



【AT Command Set】 NA611-S



1 AT Command

1. All commands are valid only in configuration mode.
2. All AT formats end with "\r\n" (except for entry commands).
3. The responses to all commands are in the format starting with "\r\n" and ending with "\r\n".
4. All "\r" and "\n" in this article refer to the translation characters of carriage return and line feed, not strings.

Error AT return \r\n+ERR=-1\r\n

1.1 Enter AT Command

Send+++ , no line break. Entering configuration mode after receiving \r\n+OK\r\n

【For example】

Firstly Send+++

Receive\r\n+OK\r\n

1.2 ExitATCommand

Command	AT+EXAT
Function	Exit ATCommand mode
Send	AT+EXAT<CR><LF>
Return	<CR><LF>+OK<CR><LF>

【For example】

Send: AT+EXAT\r\n

Receive: \r\n+OK\r\n

1.3 Reboot device

Command	AT+REBT
Function	Reboot device
Send	AT+REBT<CR><LF>
Return	<CR><LF>+OK<CR><LF>

【For example】

Send: AT+REBT\r\n

Receive: \r\n +OK\r\n

1.4 Restore factory setting

Command	AT+RESTORE
Function	Restore factory setting
Send	AT+RESTORE<CR><LF>
Return	<CR><LF>+OK<CR><LF>

【For example】

Send: AT+RESTORE\r\n

Receive: \r\n +OK\r\n

Wait device to reboot.

1.5 Check firmware version

Command	AT+VER
Function	Check firmware version
Send	AT+VER<CR><LF>
Return	<CR><LF>+OK=<verString><CR><LF>

【For example】

Send: AT+VER\r\n

Receive: \r\n +OK=FW-9076-x-xx\r\n

1.6 Enquiry MAC address Command

Command	AT+MAC
Function	Enquiry device MAC address
Send	AT+MAC<CR><LF>
Return	<CR><LF>+OK=<MAC_ADDR><CR><LF>

【For example】

Send: AT+MAC\r\n

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

1.7 Enquiry local IP address Command

Command	AT+LOCAL_IP
Function	Enquiry local device IP address
Send	AT+LOCAL_IP<CR><LF>
Return	<CR><LF>+OK=<local_ip><CR><LF>

【For example】

Send: AT+LOCAL_IP\r\n

Receive: \r\n +OK=192.168.4.1\r\n

1.8 Enquiry/configure network AT head

Command	AT+NET_AT_HEAD
Function	Enquiry/configure network AT head
Send (enquiry)	AT+NET_AT_HEAD<CR><LF>
Return (enquiry)	<CR><LF>+OK=<NET_AT_HEAD><CR><LF>
Send (configure)	AT+NET_AT_HEAD=<NET_AT_HEAD><CR><LF>
Return (configure)	<CR><LF>+OK<CR><LF>
Notes	NET_AT_HEAD :Network AT header, if the data sent and received by the network has this header, it will be regarded as AT Command, the maximum length is 24 characters, and the minimum is 3 characters.

【For example】

enquiry:

Send: AT+NET_AT_HEAD\r\n

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

Set:

Maximum length cannot exceed 24 bits

Send: AT+NET_AT_HEAD = NETEbyte\r\n

Receive: \r\n+OK\r\n

1.9 Enquiry/configure idle restart

Command	AT+FREE_RESTART_TIME
Function	Enquiry/configure idle restart parameter
Send (enquiry)	AT+FREE_RESTART_TIME<CR><LF>
Return (enquiry)	<CR><LF>+OK=<FREE_RESTART_SW,FREE_RESTART_TIME><CR><LF>
Send (configure)	AT+FREE_RESTART_TIME=<FREE_RESTART_SW,FREE_RESTART_TIME><CR><LF>
Return (configure)	<CR><LF>+OK<CR><LF>
Notes	<p>FREE_RESTART_SW: Idle restart switch, if it is 0, it means idle restart is closed, if it is 1, it means idle restart is open</p> <p>FREE_RESTART_TIME: Idle restart time, in minutes. Idle Reboot device will be triggered when the device has no data interaction for a long time. 0 means shutdown idle restart, the shortest is 1 minute, and the longest can be set to 60*24*7 minutes (one week)</p>

【For example】

enquiry:

Send: AT+FREE_RESTART_TIME\r\n
 Receive: \r\n+OK=1,120\r\n idle restart open, time is 120 mins
 Set:
 Send: AT+FREE_RESTART_TIME =1,180 \r\n idle restart open, time is 180 mins
 Receive: \r\n+OK\r\n

