

AT Command Set of USR-DR164/162



V2.0

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AT Command table

No.	name	Function
1	AT	To test AT commands, you can use
2	AT+E	Set/query the leading character of the AT command sent in transparent transmission mode.
3	AT+WEL	Settings/Inquiry Welcome Message
4	AT+EVENT	Set/query event notification function in transparent transmission mode
5	AT+ENTM	Enter transparent mode
6	AT+SN	Query SN
7	AT+TMODE	Set/query the data transmission mode of the module
8	AT+MID	Query Module ID
9	AT+WRMID	Set module ID
10	AT+NDBG	Turn debug information output on/off
11	AT+SMEM	Query the dynamic allocation status of the module RAM
12	AT+VER	Query software version
13	AT+WEBVER	Query the software version number of the webpage
14	AT+Z	Restart Module
15	AT+RELD	Restore to factory parameters
16	AT+CFGTF	Restore to factory parameters
17	AT+UART	Configure or query serial port operations.
18	AT+UARTTM	Sets or queries the 10 ms frame interval for serial data reception
19	AT+UARTBUF	Sets or queries the maximum number of bytes for serial port frame reception
20	AT+PING	Network Ping command
21	AT+NETP	Configure or query SOCKA network protocol parameters. Changes take effect immediately.
22	AT+NETPIDEN	Configures whether to display the data source channel. The setting takes effect after resetting.
23	AT+NETPID	Set/Query Communication Channel Number Mark
24	AT+MAXSK	Set/query the number of TCP Client connections when module SOCKA works in the TCP Server
25	AT+TCPLK	Query whether the SOCKA TCP link has been established
26	AT+TCPTO	Set/query SOCKA TCP timeout time
27	AT+TCPDIS	Establish/Disconnect SOCKA TCP Client connection
28	AT+SEND	Receive SOCKA data in command mode
29	AT+RECV	Receive SOCKA data in command mode
30	AT+SOCKB	Set/query SOCKB network protocol parameters
31	AT+TCPDISB	Establish/Disconnect SOCKB TCP Client connection
32	AT+TCPTOB	Sets or queries the TCP timeout time for SOCKB. The settings take effect after resetting.
33	AT+TCPLKB	Check if a SOCKB connection is established
34	AT+SNDB	Send data to SOCKB 18 in command mode

35	AT+RCVB	Receives data from SOCKB in command mode
36	AT+UDPLCPT	Configure/Query SOCKA, SOCKB as local port for UDP communication
37	AT+REGEN	Configure/Query Communication Channel Number Registration Package Function
38	AT+REGUSR	Set/Query Custom Registration Package
39	AT+REGSND	Configures/queries the transmission method for communication channel number registration packets
40	AT+REGCLOUD	Set/Query User Name and Password for PUSR Cloud
41	AT+NETHEARTCFG	Configure/Query Network Heartbeat Function Parameters
42	AT+COMHEARTCFG	Configures/queries serial port heartbeat parameters
43	AT+HTPTP	Set or query HTTP request type, the settings take effect after resetting
44	AT+HTPURL	Set or query the HTTP protocol header path and version number. The settings take effect after resetting.
45	AT+HTPHEAD	Configures or queries the content of the new HTTP protocol message. The settings take effect after resetting.
46	AT+HTPPARA	Set or query the new HTTP connection timeout time, which takes effect after resetting
47	AT+MQTOPIC	Configure or query MQTT topic content. The settings take effect after resetting.
48	AT+MQLOGIN	Configures or queries MQTT login credentials. The settings take effect after resetting.
49	AT+MQID	Set or query the MQTT Client ID. The settings take effect after resetting.
50	AT+MQPARA	Set or query MQTT parameters. The settings take effect after resetting.
51	AT+WSSSID	Set or query the SSID of the associated AP. The settings take effect after resetting.
52	AT+WSKEY	Set or query the encryption parameters of the STA. The settings take effect after resetting.
53	AT+CONFIG	The configuration module connects to the router in STA mode and returns the connection status.
54	AT+WANN	Configures and queries the STA's network parameters. The settings take effect after resetting.
55	AT+WSMAC	Configures/queries the STA MAC address parameter of the module. The settings take effect after resetting.
56	AT+WSLK	Query the STA's wireless link status
57	AT+WSLKO	Query and set the STA's wireless connection priority policy
58	AT+WSLQ	Check the wireless signal strength of the AP
59	AT+WSCAN	Search for access points (APs), displaying up to 50 APs
60	AT+WSDNS	Set or query the DNS server address 29 in STA mode static configuration
61	AT+LANN	Set or query the network parameters of the access point (AP). The settings take effect after resetting.

