



E103-W06 AT Command Manual



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1. AT Command

1. The relevant parameters of this module are changed based on the AT command. After the parameter is successfully modified by the AT command, the power-off restart will take effect. See the AT command table for details.
2. All AT commands are entered in the form of strings, and all AT commands are entered without carriage return and line feed.
3. In any case, use +++ to enter AT mode. After entering AT mode, the serial port will print "enter AT mode\r\n".
4. Use AT+EXAT to exit after entering AT mode, and the serial port will print "break AT mode\r\n" after exiting AT mode.

error code table:

error code	illustration
-1	command error, command does not exist
-2	parameter range error
-3	Station manual connection failed
-4	Failed to read MAC address
-5	This mode does not support this operation
-30	Failed to save parameters

default parameters

parameter class	parameter name	parameter value	Related instructions
serial port	baud rate	115200	AT+UART
	digit	8	
	stop bit	1	
	Parity	none	
	serial timeout	40 (ms)	
	Serial frame length	1000	
RF parameters	working frequency	2.4G	AT+RADIO
	channel	1	
	transmit power level	0	
	CountryCode	CN	
AP role SSID parameter	SSID	E103-W06	AT+SSID
	Whether to hide SSID	0 (no)	
	encryption type	2 (WPA2)	
	password	12345678	
Operating mode	job role	1	AT+MODE
	transfer mode	1	
	service mode	1	
network IP address	IP address	10.145.45.1	AT+NETIP
	subnet mask	255.255.255.0	
	gateway address	10.145.45.1	

	server address		10.145.45.1		
P2P connection parameters	P2P scanning gap		20		AT+P2PDEVINFO
	P2P role		0（client）		
	P2P local name		E103-W06WiFiDirectClient		
	P2P target name		E103-W06WiFiDirectGo		
P2P socket	P2P port		4001		AT+P2PSOCKET
	P2P address		10.145.45.1		
STA connection parameters	target SSID		E103-W06		AT+STACON
	encryption type		2		
	password		ebytew06		
	Connection Type		1		AT+CONTYPE
Local socket parameters	local port		4001		AT+SVRPORTIP
	local IP		10.145.45.1		
Remote socket parameter	Socket1	port	4001		AT+SOCKET
		IP	10.145.45.2		
	Socket2	port	4002		
		IP	10.145.45.2		
	Socket3	port	4003		
		IP	10.145.45.2		
	Socket4	port	4004		
		IP	10.145.45.2		
heartbeat parameters	4 sockets are the same	heartbeat type	0（closure）		AT+HEARTBT
		heartbeat timeout	5（Unit: second）		
		heartbeat data type	1（string）		
		heartbeat data	CDEBYTE-E103-W06-STRHT		
Registry Package Parameters	4 sockets are the same	Registry package type	0（closure）		AT+REGISTER
		Registry Packet Data Type	1（string）		
		Registry Package Data	CDEBYTE-REGISTER-PACK-STR		
NTP time	NTP time zone offset		480（Unit: points）Beijing time		AT+NTPTIME
Modbus	Modbus enable		0（Close Modbus）		AT+MODBUS
Static IP	IP address		10.145.45.2		AT+IPSTATIC
	subnet mask		255.255.255.0		
	gateway address		10.145.45.1		
	server address		10.145.45.1		

1.1 AT+UART configuration, read serial port parameters

instruction	answer	parameter
Query: AT+UART?	AT+UART=P1,P2,P3,P4,P5,P6	P1: baud rate, P2: data bit, P3: stop bit, P4: parity bit, P5: serial port receiving timeout, P6: frame length
Setup: AT+UART=115200,8,1,0,40,1000	success	AT+UART=115200,8,1,0,40,1000 return set value
	fail	ERR=x x: error code

parameter range:

Baud rate: P1	Data bit: P2	Stop bit: P3	Check digit: P4	Serial port timeout: P5	Frame length: P6
1200,2400,4800,9600,14400,19200 28800,38400,57600,76800,115200 230400,250000,460800,921600 1382400, 2000000,3000000	7 8	1: stop bit 1 2: stop bit 2	0: no parity 1: Odd parity 3: even test	scope [1,65535] Unit: millisecond	[20,1000]

Restart to take effect

Note: When using 3M high-speed baud rate, you need to pay attention to: 1). Try to connect the module directly with the USB3.0 port of the PC or above, otherwise it may cause packet loss; 2). The serial port software used must be Support 3M baud rate; 3). The serial port chip used must support 3M baud rate. It is recommended to use CP2102 series (this is the test board used by our company).