1.10 Enquiry/configure uart parameter

Command	AT+UART
Function	Enquiry/configure uart parameter
Send (enquiry)	AT+UART<CR><LF>
Return (enquiry)	<CR><LF>+OK<baudrate,uartData,uartStop,parity,uartFlow,packLen,packTime><CR><LF>
Send (configure)	AT+UART=<baudrate,uartData,uartStop,parity,uartFlow,packLen,packTime><CR><LF>
Return (configure)	<CR><LF>+OK<CR><LF>
Notes	Baudrate: 1200、2400、4800、9600、19200、38400、57600、115200、230400、460800 Uartdata: data bit: 8, pc has 7 bit but not supported Uartstop, stop bit: 1、2 Parity: NONE、ODD、EVEN Uartflow, flow control: 0 is off, remain, invalid at present, it is okay to input 0. packLen, packTime: They are the packing length (64-1536) and packing time (15-150), no need to be modified without special use

【For example】

enquiry:
 Send: AT+UART\r\n
 Receive: \r\n+OK=115200,8,1,NONE,0,1024,30\r\n
 Set:
 Configure baud rate 9600, data bit 8, stop bit 1, no parity and flow control, package length 1024、packing time 30ms.
 Send: AT+UART=9600,8,1,NONE,0,1024,10\r\n
 Receive: \r\n+OK\r\n

1.11 Enquiry network status

Command	AT+NET
Function	Enquiry WIFI network status
Send	AT+NET<CR><LF>
Return	<CR><LF>+OK=<status><CR><LF>

Notes	STA: Status, 1 (Network connection success) , 0 (network not connected) AP: Status is 1
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【For example】

Send: AT+NET\r\n

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

1.12 Enquiry/configure WIFI parameter

Command	AT+WIFI
Function	Enquiry/configure WIFI parameter
Send (enquiry)	AT+WIFI<CR><LF>
Return (enquiry)	<CR><LF>+OK<wifi_mode,ssid,pass><CR><LF>
Send (configure)	AT+WIFI=<wifi_mode,ssid,pass><CR><LF>
Return (configure)	<CR><LF>+OK<CR><LF>
Notes	wifi_mode, wifi mode: 0: AP mode (hotspot mode), 1: STA mode (terminal mode, connect to hotspot) ssid, the account name of wifi: if it is in AP mode, it is the account name of the hotspot, if it is in STA mode, it is the account name of STA, avoid using Chinese, use English characters and numbers, the maximum length is 32 pass, wifi password: if it is in AP mode, it is the password of the hotspot itself, if it is in STA mode, it is the password of the target route, avoid using Chinese, use English characters and numbers, and the maximum length is 16 Note: If you want to set STA to connect to passwordless WiFi (open WiFi), you need to set the WiFi pass to x (lowercase x), and if it is set to open AP hotspot mode, you can also set the pass to x. , cannot be blank

【For example】

enquiry:

Send: AT+WIFI\r\n

Receive: \r\n+OK=0,EBYTE_TEST,12345678\r\n

Set:

Configure WIFI mode is AP mode, hot spot is EBYTE_TEST, password is 12345678

Send: AT+WIFI=0,EBYTE_TEST,12345678\r\n

Receive: \r\n+OK\r\n

1.13 Enquiry/configure WIFI IP configuration parameter

Command	AT+WIFI_IP
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Function	Enquiry/configure WIFI configuration parameter
Send (enquiry)	AT+WIFI_IP<CR><LF>
Return (enquiry)	<CR><LF>+OK=<ip_mode,static_ip,net_mask,get_way_ip,dns_addr><CR><LF>
Send (configure)	AT+WIFI_IP=<ip_mode, static_ip,net_mask,getway_ip,dns_addr><CR><LF>
Return (configure)	<CR><LF>+OK<CR><LF>
Notes	ip_mode: ip mode 0: network static ip mode 1: DHCP mode static_ip: ip when in static ip mode net_mask: subnet mask getway_ip: router address dns_addr: dns server address

【For example】

enquiry:

Send: AT+WIFI_IP\r\n

Receive: \r\n+OK=1,192.168.10.155,255.255.255.0,192.168.10.1,114.114.114.114\r\n

Set:

configureIP is static mode, hot spot is EBYTE_TEST, password is 12345678

Send: AT+WIFI_IP=0,192.168.10.155,255.255.255.0,192.168.10.1,114.114.114.114\r\n

Receive: \r\n+OK\r\n

1.14 Enquiry/configure Protocol Distribution Settings Parameters

Command	AT+POTOCOL
Function	Enquiry/configure Protocol Distribution Settings Parameters
Send (enquiry)	AT+POTOCOL<CR><LF>
Return (enquiry)	<CR><LF>+OK<SW><CR><LF>
Send (configure)	AT+POTOCOL=<SW><CR><LF>
Return (configure)	<CR><LF>+OK<CR><LF>
Notes	SW: switch for protocol distribution 0: protocol distribution off 1: protocol distribution on

【For example】

enquiry:

Send: AT+POTOCOL\r\n

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

Set:

Disable multiprotocol translation;

Send: AT+POTOCOL=0\r\n

Receive: \r\n+OK\r\n

1.15 Enquiry/Set network protocol parameters

Command	AT+SOCK=<SockID,"base">
Function	Set/enquiry network protocol parameters format
Send (enquiry)	AT+SOCK=<SockID,"base"? >
Return (enquiry)	<CR><LF>+OK=<SockID,"base",sw,workMode,sockType,shortLinkTime,DesIP,desPort><CR><LF>
Send (set)	AT+SOCK=<SockID,"base",sw,workMode,sockType,shortLinkTime,DesIP,desPort><CR><LF>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	<p>SockID, socket number 0,1,2,3 "base", keyword Sw, link switch: 0 (off), 1 (on) Workmode, work mode: 0 (normal mode), 1 (HTTP), 2 (MQTT) Socktype, working protocol: 0 (UDPC), 1 (TCPC), 2 (UDPS), 3 (TCPS) Shortlinktime, short connection time 0 (closed), maximum configure65535, minimum 4 seconds (if you set 1-4 to run directly by 4 seconds) Default 0, only valid in TCP Client mode DesIP, target IP, maximum length 72, supports domain name resolution, if it is server mode, fill in the local IP address (if you do not know the IP address, fill in 192.168.1.1, if the device IP address is not this, it will be updated when reading the parameters , if you already know the IP address, fill in the local IP address directly) DesPort, target port, 0~65535, if it is in server mode, this port is the port opened by the server</p>

【For example】

enquiry:

Send: AT+SOCK=0,"base"?\r\n

Receive: \r\n+OK=0,"base",0,0,1,0,test.ebyte.com,10687\r\n

Set:

Send: AT+SOCK=0,"base",0,0,1,0,test.ebyte.com,10687\r\n

Receive: \r\n+OK\r\n

1.16 Enquiry/set link enable

Command	AT+SOCK=<SockID,"link/sw">
Function	Enquiry/set link enable
Send (enquiry)	AT+SOCK=<SockID,"link/sw"? >
Return (enquiry)	<CR><LF>+OK=< SockID,"link/sw",sw><CR><LF>
Send (set)	AT+SOCK=<SockID,"link/sw",sw>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	<p>SockID, socket 号: 0、1、2、3 "link/sw", keywords Sw, link switch: 0 (off), 1 (on)</p>

【For example】

enquiry:

Send: AT+SOCK=0,"link/sw"?\r\n

Receive: \r\n+OK=0,"link/sw",1\r\n

Set:

Send: AT+SOCK=0,"link/sw",1\r\n

Receive: \r\n+OK\r\n

1.17 Enquiry link status

Command	AT+SOCK=<SockID>,"link/status"? >
Function	Enquiry link status
Send	AT+SOCK=<SockID>,"link/status"? ><CR><LF>
Return	<CR><LF>+OK=<SockID>,"link/status",status<CR><LF>
Notes	SockID, socket 号: 0、1、2、3 "link/status", keywords status, link status: 0 (disconnected), 1 (connecting), 2 (connecting successfully)

【For example】

enquiry:

Send: AT+SOCK=0,"link/status"?\r\n

Receive: \r\n+OK=0,"link/status",0\r\n

1.18 Enquiry/Set heartbeat packets

Command	AT+SOCK=<SockID>,"keep/alive">
Function	Enquiry network link status
Send(enquiry)	AT+SOCK=<SockID>,"keep/alive"? >
Return (enquiry)	<CR><LF>+OK=<SockID>,"keep/alive",sw ,keepAliveType,infoType,time,defaultData<CR><LF>
Send (set)	AT+SOCK=<SockID>,"keep/alive",sw , keepAliveType,infoType,time,defaultData ><CR><LF>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	SockID, socket number: 0,1,2,3 "keepalive", keywords sw, switch: 0 (off), 1 (on), note that it only works on TCP Client and UDP Client, and there is no heartbeat packet in other modes (MQTT heartbeat packet is kept alive once every 60s) keepAliveType: Heartbeat packet mode 0 (MAC, please set non-hex mode) 1 (custom), default custom infoType, data format: 0 (ASCII), 1 (HEX) Time, heartbeat time: the maximum configurable time is 65535s defaultData, custom heartbeat package content: maximum configure 72 bytes