62	AT+WAMAC	Query module's AP MAC address parameter
63	AT+WAP	Set or query the Wi-Fi configuration parameters of an access point (AP). The settings take effect after resetting
64	AT+WAKKEY	Set or query the encryption parameters of the AP. The settings take effect after resetting.
65	AT+WADHCP	Configures or queries the DHCP Server status of an access point (AP). The settings take effect after a reset.
66	AT+WALK	Query the MAC address 31 of the STA device connected to the AP module
67	AT+WALKIND	Enable/Disable connection status indication in AP mode
68	AT+WAPMXSTA	Query/Setup module for STA connections in AP mode
69	AT+WFREQ	Set/Query Wi-Fi working frequency
70	AT+WMODE	Configures/queries WIFI operating mode. Settings take effect after reset
71	AT+ASWD	Set or query the Wi-Fi configuration password for local network search
72	AT+DISPS	Set/Query Wi-Fi Power Mode
73	AT+WIFI	Turn Wi-Fi on/off command
74	AT+SMARTAPCONFIG	Configure the SmartAPLink networking function for SoftAP mode
75	AT+SMARTAPSTART	Initiate the SmartAPLink network configuration function in SoftAP mode
76	AT+PLANG	Set/Query Webpage Language Mode
77	AT+WEBU	Set or check the login username and password for the web page. The settings take effect after resetting.
78	AT+NTPEN	Enable or disable network clock calibration. The setting takes effect after resetting.
79	AT+NTPTM	Query the network clock
80	AT+NTPSER	Set NTP server

1. Management Instructions

1.1. AT+E: Turn on/off the echo function

※ form :

。 set up

AT+E=<status><CR>

+ok<CR><LF><CR><LF>

※ parameter :

. status: Status

ON: Turn on the display

OFF: Turn off the display

When the module switches from transparent mode to command mode, the default backlight function is enabled (when backlight is enabled, the instruction's own backlight and

Messages are separated by 0x0D characters. To disable the backspace function, press AT+E once, then enable it again.

Yes, AT+E=on/off can save the return display function.

1.2. AT+CMDPW: Sets or queries the preamble for sending AT commands in transparent mode. The setting takes effect after resetting.

※ form :

◦ query

AT+CMDPW<CR>

+ok=<data><CR><LF><CR><LF>

◦ set up

AT+CMDPW=<data><CR>

+ok<CR><LF><CR><LF>

※ parameter :

. data: Default is [USR]. Set to [off] to disable this feature. You can enter up to 20 characters. Once entered

This feature will be enabled by default for transparent transmission of AT commands (AT+H is not supported). To clear it, you need to restore the factory settings.

set up

Example: Set this parameter to "USR" to send "USRAT+WMODE\r" (hex: 55 53 52 41 54 2B 57 4D 4F 44 45 0D, ending with 0x0d or 0x0a) in transparent mode. The module will respond with the AT command result "+ok=STA" (hex: 2B 6F 6B 3D 53 54 41).

1.3. AT+WEL: Set or query the welcome message during startup

※ form :

◦ query

AT+WEL<CR>

+ok=<message><CR><LF><CR><LF>

- set up

AT+WEL=<message><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- message: Displays a welcome message during startup. The default is [USR-DR164]. If set to [off], this feature is disabled. The message cannot exceed 10 bytes.

1.4. AT+EVENT: Set or query event notification in transparent mode. The settings take effect after resetting.

※ form :

- query

AT+EVENT<CR>

+ok=<status><CR><LF><CR><LF>

- set up

AT+EVENT=<status><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- Status: Enable or disable event notification.
- off: Turn off.
- on: Enable, default.

After the trigger condition of the corresponding event is met, the module outputs the serial port event data.

Event output serial port data

condition

+EVENT=SOCKA_ON

SOCKA connection establishment (TCP Client/Server, MQTT, HTTP only)

+EVENT=SOCKA_OFF When the SOCKA connection is disconnected (only for TCP Client/Server, MQTT, HTTP)

+EVENT=SOCKB_ON

SOCKB connection establishment (TCP Client only)

+EVENT=SOCKB_OFF When the SOCKB connection is disconnected (only for TCP Clients)

+EVENT=CON_ON

STA successfully connected to the router

+EVENT=CON_OFF

STA disconnected from the router or not connected to the router

+EVENT=DHCP_OK
STA DHCP obtained IP

1.5. AT+ENTM: Enter transparent mode

※ form :

AT+ENTM<CR>
+ok<CR><LF><CR><LF>

After the command is executed correctly, the module switches from command mode to transparent mode.

1.6. AT+SN: Query SN

※ form :

AT+SN<CR>
+ok=<SN><CR><LF><CR><LF>

※ parameter :

<SN>: SN code, 20-bit SN number

1.7. AT+TMODE: Configures or queries the data transmission mode of the module. The settings take effect after resetting.

※ form :

■ query :

AT+TMODE<CR>
+ok=<tmode><CR><LF><CR><LF>

■ set up :

AT+TMODE=<tmode><CR>
+ok<CR><LF><CR><LF>

※ parameter :

■ tmode: Data transmission mode, including:
throughput: transparent mode
cmd: Command Mode

1.8. AT+MID: Query module ID

※ form :

AT+MID<CR>
+ok=<module_id><CR><LF><CR><LF>

※ parameter :

■ module_id: Module ID

USR-DR164。

Note: This parameter can be set via AT+WRMID.

1.9. AT+WRMID: Set module ID

※ form :

■ set up

AT+WRMID=<wrmid><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ wrmid: Sets the module ID, limited to 20 characters.