1.2 AT+SSID configuration, read SSID information in AP mode

instruction	answer	parameter
Query: AT+SSID?	AT+SSID=P1,P2,P3,P4	P1: hide SSID or not, P2: SSID name, P3: encryption type, P4: password
Setting: AT+SSID=0,E103-W06-TEST,2,12345678	success	AT+SSID=0,E103-W06-TEST,2,12345678 return setting value
	fail	ERR=x x: error code

parameter range:

P1: Whether to hide SSID	P2: SSID	P3: encryption type	P4: Password
0: Disable hiding, 1: Enable hiding	String not larger than 32 bytes	0: open, 1: WEP, 2: WPA2	String of [8,32] bytes

Note: When the encryption type is open, the password can be empty and not set.
Restart to take effect.

1.3 AT+MODE configuration, read working mode

Patterns include roles, transport patterns, and network service patterns.

instruction	response	parameter
Query: AT+MODE?	AT+MODE=P1,P2,P3	P1: role, P2: transport mode, P3: service mode
Setting: AT+MODE=1,1,1	success	AT+MODE=1,1,1 return set value
	fail	ERR=x x: error code

parameter range:

P1	P2	P3
1: AP mode, 2: STA mode, 3: WiFiDirect	1: transparent transmission, 2: protocol transmission	1:TCP server,2:TCP client,3:UDP client,4:MQTT,5:HTTP client,6:WebSocket

Note: When set to WiFiDirect mode (P2P), P2 and P3 parameters are currently ineffective, but will take effect when switching back to AP or STA.
Restart to take effect.

1.4 AT+RADIO configuration, read RF parameters (frequency, channel, power)

instruction	response	Parameter Description
Query: AT+RADIO?	AT+RADIO=P1,P2,P3,P4,P5	P1: 2.4G channel, P2: 5G channel, P3: whether to enable 5G, P4: power, P5: CountryCode
Setting: AT+RADIO=1,,36,0,0,CN	success	AT+RADIO=1,36,0,0,CN return set value
	fail	ERR=x x: error code

parameter range:

P1	P2	P3	P4	P5
Channel number (1~13) under 2.4G frequency	The channel number under the 5G frequency (refer to the Chinese regional value)	Whether to enable 5G 0: 2.4G, 1: 5G	Power level: 0~15	CountryCode: CN

illustrate:

1. Because the channel frequency bands of WiFi are different in different countries and regions, but because there are too many parameters, this module currently only supports the frequency bands of CountryCode in China, that is to say, setting P5 to parameters other than CN will not take effect. Requirements can be customized. The 2.4G frequency bands supported in China [1,13], the supported 5G frequency bands: 36, 40, 44, 48, 149, 153, 157, 161, 165.

2. 0~15 refers to the power level, not the power, 0 means the maximum power level, the maximum power is 18dBm; 15 means the minimum power level, the minimum power is 14dBm, [0,15] decreases in turn.

Restart to take effect.

1.5 AT+MQTT configuration mqtt

instruction	response	Parameter Description
Query: AT+MQTT?	AT+MQTT=P1,P2,P3,P4,P5,P6,P7,P8,P9,P10(P11)	See "Parameter Range" below for details
Setting: AT+MQTT=2,561986583,288258,ebyte12345,mqtt.h eclouds.com,6002,get,0,get,0	success	AT+MQTT=2,561986583,288258,ebyte12345,mqtt.h eclouds.com,6002,get,0,get,0 return set value
	fail	ERR=x x: error code

parameter range:

According to the different MQTT platforms connected, there are three cases

1、 When connecting to Alibaba Cloud, that is, when the P1 item is 0

P1:platform	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11
0	product key	device name	client_ID	device key	addresses	port	subscribe topic	Subscribe to QOS	post topic	Release QOS

2、 When connecting to Baidu Cloud, that is, when the P1 item is 1

P1:platform	P2	P3	P4	P5	P6	P7	P8	P9	P10
1	device name	username	password	address	port	subscribe topic	Subscribe to QOS	post topic	Release QOS

3、 When connecting to ONENET, that is, when the P1 item is 2

P1:platform	P2	P3	P4	P5	P6	P7	P8	P9	P10
2	device ID	Product ID	Authentication information (device name)	address	port	subscribe topic	Subscribe to QOS	post topic	Release QOS

illustrate:

1. The maximum length of Alibaba Cloud product key is 18 bytes, the maximum length of device name is 20 bytes, the maximum length of client_id is 20 bytes, and the maximum length of device key is 40 bytes.

2. The maximum length of Baidu cloud device name is 20 bytes, the maximum length of user name is 30 bytes, and the maximum length of password is 20 bytes. Select the key authentication as the authentication method.
 3. The maximum length of Onenet device ID is 10 bytes, the maximum length of product ID is 10 bytes, and the maximum length of authentication information is 20 bytes.
 4. The maximum address length is 65 bytes. The maximum length of subscription is 60 bytes. The maximum post length is 60 bytes. Subscribe QOS and publish QOS can only be 0,1,2.
- Restart to take effect

1.6 AT+HTTPCLIENTConfigure HTTPCLIENT

instruction	response	Parameter Description
Query: AT+HTTPCLIENT?	AT+HTTPCLIENT=P1,P2,P3,P4,P5,P6	P1: IP address, P2: port number. P3: Request method. P4: output mode P5: URL. P6: Custom.
setting: AT+HTTPCLIENT=192.168.4.100,8886,0,0,test.txt,Connection: keep-alive	success	AT+HTTPCLIENT=192.168.4.100,8886,0,0,test.txt,Connection: keep-alive return set value
	fail	ERR=x x: error code

Parameter range:

illustrate:

1. The request method is 0-get, 1-post. Output mode 0-valid data output, 1-all output.
2. For the output mode of P4 item, it is recommended to use the all output mode, and then the user can analyze the content by himself. Due to the limitation of the network environment, there may be sticky packets when receiving. Without the specified delimiter, the module cannot perfectly sub-package, which may cause data anomalies. If you must only output valid content, you can customize it under the condition of specifying the delimiter.
3. After restarting the connection successfully, the content input by the serial port will be automatically connected to the URL. For example, if you want to access the file /test.txt, enter "AT+HTTPCLIENT=192.168.4.100,8886,0,1,/,Connection:keep-alive", restart, and enter "test.txt" after the connection is successful That's it.

Restart to take effect

1.7 AT+WEBSOCKET Configure Websocket

instruction	response	Parameter Description
Query: AT+WEBSOCKET?	AT+WEBSOCKET=P1,P2,P3	P1: IP address, P2: port number. P3: Origin
Setting: AT+WEBSOCKET=192.168.4.100,8886,http://192.168.4.100	success	AT+WEBSOCKET=192.168.4.100,8886,http://192.168.4.100 return set value
	fail	ERR=x x: error code

Restart to take effect

1.8 AT+P2PDEVINFO configuration, read WiFi-Direct (P2P)

parameters

instruction	response		Parameter Description
Query: AT+P2PDEVINFO?	AT+P2PDEVINFO =P1,P2,P3,P4		P1: scan time, P2: current role, P3: local device name, P4: peer device name
setting: AT+P2PDEVINFO=30,1, E103-W06WiFiDirectGo, E103-W06WiFiDirectClient	success	AT+RADIO=1,36,0,0,CN	return set value
	fail	ERR=x x: error code	

Parameter range

P1	P2	P3	P4
Scan interval in WiFi-Direct mode: 20~1000(s)	0: client 1: GroupOwner	Native device name: a string of less than 32 bytes	Peer device name: a string of less than 32 bytes