【For example】

enquiry:

Send: AT+SOCK=<SockID,"keep/alive"? >\r\n
 Receive: \r\n+OK=0,"keep/alive",1,1,0,60,KeepAlive\r\n
 Set:
 Send: AT+SOCK=0,"keep/alive",1,1,0,60,KeepAlive\r\n
 Receive: \r\n+OK\r\n

1.19 Enquiry/Set serial heartbeat packet

Command	AT+UART_KEEPAIVE
Function	Enquiry network connection status
Send(enquiry)	AT+UART_KEEPAIVE
Return (enquiry)	<CR><LF>+OK=<sw,msg_mode,time,data><CR><LF>
Send (set)	AT+UART_KEEPAIVE=< sw,msg_mode,time,data ><CR><LF>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	sw: serial heartbeat packet switch msg_mode: message type (0: ascll type, 1: hex type) time: Heartbeat packet time interval, 0-65535 (fill in 0 and default to once per second) data: Heartbeat packet content, maximum 48 bytes

【For example】

enquiry:
 Send: AT+UART_KEEPAIVE\r\n
 Receive: \r\n +OK= \r\n
 Set:
 Disable serial heartbeat;
 Send: AT+UART_KEEPAIVE=0,0,0,test\r\n
 Receive: \r\n+OK\r\n

1.20 Enquiry/Set up registration package

Command	AT+SOCK=<SockID,"regist">
Function	Enquiry/Set up registration package
Send (enquiry)	AT+SOCK=<SockID,"regist"?>
Return (enquiry)	<CR><LF>+OK=<SockID,"regist",sw ,registype,infoType,defaultData,way><CR><LF>
Send (set)	AT+SOCK=<SockID,"regist",sw , registype ,infoType,defaultData,way><CR><LF>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	SockID, socket number: 0,1,2,3 “regist”, keywords Sw, switch: 0 (off), 1 (on), note that this parameter only works in TCP Client, UDP Client mode registype: Registration packet mode: 0 (MAC, after setting the MAC

	<p>form, the infoType is ignored, and it can only be in HEX format, because the MAC packet header is generally used for server identification, and it is all hexadecimal) 1 (custom) Default custom</p> <p>infoType, data format: 0 (ASCII), 1 (HEX) defaultData, custom heartbeat package content: maximum configure72 bytes Way: 0 (connect to Send once), 1 (before each packet of data)</p>
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【For example】

enquiry:

Send: AT+SOCK=0,"regist"?\r\n

Receive: \r\n+OK=0,"regist",0,1,0,Regist,0\r\n

Set:

Send: AT+SOCK=0,"regist",0,1,0,Regist,0\r\n

Receive: \r\n+OK\r\n

1.21 Enquiry/Set MQTT connection information

Command	AT+SOCK=<SockID,"mqtt/connet">
Function	Enquiry/Set MQTT connection information
Send (enquiry)	AT+SOCK=<SockID,"mqtt/connet"? >
Return (enquiry)	<CR><LF>+OK=<sockID,"mqtt/connet",sw,mode,productKey,deviceName,deviceSecret><CR><LF>
Send (set)	AT+SOCK=<sockID,"mqtt/connet",sw,mode,productKey,deviceName,deviceSecret><CR><LF>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	<p>SockID, socket number: 1、2、3、4</p> <p>“mqtt/connet”, keywords</p> <p>Sw, switch: 0 (off), 1 (on)</p> <p>Mode, cloud platform: 0 (Alibaba Cloud), 1 (ONENET), 2 (Baidu Cloud) 3 (3.1.1 Standard MQTT)</p> <p>productKey: Ali product key, Baidu device key, ONENET device ID, the maximum configurable length is 64 bytes</p> <p>deviceName: Ali device name, Baidu user name, ONENET product ID, the maximum configurable length is 64 bytes</p> <p>deviceSecret: Ali device key, Baidu password, ONENET authentication information, the maximum configurable length is 96 bytes</p>