1.10. AT+NDBGL: Turn debug information output on/off

※ form :

■ query

AT+ NDBGL<CR>

+ok=<debug_level,uart_num><CR>< LF><CR>< LF>

■ set up

AT+ NDBGL =<debug_level,uart_num><CR>

+ok<CR>< LF><CR>< LF>

※ parameter :

■ debug_level: Debugging information output level. Internal debugging information is displayed only if it meets or exceeds this setting.

0: Turn off debug information output.

1 ~ XX: Output debug information at or above the set value.

■ uart_num: Serial port for debug information output

0: Serial port 0

1: Serial port 1 with baud rate 921600 can output more system operation information.

1.11. AT+SMEM: Query the dynamic allocation status of the module RAM

※ form :

■ query

AT+SMEM<CR>

+ok=<status><CR>< LF><CR>< LF>

※ parameter :

■ Staus: Dynamic allocation status of remaining RAM, in bytes. Example: current_size: 126736

1.12. AT+VER: Query software version number

※ form :

AT+VER<CR>

+ok=<ver><CR><LF><CR><LF>

※ parameter :

- ver: The software version number of the module.

1.13. AT+WEBVER: Query the software version number of the webpage

※ form :

AT+WEBVER<CR>

+ok=<ver><CR><LF><CR><LF>

※ parameter :

- ver: The web version number of the module.

1.14. AT+Z: Restart module

※ form :

AT+Z<CR>

1.15. AT+RELD: Restore to factory parameters

※ form

AT+RELD<CR>

+ok=rebooting...<CR><LF><CR><LF>

The command restores the factory settings of the module and then automatically restarts.

1.16. AT+CFGTF: Copy user configuration parameters to factory settings

※ form :

- query

AT+CFGTF<CR>

+ok=<status><CR><LF><CR><LF>

※ parameter :

- Status: Returns the operation status.

2. Serial port instruction

2.1. AT+UART: Configure or query serial port operations. The settings take effect after resetting.

※ form :

- query :

AT+UART[=uart_num]<CR>

+ok=<baudrate,data_bits,stop_bit,parity,flowctrl><CR><LF><CR><LF>

- set up :

**AT+UART=<baudrate,data_bits,stop_bit,parity,flowctrl>[,uart_num]<CR>
+ok<CR><LF><CR><LF>**

※ parameter :

■ uart_num: Optional serial port number, defaults to 0.

● 0: Serial port channel 0

■ baudrate: baudrate

1200 , 2400 , 4800 , 9600 , 19200 , 38400 , 57600 , 115200 , 230400 ,
380400 , 460800 , 921600

■ data_bits: Data bits

7 , 8

■ stop_bits: Stop bits

1 , 2

■ Parity: Check bit

NONE (No test bit)

EVEN (even test)

ODD (odd parity check)

■ flowctrl: Hardware flow control (CTSRTS)

NFC: No Hardware Flow Control

FC: has hardware flow control

2.2. AT+UARTTM: Configuration/Query of Two-Frame Time Interval for Serial Data Reception

※ form :

■ query :

AT+UARTTM<CR>

+ok=<interval><CR><LF><CR><LF>

■ set up :

AT+UARTTM=<interval><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ interval: Serial port packet interval, default [20] ms, range 10 ~ 1000ms

2.3. AT+UARTBUF: Sets or queries the maximum number of bytes for serial port framing reception

※ form :

■ query :

AT+UARTBUF<CR>

+ok=<size><CR><LF><CR><LF>

- set up :

AT+UARTBUF=<size><CR>

+ok<CR><LF><CR><LF>

- ※ parameter :

- size: Frame size, default is 1400 bytes, range 32 to 1400 bytes

Note: The frame size setting must not be smaller than the maximum length of the AT command used. Otherwise, AT commands with a length exceeding the frame size will fail to set.

3. Network Protocol Instructions

3.1. AT+PING: Network "Ping" command

- ※ form :

- set up

AT+PING=<ip[,count,size]><CR>

+ok=<sta><CR><LF><CR><LF>

- ※ parameter :

- ip: IP address or domain name
- count: Number of PING commands, default 1, range 1 to 100
- size: PING command packet size, default 32 bytes, range <=1472
- sta:Return value

Success:

Timeout:

Unknown host: DNS cannot resolve the domain name

3.2. AT+NETP: Set or query SOCKA network protocol parameters. Changes take effect immediately.

- ※ form :

- query

AT+NETP<CR>

+ok=<protocol,CS,port,IP[,opt]><CR><LF><CR><LF>

- set up

AT+NETP=<protocol[,CS,port,IP[,opt]]><CR>

+ok<CR><LF><CR><LF>

- ※ parameter :

- Protocol: Protocol type, including

TCP

UDP

HTTP

MQTT

IGMP: Multicast

function ■ CS:

Network mode

SERVER: Server

CLIENT: Client

■ Port: Protocol port, in decimal, less than 65535

■ IP: The server's IP address or domain name when the module is set to "CLIENT", with the domain name length ≤ 100 characters.

When set to UDP, the SERVER mode preserves IP addresses and ports, and the module automatically saves the latest received data.

The UDP packet's IP address and port are received, and data is sent to the saved IP address and port.

During module initialization, data is sent by default to the IP address and port specified in the command.

