

Send to: A T + HTPURL = / view/ed7e65a90408763231126edb6f1aff00bfd57061.html \ r \ n

Received: \ r \ n + OK \ r \ n

3.5 Query / Set HTTP Packet Header

Instruct	AT+HTPHEAD
function	Query and set up the HTTP header
Send (query)	AT+HTPHEAD <CR><LF>
Return (query)	<CR><LF>+OK=<P ara>,<H ead ><CR><LF>
Send (Settings)	AT+HTPHEAD =<P ara>,<H ead ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	Para (whether HTTP returns the serial port data with a header): D EL: No Baotou; A DD: with Baotou; Head (HTTP Request Ptou): Length limit 128 characters;

[Example]

query:

Send to: AT + HTPHEAD \ r \ n

Received: \ r \ n + OK =DEL, User-Agent: Mozilla / 5.0 \ r \ n

set up:

Send: A T + HTPHEAD =ADD, Host: www.ebyte .com \r\n

Received: \ r \ n + OK \ r \ n

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3.6 Query / Set up the MQTT target platform

Instruct	AT+MQTTCLOUD
function	Query and set up the MQTT target platform
Send (query)	AT+MQTTCLOUD <CR><LF>
Return (query)	<CR><LF>+OK=<S erver><CR><LF>
Send (Settings)	AT+MQTTCLOUD =<S erver ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	S erver (MQTT Target Platform): S TANDARD (MQTT3.1.1 standard protocol server) O NENET (O ne NET-MQTT server) A LI (AliCloud M QTT Server) B AIDU (Baidu Cloud M QTT Server) H UAWEI (Huawei Cloud M QTT Server)

[Example]

query:

Send to: AT + MQTTCLOUD \ r \ n

Received: \ r \ n + OK =STANDARD \ r \ n

set up:

Send to: A T + MQTTCLOUD =BAIDU \ r \ n

Received: \ r \ n + OK \ r \ n

3.7 Query / Set the MQTT Active Packet Header Package Delivery Cycle

Instruct	AT+M QTKPALIVE
function	Query and set the MQTT active heartbeat package time cycle
Send (query)	AT+MQTKPALIVE <CR><LF>
Return (query)	<CR><LF>+OK=<T ime><CR><LF>
Send (Settings)	AT+MQTKPALIVE =<T ime ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	T ime: MQTT active heartbeat time (limited to 1-255 seconds, default to 60s, modification is not recommended);

[Example]

query:

Send to: AT + MQTKPALIVE \ r \ n

Receive: \ r \ n + OK =60 \ r \ n

set up:

Send to: A T + MQTKPALIVE =30 \ r \ n

Received: \ r \ n + OK \ r \ n

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3.8 Query / Set the MQTT Device Name (Client ID)

Instruct	AT+MQTDEVID
function	Query and set the MQTT device name (Client ID)
Send (query)	AT+MQTDEVID <CR><LF>
Return (query)	<CR><LF>+OK=<Client ID ><CR><LF>
Send (Settings)	AT+MQTDEVID =<Client ID ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	Client ID: The MQTT Device Name (C lient ID) limits a length of 128 characters;

[Example]

query:

Send to: AT + MQTDEVID \ r \ n

Receive: \ r \ n + OK =test-1 \ r \ n

set up:

Send to: A T + MQTDEVID =6164028686b027ddb5176_NA111-TEST \ r \ n

Received: \ r \ n + OK \ r \ n

3.9 Query / Set the MQTT Username (User Name / Device Name)

Instruct	AT+MQTUSER
function	Query, Set the MQTT username (User Name / D evice N ame)
Send (query)	AT+MQTUSER <CR><LF>
Return (query)	<CR><LF>+OK=<User Name ><CR><LF>
Send (Settings)	AT+MQTUSER =<User Name ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	User Name: MQTT product I D (User N ame / device name) limit length of 128 characters;

[Example]

query:

Send to: AT + MQTUSER \ r \ n

Received: \ r \ n + OK =ebyte-IOT \ r \ n

set up:

Send to: A T + MQTUSER =12345678 & a1Ofdo5l0 \ r \ n

Received: \ r \ n + OK \ r \ n

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3.10 Query / Set the MQTT Password (MQTT Password / Device Secret)

Instruct	AT+M QTPASS
function	Query and set the MQTT login password (MQTT P assword / D evice Secret)
Send (query)	AT+MQTPASS <CR><LF>
Return (query)	<CR><LF>+OK=<P assword ><CR><LF>
Send (Settings)	AT+MQTPASS =<P assword ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	P assword: MQTT Login password (MQTT P assword / Device Secret) length limit of 128 characters;

[Example]

query:

Send to: AT + MQTPASS \ r \ n

Received: \ r \ n + OK =12345678 \ r \ n

set up:

Send to: A T + MQTPASS =87654321 \ r \ n

Received: \ r \ n + OK \ r \ n

3.11 Query / Set the Product Key of AliCloud MQTT

Instruct	AT+MQTTPRDKEY
function	Query and set up the Product Key of Ali Cloud M QTT
Send (query)	AT+MQTTPRDKEY <CR><LF>
Return (query)	<CR><LF>+OK=<Product Key ><CR><LF>
Send (Settings)	AT+MQTTPRDKEY =<Product Key ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	Product Key: Product Ke y (64 characters)

[Example]

query:

Send to: AT + MQTTPRDKEY \ r \ n

Received: \ r \ n + OK =user ProductKey \ r \ n

set up:

Send to: A T + MQTTPRDKEY =a1HEeOIqVHU \ r \ n

Received: \ r \ n + OK \ r \ n

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3.12 Query / Set the MQTT subscription topic

Instruct	AT+MQTSUB
function	Query, set the MQTT subscription subject
Send (query)	AT+MQTSUB <CR><LF>
Return (query)	<CR><LF>+OK=<Q o s >,<T opic><CR><LF>
Send (Settings)	AT+MQTSUB =<Q o s >,<T opic ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	Qos: Only levels 0,1 are supported; Topic: MQTT subscription theme (length limit of 128 characters)

[Example]

query:

Send to: AT + MQTSUB \ r \ n

Received: \ r \ n + OK = 0, topic \ r \ n

set up:

Send to: A T + MQTSUB =0, / ggip6zWo8of / NA111-TEST / user / SUB \ r \ n

Received: \ r \ n + OK \ r \ n

3.13 Query / Set the MQTT release topic

Instruct	AT+MQTPUB
function	Query, set the MQTT release topic
Send (query)	AT+MQTPUB <CR><LF>
Return (query)	<CR><LF>+OK=<Qos >,<T opic><CR><LF>
Send (Settings)	AT+MQTPUB =<Qos >,<T opic ><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
remarks	Qos: Only levels 0,1 are supported; Topic: MQTT release theme (128 characters)

[Example]

query:

Send to: AT + MQTPUB \ r \ n

Received: \ r \ n + OK =0, topic \ r \ n

set up:

Send to: A T + MQTPUB = 0, / ggip6zWo8of / NA111-TEST / user / PUB \ r \ n

Received: \ r \ n + OK \ r \ n

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4 Examples

4.1 Connect to the standard MQTT3.1.1 server for example

{

Client id:876275396

mqtt username:485233

mqtt password:E _DEV01

m q tt server: mqtt.heclouds.com

m q tt port:6002

}

Restore the factory settings before configuration to avoid enabling unused features.

SEND （+++）

SEND in the 3S S (A T)

RECV(+OK=AT enable)

SEND （AT+RESTORE ）

RECV(+OK)

The above steps can use the hardware to restore the factory settings.

Step 1: Go into the A T configuration mode;

SEND （+++）

SEND in the 3S S (A T)

RECV (+OK=AT enable)

Step 2: To enable the dynamic I P. If the corresponding I P is configured for the LAN M QTT server, the dynamic I P is used here;

SEND (AT+WAN=DHCP,192.168.3.7,255.255.255.0,192.168.3.1,114.114.114.114)

RECV (+OK)

Step 3: Configure the working mode and the MQTT server address and port;

SEND (AT+SOCK=MQTTC,mqtt.heclouds.com ,6002)

RECV (+OK=And local port has been set to 0)

Step 4: Select the M QTT platform;

SEND (AT+MQTTCLOUD=STANDARD)

RECV(+OK)

Step 5: Configure the Client id of the device;

SEND (AT+MQTDEVID=876275396)

RECV(+OK)

Step 6: Configure the mqtt username for the device;

SEND (AT+MQTUSER=485233)

RECV(+OK)

Step 7: Configure the mqtt password of the device;

SEND (AT+MQTPASS=E_DEV01)

RECV(+OK)

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Step 8: Subscribe to the corresponding theme (Topic);

SEND (AT+MQTSUB=0,EBYTE _TEST)

RECV(+OK)

Step 9: Configure the topic used for publication use (Topic);

SEND (AT+MQTPUB=0,EBYTE _TEST)

RECV(+OK)

Step 1: Restart the equipment;

SEND (AT+REBT)

RECV(+OK)

Revision history

Version	Revision date	Revision note
1.0	2021-10-22	Initial version
1.1	2022-01-05	Adapt to the 9013-2-xx firmware
1.2	2022-09-14	Content revision

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