Reconnect takes effect

1.9 1.9 AT+P2PSOCKET configuration, read WiFi-Direct (P2P) port, IP address

instruction	response		Parameter Description
Query: AT+P2PSOCKET?	AT+P2PSOCKET=P1,P2		P1: port, P2: IP address
setting: AT+P2PSOCKET=4001,192.168.1.1	success	return set value	
	fail	ERR=x x: error code	

parameter range:

P1: port	P2: IP address
[0,65535]	[0,254]

illustrate:

1. There are two roles in WiFi-Direct mode, Client and GroupOwner. Support changing the port number under the GroupOwner; support changing the port and IP address under the Client role.
2. In Client mode, the port and IP address of the peer device are set, that is, the remote port and IP; in GroupOwner, the local port is set.

Reconnect takes effect.

1.10 AT+NETIP configuration, read AP network IP address

instruction	response	Parameter Description
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Query: AT+NETIP?	AT+NETIP=P1,P2,P3,P4		P1: IP address P2: subnet mask P3: gateway address P4: DNS server address
setting: AT+NETIP=192.168.1.111,255.255.255.0,192.168.1.31,192.168.1.31	success	return set value	
	fail	ERR=x x: error code	

parameter range:

P1	P2	P3	P4
0~255			

Restart to take effect

Note: This command is only valid for the AP. If you need to query the IP address of the STA, please use AT+GETNETIP? to query

To set the static IP address of STA. Please use AT+IPSTATIC command to set

1.11 AT+STACON configuration, read STA connection parameters

instruction	response		Parameter Description
Query: AT+STACON?	AT+STACON=P1,P2,P3		P1: target SSID name, P2: encryption type, P3: password
setting: AT+STACON=ebytew06,2,12345678	success	return set value	
	fail	ERR=x x: error code	

parameter range:

P1	P2	P3
Target SSID, less than a 32-byte string	Encryption type: 0: open, 1: WEP, 2: WPA2	password, less than a 32-byte string

illustrate:

1. P2 encryption type, if it is open type, then P3 password can be empty, do not set

Reconnect takes effect.

1.12 AT+CONTYPE set connection type

instruction	response		Parameter Description
Query: AT+CONTYPE?	AT+CONTYPE=P1		P1: connection type. 1:
Setting: AT+CONTYPE=P1	success	AT+CONTYPE=P1	Successfully return the set value
	fail	ERR=x x: error code	

Note: P1 indicates the connection type. Although this command can be configured in AP mode, it must be in STA (station) mode to take effect.

Parameter range: only 1,2,3

- 1: Automatic connection. Automatically connect according to the SSID stored in the flash (from the AT+STACON command);
 - 2::smartconfig connection. Automatically connect according to the SSID parameters configured by smartconfig.
 - 3: Manual connection. Connect to the specified AP according to the parameters of the command: AT+HDCONTO=P1,P2,P3.
- Restart to take effect.

1.13 AT+HDCONTO manually connect to AP

instruction	response		Parameter Description
AT+HDCONTO=P1,P2,P3	success	Not responding	P1: SSID name, P2: encryption type, P3: password
	fail	ERR=x x: error code	

parameter range:

P1	P2	P3
SSID name (no more than 32 bytes)	Encryption type. 0: open, 1: WEB, 2: WPA2	Password (no more than 32 bytes)

illustrate:

1. The success and failure here only indicate whether the configuration parameters comply with the connection rules, and do not mean that the connection is successful. Please judge whether the connection is successful or not in the end according to the indicating pin. The parameters here are not saved to flash, and will become invalid after power off. This command is only applicable to STA mode. For example, the connection Wifi name is: eby tew06, the password is: 12345678, and the encryption method is: WPA2. Then enter the command: AT+HDCONTO=eby tew06,2,12345678
 2. If the target SSID is open, then P3 can be empty.
 3. This command only supports the use of STA role
- Effective immediately.