If set to UDP, the CLIENT mode does not have memory functionality.

Set the example as follows:

> AT+NETP=TCP,CLIENT,8899, 192.168.1.1

> AT+NETP=TCP,CLIENT,80,www.baidu.com

> AT+NETP=HTTP,80,www.XXXX.com

> AT+NETP=MQTT,80,www.XXXX.com

Multicast feature:

AT+NETP=IGMP,CLIENT,8899,239.255.0.1 //Socket A channel for UDP multicast communication, where 8899 is the target port and 239.255.0.1 is the multicast IP address. If the protocol is multicast but the IP address is not a multicast address, an error will be reported.

AT+SOCKB= IGMP, 9999,239.255.0.2 //Socket B channel for UDP multicast communication

AT+UDPLCPT=XXXX,XXXXX //Configure the local UDP receiving port, also applies to multicast messages.

3.3. AT+NETPIDEN: Set or query whether to display the data source channel. The setting takes effect after resetting.

※ form :

■ query :

AT+NETPIDEN=<id><CR>

+ok=<id,status,flag><CR><LF><CR><LF>

■ set up :

AT+NETPIDEN=<id,status[,flag]><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- id: Communication channel number, including the following parameters.

A: SOCKA channel .

B: SOCKB channel .

C: BLE Bluetooth data transmission channel

- Status: The status value, including the following parameters.

on: enable .

Off: Turn off. The default is off.

- flag: A flag value that applies only to Bluetooth channel C, indicating whether data received by the Bluetooth channel is transmitted to the serial port.

Send the channel tag value.

0 or do not set: Issue tag value

1: Do not issue the tag value

When enabled, the communication channel number is added to the data header. For example, if the received data is [abc], the actual serial port output is [#SOCKA#abc].

When transmitting via a serial port, a communication channel number must be added to the header. This ensures data is sent only to the specified channel. For example, to send data [abc] to the SOCKA channel, the actual serial port must transmit [#SOCKA#abc].

In the case of disable, the serial port output data does not distinguish the communication channel number, and the serial port receives the data will send to all the communication channels pointing to the serial port number.

3.4. AT+NETPID: Set/Query Communication Channel Number Markers

※ form :

- query :

AT+NETPID=<id><CR>

+ok=<id,value><CR><LF><CR><LF>

- set up :

AT+NETPID=<id,value><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- id: Communication channel number, including the following parameters.

● A: SOCKA channel .

● B: SOCKB channel .

● C: BLE Bluetooth data transmission channel

- Value: Communication channel number tag. SOCKA defaults to [#SOCKA#], SOCKB defaults to [#SOCKB#], BLE

Default is [#BLE#]. Enter up to 10 characters.

3.5. AT+MAXSK: Settings/Query Module. When SOCKA operates as a TCP Server, the number of TCP Client connections

※ form :

■ query

AT+MAXSK<CR>

+ok=<num><CR><LF><CR><LF>

■ set up

AT+MAXSK=<num><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ num: Limits the number of TCP Client connections. The default is 5, and the range is 1 to 5.

Data received by each socket is directly transmitted to the serial port, and data received from the serial port is sequentially sent out through each socket.

3.6. AT+TCPLK: Check if a SOCKA TCP connection has been established

※ form :

AT+TCPLK<CR>

+ok=<sta><CR><LF><CR><LF>

※ parameter

■ sta.: Whether to establish a TCP connection

On: TCP connection established

off: TCP not connected

3.7. AT+TCPTO: Set or query the SOCKA TCP timeout time. The setting takes effect after resetting.

※ form :

■ query

AT+TCPTO<CR>

+ok=<time><CR><LF><CR><LF>

■ set up

AT+TCPTO=<time><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ Time: TCP timeout time.

<= 600 : 600s

>=0:0 indicates no timeout time is set

If the TCP channel receives no data, it starts a timer. When data is received, the timer is cleared. If the set time exceeds the TCPTO, the connection is terminated. If the module acts as a TCP Client, it automatically reconnects to the TCP Server. If the module acts as a TCP Server, the TCP Client must re-establish the connection.

3.8. AT+TCPDIS: Establish/terminate a SOCKA TCP Client mode connection

※ form :

■ query

AT+TCPDIS<CR>

+ok=<sta><CR><LF><CR><LF>

■ set up

AT+TCPDIS =<sta[,opt]><CR>

+ok<CR><LF><CR><LF>

※ parameter :

When querying, sta.: returns whether the TCP Client is connected, such as

on, indicates a linked state (default)

Off, indicating a non-linkable state

■ opt: Function code, an optional parameter that determines whether the command is saved to flash. If left blank, the default value is 0.

0: This command does not save

1: This command saves to Flash.

The off setting module does not allow or disconnects the TCP connection, meaning the module immediately disconnects the link and does not reconnect after the command is issued. The on setting module allows the TCP connection, meaning the module immediately starts reconnecting to the server after the command is issued.

When opt is set to 0, this command is not saved, and AT+TCPDIS defaults to on after reboot. When opt is set to 1, if AT+TCPDIS is on, a TCP connection is established upon power-up by default; if off, no TCP connection is established upon power-up, and a connection is only established when AT=TCPDIS=on, 0, or 1.