1.22 Enquiry/Set up subscription topics

Command	AT+SOCK=<SockID,"mqtt/sub">
Function	Enquiry/Set up subscription topics
Send (enquiry)	AT+SOCK=<SockID,"mqtt/sub"? >
Return (enquiry)	<CR><LF>+OK=<sockID,"mqtt/sub",sw,topicName,qos><CR><LF>

Send (set)	AT+SOCK=<sockID,"mqtt/sub",sw,topicName,qos><CR><LF>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	SockID, socket number: 1、2、3、4 “mqtt/sub”, keywords Sw, switch: 0 (off), 1 (on) TopicName, subscription topic name, the maximum length can be configured 128 bytes QoS, class of service, 0, 1, 2

1.23 Enquiry/Set Post Topic

Command	AT+SOCK=<SockID,"mqtt/pub">
Function	Enquiry/Set Post Topic
Send (enquiry)	AT+SOCK=<SockID,"mqtt/pub"? >
Return (enquiry)	<CR><LF>+OK=<sockID,"mqtt/pub",sw,topicName,qos><CR><LF>
Send (set)	AT+SOCK=<sockID,"mqtt/pub",sw,topicName,qos><CR><LF>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	SockID, socket number: 1、2、3、4 “mqtt/pub”, keywords Sw, switch: 0 (off), 1 (on) TopicName, subscription topic name, the maximum configurable length is 128 bytes QoS, class of service, 0, 1, 2

1.24 Enquiry/Set HTTP mode

Command	AT+SOCK=<SockID,"http">
Function	Enquiry/set HTTP mode
Send (enquiry)	AT+SOCK=<SockID,"http"?><CR><LF>
Return (enquiry)	<CR><LF>+OK=<sockID,"http",method,url,head,data_head><CR><LF>
Send (set)	AT+SOCK=<sockID,"http",method,url,head,data_head ><CR><LF>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	SockID, socket number: 1、2、3、4 “http”, keywords method, method: 0 (GET), 1 (POST) url, resource path, up to configure128Bit head, header, the maximum can be configured 128Bit data_head, whether the received information is sent with header, 0, without header, 1 with header. Default is 1

1.25 Enquiry/Set Modbus working mode and Command timeout

Command	AT+MOD_WORK_MODE
Function	Enquiry/set Modbus working mode and command timeout
Send (enquiry)	AT+MOD_WORK_MODE=?<CR><LF>
Return (enquiry)	<CR><LF>+OK=<mode,time><CR><LF>
Send (set)	AT+MOD_WORK_MODE=<mode,time><CR><LF>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	Mdoe: modbus working mode (0 (default): off state, 1: simple protocol conversion, 2: multi-host mode, 3: storage gateway, 4: configure gateway, 5: automatic upload) Time: Command timeout time (200-65535, default 1500, unit ms)

1.26 Enquiry/Set Modbus TCP and Modbus RTU protocol conversion switch

Command	AT+MOD_PTCL
Function	Enquiry/set Modbus TCP and Modbus RTU protocol conversion switch
Send (enquiry)	AT+MOD_PTCL=?<CR><LF>
Return (enquiry)	<CR><LF>+OK=<sw><CR><LF>
Send (set)	AT+MOD_PTCL=<sw><CR><LF>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	Sw: Switch 0: Off 1: On

1.27 Enquiry/set Modbus configure type gateway prestore command

Command	AT+MOD_CMD_EDIT
Function	Enquiry/set Modbus configure type gateway prestore Command
Send (enquiry)	AT+MOD_CMD_EDIT=?<CR><LF>
Return (enquiry)	<CR><LF>+OK=<Command list><CR><LF>
Send (set)	AT+MOD_CMD_EDIT=< “method”,010300000003 ><CR><LF>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	Method:Command, ADD/DLE add and delete 010300000003: to be operated Command, standard 6 bits modbus Command, Therefore, the length of the above command part is fixed to 12, and it will not be stored if it is not filled in as required.

1.28 Enquiry/set Modbus Command store time and Command enquiry gap

Command	AT+MOD_GETWAY_TIME
Function	Enquiry/set Modbus working mode and Command timeout
Send (enquiry)	AT+MOD_GETWAY_TIME =?<CR><LF>
Return (enquiry)	<CR><LF>+OK=<time,interval_time><CR><LF>
Send (set)	AT+MOD_GETWAY_TIME =<time,interval_time><CR><LF>
Return (set)	<CR><LF>+OK<CR><LF>
Notes	Time:Command store time (1-255, default 5, unit s) interval_time: Command gap time (10-65535, default 100ms, unit ms)

Revision history

Version	Date	Description	Issued by
1.0	2022-07-01	Initial version	LC

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