1.14 AT+DISCON Disconnect

instruction	response		Parameter Description
AT+DISCON	success	disconnect	none
	fail	ERR=x x: error code	

illustrate:

1. Returning disconnect when using this command successfully only means that the module has received the command, and whether to disconnect in the end depends on the W_LINK indicator pin to judge.
 2. This command only supports the use of STA role
- Effective immediately.

1.15 AT+SOCKET?P1 configuration, read SOCKET port, IP address:

instruction	response	illustrate
Query: AT+SOCKET?P1	AT+SOCKET=P1,P2,P3	P1: socket label, P2: port, P3: IP address
setting: AT+SOCKET=0,4001,192.168.1.1	success	return set value
	fail	ERR=x x: error code

parameter range:

P1: socket label	P2: port number	P3: IP address
[0,3]	[0,65535]	[0,255]

Note: 1. This command is to configure the remote port and IP address for protocol transmission. There are 4 ports and addresses in total, which can be set separately.

2. When the transmission mode is transparent transmission, the first parameter is used by default.

Restart to take effect.

1.16 AT+SVRPORTIP configuration, read local port and IP address

instruction	response	Parameter Description
Query: AT+SVRPORTIP?	AT+SVRPORTIP =P1,P2	P1: local port, P2: local IP
setting: AT+SVRPORTIP =4001	success	return set value
	fail	ERR=x x: error code

Note: This command is mainly used to query and set the local port number and IP address in TCP serve mode, and to query and set the local port number and IP address in UDP mode. It should be noted that if in STA mode If the WiFi connection is not established, the returned IP address is 0, and the local IP address will not be obtained until the connection is established.

Restart to take effect.

1.17 AT+HEARTBT configuration, read heartbeat packet parameters

instruction	response	Parameter Description
Query: AT+HEARTBT?0	AT+HEARTBT=P1,P2,P3,P4,P5	P1: label, P2: heartbeat packet type, P3: heartbeat timeout, P4: heartbeat data type, P5: heartbeat data
setting: AT+HEARTBT=0,1,5,1, CDEBYTE-E103-W06-STRHT	success	Successfully return the set value
	fail	ERR=x x: error code

parameter range:

P1	P2	P3	P4	P5
socket label range [0,3]	Heartbeat packet type: 0: Disable the heartbeat package 1: serial port heartbeat 2: network heartbeat 3: serial port + network heartbeat	Heartbeat timeout: [0,65535] Unit: second	Heartbeat data type: 1: String 2: HEX	Heartbeat data, no more than 40 bytes

illustrate:

1. P1 represents the label of the socket, which corresponds to the socket ID of the protocol transmission, and the range is [0,3]. When it is transparent transmission, the heartbeat packet is printed according to the configuration information of the first channel, that is, the parameter with the socket label 0.

2. If the heartbeat data type is HEX mode, then you need to follow the HEX format rules when setting, that is, the heartbeat data must be composed of 0~F. And the data is aligned in the form of two-in-one, and if it is not enough, the bottom bit is added to 0. For example, if you want to set the heartbeat data to HEX format, send the command:

AT+HEARTBT=0,5,2,1f2a3b4. Because the third digit is 2, it means HEX format, so it will be aligned according to: 1f 2a 3b 40.

3. If the serial port heartbeat packet is enabled, and the transmission mode is protocol transmission, the serial port will output according to the protocol transmission format.

Effective immediately.

1.18 AT+ REGISTER configuration, read registration package parameters

instruction	response	Parameter Description
Query: AT+ REGISTER?0	AT+ REGISTER=P1,P2,P3,P4	P1: label, P2: registration package type, P3: registration package data type, P4: registration package data
setting: AT+REGISTER=0,1,2, 313233343536373839	success	return set value
	fail	return error code

parameter range:

P1: label	P2: Registration package type	P3: Packet Type	P4: Registration Package Data
[0,3]	0: off 1: Send MAC address when connecting 2: Append the MAC address before each packet of data	1: String 2: HEX	Maximum length is 60 bytes

	3: Send custom data when connecting 4: Add custom data to each packet of data		
--	--	--	--

illustrate:

1. P1 represents the label of the socket, which corresponds to the socket ID of the protocol transmission, and the range is [0,3]. When it is transparent transmission, the registration packet is printed according to the configuration information of the first channel, that is, the parameter with the socket label 0.