3.9. AT+SEND: Transmits data to SOCKA in command mode

※ form :

AT+SEND=<data_lenth><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ data_lenth: The length of the data to be sent. Range: 0 to 1000 bytes.

After successful input, return a " and wait 3 seconds for input. Send the received data from the serial port to SOCKA. If two characters

If the interval between sections exceeds 10ms, the input will be sent immediately upon completion.

3.10. AT+RECV: Receives SOCKA data in command mode

※ form :

AT+RECV=<data_lenth[,timeout]><CR>

+ok=< data_lenth, data_content><CR><LF><CR><LF>

※ parameter :

- data_lenth: The length of the received data. Range: 0 to 1000 bytes
- timeout: Timeout time, 0 to 10 seconds. Leave this field blank to use the default value of 3 seconds.
- data_content: The received data content.

If no data is received within the timeout period, return +ok=0.

When SOCKA operates as a TCP client or UDP client, it buffers multiple packets (with an internal buffer pool). If the specified length in AT+RECV is smaller than this packet, all buffered packets can be retrieved by repeatedly sending AT+RECV commands.

When functioning as a TCP server, SOCKA only buffers the latest data packet. If the specified length in AT+RECV is shorter than this packet, the message can be retrieved by repeatedly sending AT+RECV commands.

3.11. AT+SOCKB: Set or query SOCKB network protocol parameters. Changes take effect immediately.

※ form :

■ query

AT+SOCKB<CR>

+ok=<protocol,port,IP><CR><LF><CR><LF>

■ set up

AT+SOCKB=<protocol,port,IP><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ Protocol: Protocol type, including

TCP, indicates only TCP Client

UDP, UDP client mode

UDPS, UDP server mode

IGMP: UDP multicast mode

■ Port: Protocol port, in decimal, less than 65535

■ IP: The target IP address or domain name, with a length of no more than 100 characters.

When set to UDPS mode, the module automatically saves the IP address and port of the latest received UDP data packet. Data is sent to the saved IP address and port. By default, the module sends data during initialization.

Remove the IP address and port set by this command.

3.12. AT+TCPDISB: Establish/terminate a SOCKB TCP Client mode connection

※ form :

■ query

AT+TCPDISB<CR>

+ok=<sta><CR><LF><CR><LF>

■ set up

AT+TCPDISB=<sta[,opt]><CR>

+ok<CR><LF><CR><LF>

※ parameter :

When querying, sta.: returns whether the SOCKB TCP Client is connected, such as

on, indicates a linked state (default)

Off, indicating a non-linkable state

■ opt: Function code, an optional parameter that determines whether the command is saved to flash. If left blank, the default value is 0.

0: This command does not save

1: This command saves to Flash.

The off setting module does not allow or disconnects the TCP connection, meaning the module immediately disconnects the link and does not reconnect after the command is issued. The on setting module allows the TCP connection, meaning the module immediately starts reconnecting to the server after the command is issued.

When opt is set to 0, this command is not saved, and AT+TCPDISB defaults to on after reboot.

When opt is set to 1, if AT+TCPDISB is on, a TCP connection is established upon power-up by default; if off, no TCP connection is established upon power-up, and a connection is only established when AT=TCPDISB=on, 0, or 1.

3.13. AT+TCPTOB: Sets or queries the TCP timeout time for SOCKB. The setting takes effect after resetting.

※ form :

■ query

AT+TCPTOB<CR>

+ok=<time><CR><LF><CR><LF>

■ set up

AT+TCPTOB=<time ><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ Time: TCP timeout time.

<= 600 : 600s

>=0:0 indicates no timeout time is set

If the TCP channel of the SOCKB module receives no data, it starts a timer. The timer is cleared upon data receipt. If the time exceeds the TCPTOB setting, the TCP connection is terminated and the module automatically reconnects to the TCP server.

3.14. AT+TCPLKB: Check if a SOCKB connection is established

※ form :

AT+TCPLKB<CR>

+ok=<sta><CR><LF><CR><LF>

※ parameter

■ sta.: Whether to establish a SOCKB connection

On: TCP connection established

off: TCP not connected

3.15. AT+SNDB: Send data to SOCKB in command mode

※ form :

AT+SNDB=<data_lenth><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ data_lenth: The length of the data to be sent. Range: 1 to 1000 bytes

After successful input, a " is returned, and the serial port waits for 3 seconds of input. The received data from the serial port is sent to SOCKB. If the interval between two bytes exceeds 10ms, the input is considered complete and sent immediately.

3.16. AT+RCVB: Receives data from SOCKB in command mode

※ form :

AT+RCVB=<data_lenth[,timeout]><CR>

+ok=<data_lenth,data_content><CR><LF><CR><LF>

※ parameter :

■ data_lenth: The length of the received data. Range: 0 to 1000 bytes

■ timeout: Timeout time, 0 to 10 seconds. Leave this field blank to use the default value of 3 seconds.

■ data_content: The received data content.

If no data is received within the timeout period, return +ok=0.

When SOCKB operates as a TCP client or UDP client, it buffers multiple packets (with an internal buffer pool). If the specified length in AT+RCVB is smaller than this packet, the message can be received by sending the AT+RCVB command multiple times.

3.17. AT+UDPLCPT: Configure/Query SOCKA, SOCKB as local ports for UDP communication

※ form :

■ query

AT+UDPLCPT<CR>

+ok=<porta,portb><CR><LF><CR><LF>

■ set up

AT+UDPLCPT=<porta,portb><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ Port: The SOCKA protocol operates on the local port. A value of 0 indicates that the local port matches the target port.

■ port: The SOCKB protocol operates on the local port. A value of 0 indicates the local port matches the target port.

3.18. AT+REGEN: Set/Query Communication Channel Number Registration Package Function

※ form :

■ query :

AT+REGEN<CR>

+ok=<reg_mode><CR><LF><CR><LF>

■ set up :

AT+REGEN=<reg_mode><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ reg_mode: Registration package enable mode.

● OFF: Enable.

● SN: Off by default.

● MAC: Use MAC as the registration package content

● USR: Custom registration package content

● CLOUD: Use the WPS Cloud

3.19. AT+REGUSR: Set/Query Custom Registration Package

※ form :

■ query :

AT+REGUSR<CR>

+ok=<reg_type,reg_data><CR><LF><CR><LF>

■ set up :

AT+REGUSR=<reg_type,reg_data><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ <reg_data>: Custom registration package format.

● HEX: Hexadecimal.

● ASC : Ascii.

■ <reg_data>: Custom registration package. The content length ranges from 0 to 40 bytes.

3.20. AT+REGSND: Sets or queries the transmission method for the communication channel number registration packet

※ form :

■ query :

AT+REGSND<CR>

+ok=<reg_snd_mode><CR><LF><CR><LF>

■ set up :

AT+REGSND=<reg_snd_mode><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ <regsnd_mode>: Registration package sending method (default:

FIRST). ● FIRST: Send via connection.

● EVERY: Data is transmitted in a portable format.

3.21. AT+REGCLOUD: Set or query the user name and password for the human cloud

※ form :

■ query :

AT+REGCLOUD<CR>

+ok=<usr_cld_id>,<usr_cld_pass><CR><LF><CR><LF>

■ set up :

AT+REGCLOUD=<usr_cld_id>,<usr_cld_pass><C

R> +ok<CR><LF><CR><LF>

※ parameter :

■ <usr_cld_id>: A cloud ID with a fixed length of 20 characters

■ <usr_cld_pass>: A password with a fixed length of 8 characters

3.22. AT+NETHEARTCFG: Configures/queries network heartbeat parameters

※ form :

■ query :

AT+NETHEARTCFG<CR>

+ok=<status1>,<status2>,<status3>,<status4><CR><LF><CR><LF>

■ set up :

AT+NETHEARTCFG=<status1>,<status2>,<status3>,<status4><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ <status1>: Function switch (default OFF).

- ON: Turn on.
- OFF: Turn off.

■ <status2>: Heartbeat cycle _s (default: 60)

- Value range: 1-6000

■ <status3>: Heartbeat content type

- HEX/hex
- ASC/asc

■ <status4>: Heartbeat content

- Enter the <status3>content (minimum 1 byte, maximum 32 bytes)

==hex: The ASCII value is converted to hex; the instruction length ranges from 2 to 64 (a power of 2).

==ASCII: Command length range 1~32

Note: The instruction content must match the instruction length, otherwise ERR. Set instruction: Off:

AT+HEARTCFG=OFF; On: AT+NETHEARTCFG=ON, 300, ASC, www.usr.cn

3.23. AT+COMHEARTCFG: Configures/queries serial port heartbeat parameters

※ form :

■ query :

AT+COMHEARTCFG<CR>

+ok=<status1>,<status2>,<status3>,<status4><CR><LF><CR><LF>

■ set up :

AT+COMHEARTCFG=<status1>,<status2>,<status3>,<status4><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ <status1>: Function switch (default OFF).

- ON: Turn on.

- OFF: Turn off.
- <status2>: Heartbeat cycle _s (default: 60)
- Value range: 1-6000
- <status3>: Heartbeat content type
- HEX/hex
- ASC/asc
- <status4>: Heartbeat content
- Enter the <status3>content (minimum 1 byte, maximum 32 bytes)

==hex: The ASCII value is converted to hex; the instruction length ranges from 2 to 64 (a power of 2).

==ASCII: Command length range 1~32

Note: The instruction content must match the instruction length, otherwise ERR. Set instruction: Off:

COMHEARTCFG=OFF; On: COMHEARTCFG=ON, 300, ASC, www.usr.cn

4. SOCKA channel HTTP command (set to HTTP mode)

4.1. AT+HTPTP: Set or query HTTP request type. The setting takes effect after resetting.

※ form :

- query

AT+HTPTP<CR>

+ok=<type,method><CR>< LF><CR>< LF>

- set up

AT+HTPTP=<type[,method]><CR>

+ok<CR>< LF><CR>< LF>

※ parameter :

- Type: HTTP request type

GET: GET method

POST: POST method, default.

- method: HTTP protocol type, optional parameter, valid only for POST requests. If omitted, the default value is 0.