2. If the data type of the registration package is HEX mode, then the HEX format rules must be followed when setting, that is, the registration package data must be composed of 0~F. And the data is aligned in the form of two-in-one, and the bottom bit is added to 0 if it is not enough. For example, if you want to set the heartbeat data in HEX format, send the command: AT+HEARTBT=0,5,2,1f2a3b4. Because the third The bit is 2 to indicate the HEX format, so it will be aligned according to: 1f 2a 3b 40.

3. If the registration packet type is set to MAC address-related (connection sending MAC address and adding MAC address to each packet of data), the parameter P3 data packet type will be specified as HEX form, and parameter P4 will be specified as the MAC obtained by the module from inside address.

Effective immediately.

1.19 AT+NTPTIME configuration, read NTP time

instruction	response		illustrate
Query: AT+NTPTIME?	NTP time:Mon Aug 24 11:16:00 2020.Zone=480		
Setting: AT+NTPTIME=Zone	success	AT+NTPTIME=Zone Zone: setting value	
	fail	ERR=x x: error code	

illustrate:

1. This command takes effect only in STA mode and connected to the network.

2. The time is output in the following format: week, month, day, hour, minute, second, year.

3. Zone is the offset based on GMT time. For example, Beijing time is East Eighth District time, then Zone=8*60 (minutes).

4. When setting parameters, only the GMT time offset can be set, and the specific value is calculated according to the specific time zone, and the unit is minutes.

5. Zone range: [-720,840]

Effective immediately.

1.20 AT+MAC read MAC address

instruction	response	Parameter Description
Query: AT+MAC?	AT+MAC=P1	P1: MAC address, in string form

1.21 AT+SMARTCFG smartconfig distribution network

instruction	response	Parameter Description
AT+SMARTCFG	Enter SmartConfig	Indicates entering SmartConfig mode

After the network distribution is completed, the module automatically restarts. Configuration timeouts also restart.

Effective immediately.

1.22 AT+VERSION read hardware, software version number

instruction	response	Parameter Description
AT+VERSION	AT+VERSION=HV:p1,SV:p2	P1: hardware version number, P2: software version number

Description: This command cannot be set, only parameters can be read.

1.23 AT+RESET restarts the module

instruction	response	Parameter Description
AT+RESET	RESET	Returning RESET means that the command is executed successfully

Note: After executing this command, the module resets and restarts, and the user parameters will not be lost. It is only equivalent to re-powering on. Before restarting, the serial port will print information: RESET.

1.24 AT+RESTORE parameter restore factory

instruction	response	Parameter Description
AT+RESTORE	RESTORE	Returning RESTORE means that the command is executed successfully

Note: After executing this command, the module will reset and restart, and the parameters will be set to the initial value, that is, the parameters configured by the user will be invalid. Before the reset and restart, the serial port will print information: RESTORE.

1.25 AT+SLEEPIN to enter sleep mode

instruction	response	Parameter Description
AT+SLEEPIN	sleep	go to sleep

Note: When waking up the module, give the WAKEUP pin (GPIO_13) a rising edge level greater than 200ms. After the module wakes up, it will print wakeup on the serial port, or the serial port will receive data.

1.26 AT+IPSTATIC configuration, read static IP address

instruction	response		illustrate
Query: AT+IPSTATIC?	AT+IPSTATIC= p1,p2,p3,p4,p5		p1: enable p2: IP address p3: subnet mask p4: gateway address p5:DNS server
setting: AT+IPSTATIC=p1,p2,p3,p4,p5	success	return set value	
	fail	return error code	

- requires attention:
1. This parameter only takes effect in STA mode. Using this command in non-STA mode will report an error, and this operation is not supported.
2. If the static IP function is turned off, you only need to set p1 when setting parameters, and the parameters p2, p3, p4, and p5 are invalid, and the module will not be saved even if it is set. The same goes for queries.
- The IP address must be in the same network segment as the target AP or the target router, otherwise it will not work because it cannot assign a legal IP address. For example, if the IP address of the target AP is 10.123.145.1, then the static IP must be 10.123.145.x.

parameter range

p1: enable	p2: IP address	p3: subnet mask	p4: gateway address	p5: server address
0: off 1: open	The number not greater than 255 in the same network segment as the target AP	Not greater than 255	Not greater than 255	Not greater than 255

Restart to take effect.