0: Default value, serial port data is reported as body content.

1: Serial port data is reported as path content, with an automatic? added between the URL and path.

4.2. AT+HTPURL: Set or query the HTTP header path and version number. The settings take effect after resetting.

※ form :

- query

AT+HTPURL<CR>

+ok=<path,version><CR><LF><CR><LF>

- set up

AT+HTPURL=<path,version><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- path: URL resource path, up to 50 characters, default: /abcd
- version: HTTP version, 1.0 or 1.1, default 1.1

4.3. AT+HTPHEAD: Configure or query the content of the new HTTP protocol message. The settings take effect after resetting.

※ form :

- query

AT+HTPHEAD<CR>

+ok=<header><CR><LF><CR><LF>

- set up

AT+HTPHEAD=<header><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- header: Replace the carriage return in the header with the string "<CRLF>" and end with two consecutive "<CRLF>" characters. The maximum length is 180 characters.

4. AT+HTPPARA: Set or query the new HTTP connection timeout time. The setting takes effect after resetting.

※ form :

- query

AT+HTPPARA<CR>

+ok=<time><CR><LF><CR><LF>

- set up

AT+HTPPARA=<time><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- time: The time interval after the HTTP connection to the server initiates data transmission before actively disconnecting. The default is 5 seconds, with a range of 0 to 60. A value of 0 indicates the long connection remains active without disconnection.

5. SOCKA channel MQTT command (set to MQTT mode)

5.1. AT+MQTOPIC: Set or query MQTT topic content. The settings take effect after resetting.

※ form :

- query

AT+MQTOPIC<CR>

+ok=<publish,subscribe><CR>< LF><CR>< LF>

- set up

AT+MQTOPIC=<publish,subscribe[,opt]><CR>

+ok<CR>< LF><CR>< LF>

※ parameter :

- Publish: Submit a topic. The default is %MAC/up, where %MAC is the module's MAC address. The query will display the actual MAC address, with a maximum of 60 characters.

- Subscribe: Subscribe to topics. Default is %MAC/down, with a maximum of 60 characters.

- opt: Optional parameter. If left blank, the command will save the changes to flash by default

0: Set to do not save, for frequent data transmission to different subjects.

1: Save to Flash

5.2. AT+MQLOGIN: Set or query MQTT login credentials. The settings take effect after resetting.

※ form :

- query

AT+MQLOGIN<CR>

+ok=<user,password><CR>< LF><CR>< LF>

- set up

AT+MQLOGIN=<user,password><CR>

+ok<CR>< LF><CR>< LF>

※ parameter :

- user: login username, up to 32 characters

- password: Login password, up to 32 characters

5.3. AT+MQID: Set or query the MQTT Client ID. The settings take effect after resetting.

※ form :

- query

AT+MQID<CR>

+ok=<id><CR>< LF><CR>< LF>

- set up

AT+MQID=<id><CR>

+ok<CR>< LF><CR>< LF>

※ parameter :

- id: Client ID. Each device must be assigned a unique identifier. By default,%MAC or MAC address is used as the Client ID. The query will display the actual MAC address. The maximum length is 32 characters.

5.4. AT+MQPARA: Set or query MQTT parameters. The settings take effect after resetting.

※ form :

- query

AT+MQPARA<CR>

+ok=<heartbeat,QoS><CR><LF><CR><LF>

- set up

AT+MQPARA=<heartbeat,QoS><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- Heartbeat: MQTT heartbeat interval, default 60 seconds, range 0~300.
- QoS: MQTT QoS, default 0, range 0, 1, 2

6. Wi-Fi STA command

6.1. AT+WSSSID: Set or query the SSID of the associated AP. The settings take effect after resetting.

※ form :

- query

AT+WSSSID<CR>

+ok=<ap' s ssid><CR><LF><CR><LF>

- set up

AT+WSSSID=<ap' s ssid ><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- AP, SSID: The SSID of the access point (maximum 32 bytes).

6.2. AT+WSKEY: Set or query the encryption parameters of the STA. The settings take effect after resetting.

※ form :

- query

AT+WSKEY<CR>

+ok=<key><CR><LF><CR><LF>

- set up

AT+WSKEY=<key><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- Key: The password for the STA to connect to the AP.

When no password is set, use AT+WSKEY=OPEN, NONE

When a password is set, its length is 5 or 8 to 63 bytes. For backward compatibility, the query returns the WPA2PSK and AES prefixes.

If the password contains the AT command delimiter "=", it needs to be escaped.

6.3. AT+CONFIG: The configuration module connects to the router in STA mode and returns the connection status.

※ form :

- set up

AT+CONFIG=<ssid,key[,address,mask,gateway,dns]><CR>

+ok=<ret><CR><LF><CR><LF>

※ parameter :

- SSID: The router SSID. If SSID is present, set it to? and use escape characters
- key: router password. None means no password. If key is present, =? requires escaping
- Address: The local IP address under the static IP address
- mask: subnet mask
- Gateway: Gateway IP
- dns: DNS server address under a static IP address
- Ret:

SSID error: The AP SSID does not exist. It usually takes about 3 seconds to respond.

Password error: The following internal states indicate a password error. A response is usually returned within about 12 seconds.