1.27 AT+MODBUS configuration, query Modbus

instruction	response		illustrate
Query: AT+MODBUS?	AT+MODBUS=p1		0: off 1: open
Setup: AT+MODBUS=p1	success	return set value	
	fail	return error code	

Effective immediately.

1.28 AT+SCAN scan nearby AP

instruction	response	Parameter Description
AT+SCAN	Success: +scan:p1,p2,p3,p4 Failed: no ap scan	

1、 Notice:

2、 1. Scanning for nearby APs will only take effect in STA mode, when the connection mode is manual connection, and no wifi connection is established, otherwise it will return ERR=-5, indicating that this operation is not supported in this state.

3、 If a nearby AP is scanned, the returned information format is as follows:

fixed head	SSID	MAC(BSSID)	channel	rsi
+scan:	Maximum 32 bytes	17 bytes	Maximum 3 bytes	Maximum 3 bytes
+scan:	TEST_ZW	14:AD:CA:AA:91:D6	4	-69

+scan:tenda_TX,B8:3A:08:AC:46:E1,1,-71

Each parameter is separated by a comma ',' and terminated by a carriage return (\r\n). MAC addresses (BSSID) are separated by a semicolon ':'

4、 4. To scan the AP in the 5G frequency band, you need to enable 5G, otherwise the module can only scan the AP information in the 2.4G frequency band. The difference between 5G and 2.4G is in the channel, the channel of 2.4G is [1,13], and the channels greater than 13 are 5G channels.

5、 A maximum of 30 AP information can be scanned at a time.

1.29 AT+GETNETIP Get the IP address information of STA

instruction	response	Parameter Description
AT+GETNETIP?	AT+GETNETIP=P1, P2, P3	P1: IP address P2: Gateway P3: DNS server

Note: This command can only be queried, not configured.

1.30 AT+FWCODE Get module firmware number

instruction	response	Parameter Description
AT+ FWCODE?	AT+GETNETIP=P1	P1: Firmware number

Note: This command is upgraded after V1.5

2. Software Upgrade Update Record Table

Firmware number/version number	update content
--- / V1.0	first edition
--- / V1.1	Based on the first version, STA static IP address, modbus protocol conversion, pin return to factory settings, and IP address setting rules have been repaired, and AP information has been added for scanning and printing.
--- / V1.2	Optimize the conversion function of Modbus TCP and Modbus RTU
7270-0-13 / ---	<ol style="list-style-type: none"> 1. Add English web page configuration interface. 2. Added the serial port wake-up function after hibernation. 3. Optimize the IO restore factory logic, and change it to continuous detection for a period of time instead of only one detection. 4. Fix the problem that many input boxes in the webpage configuration cannot enter special characters. 5. Fixed the problem that NTP did not return 6. Fixed some other text errors
7270-0-14 / ---	<ol style="list-style-type: none"> 1. Fix the problem that 1200 and 2400 baud rates cannot be configured in web page configuration.
7270-0-15 / V1.5	<ol style="list-style-type: none"> 1. Fix the problem that when IPSTATIC is in a three-layer switch network, the gateway and DNS cannot input the IP of a different network segment, and delete the restriction of NETIP at the same time. Currently, the module does not have AP+STA, so it does not take effect without this NETIP 2. Fix the problem that AT+GETNETIP returns in any case of input 3. To solve the problem of inconsistent version numbers, rewrite a command to query FWCODE, and separate Fw code and Software Verion
7270-0-15 / V1.6	<ol style="list-style-type: none"> 1. Power level description of the revision manual.

Note: It can be queried by AT+VERSION and AT+FWCODE.

Manuals are updated to new versions as software changes.