Error: Other reasons, kicked out by AP, etc. Failed to display this error after 20 seconds of timeout

Connected: The connection is established and the IP address is obtained, typically with a response time of about 7 seconds. Display format: Connected (IP mode, IP address, subnet mask, gateway address, DNS server address), DHCP down
If there are two DNS server addresses, it returns two.

This command integrates the functions of AT+WSSSID, AT+WSKEY, AT+WMODE, AT+WANN, and AT+WANN, simplifying upper-layer client applications. Example:

1. Configure the STA mode to connect to the router using the SSID and password, with DHCP mode enabled
2. Configure the STA mode to connect to the router using the SSID and password, with static IP address configuration.

6.4. AT+WANN: Set or query the STA's network parameters. The settings take effect after resetting.

※ form :

- query

AT+WANN<CR>

+ok=<mode,address,mask,gateway><CR><LF><CR><LF>

- set up

AT+WANN=< mode,address,mask,gateway ><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- Mode: STA's network IP mode

static: static IP

DHCP: Dynamic IP

- Address: The STA's IP address.

- Mask: The subnet mask of the STA.

- Gateway: The gateway address of the STA.

6.5. AT+WSMAC: Set/Query the STA MAC address parameter of the module. The settings take effect after resetting.

※ form :

- query

AT+WSMAC<CR>

+ok=<mac_address><CR><LF><CR><LF>

- mac_address: The MAC address of the module. For example: ACCF23FF1234

6.6. AT+WSLK: Query the STA's wireless link status

※ form :

- query

AT+WSLK<CR>

+ok=<ret><CR><LF><CR><LF>

※ parameter :

- ret

If not connected: Return "Disconnected"

If connected: Return the AP's SSID (AP's MAC)

6.7. AT+WSLKO: Query and set the STA's wireless connection priority policy

※ form :

- query

AT+WSLKO<CR>

+ok=<order><CR><LF><CR><LF>

■ set up

AT+WSLKO=<order[,RSSI]><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ Order: Sorting strategy. In enterprise environments with multiple SSIDs and passwords, enable this strategy to connect to the strongest signal. Otherwise, the module may connect randomly, potentially leading to unstable connections. On an AP with weak signal, the connection will be delayed by about 2 seconds when enabled.

Enable: Sort by the strongest signal connection.

Disable: Do not enable the sorting policy. The default value.

■ RSSI: This parameter is configurable when enabling sorting functionality with both 2.4G and 5G connections. It prioritizes 5G AP connections when the 5G AP's RSSI exceeds this threshold. Example: AT+WSLKO=Enable, -72.

6.8. AT+WSLQ: Check the wireless signal strength of the access point (AP)

※ form :

■ query

AT+WSLQ[=ssid]<CR>

+ok=<ret><CR><LF><CR><LF>

※ parameter :

■ ssid: This parameter enables scanning of a specified AP and returns its signal strength, useful for production testing

■ ret:

Disconnected: Not connected to the AP

Good, strength: strength> 70% indicates Good

Normal, strength: 70%>= strength>40% indicates Normal

Weak, strength: 40%>= strength indicates Weak.

None: If the specified SSID does not exist, return None. The conversion relationship between our percentage definition and actual RSSI is as follows

wifi_transform_rssi(int rssi_dbm)

{

int ret;

ret = (rssi_dbm+95)*2;

if(ret < 70)

ret = ret -(15 - ret/5);

```

if(ret < 0)
ret = 0;
else if(ret > 100)
ret = 100;
return ret;
}

```

6.9. AT+WSCAN: Search for APs, displaying up to 50

※ form :

■ query

AT+WSCAN[=ssid]<CR>

+ok=<ap_site><CR><LF><CR><LF>

※ parameter :

■ ap_site: The AP site found.

■ SSID: Search for the specified AP SSID

6.10. AT+WSDNS: Set or query the DNS server address in STA mode static configuration

※ form :

■ query

AT+WSDNS<CR>

+ok=<address><CR><LF><CR><LF>

■ set up

AT+WSDNS =<address><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ Address: The DNS server address in STA mode. Effective immediately.

7. Wi-Fi AP command

7.1. AT+LANN: Set or query the network parameters of the access point (AP). The settings take effect after resetting.

※ form :

■ query

AT+LANN<CR>

+ok=<ipaddress,mask><CR><LF><CR><LF>

■ set up

AT+LANN=< ipaddress,mask><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- ipaddress: The IP address in AP mode.
- Mask: The subnet mask in AP mode.

7.2. AT+WAMAC: AP MAC address parameters for setting and querying modules

※ form :

- query

AT+WSMAC<CR>

+ok=<mac_address><CR><LF><CR><LF>

The AP's MAC address is STA+1.

example :

STA's MAC:98D86323D16E

The AP's MAC address is:98D86323D16F

7.3. AT+WAP: Set or query the Wi-Fi configuration parameters of an AP. The settings take effect after resetting.

※ form :

- query

AT+WAP<CR>

+ok=< wifi_mode,ssid,channel ><CR><LF><CR><LF>

- set up

AT+WAP =<wifi_mode,ssid,channel[,hideSSID]><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- wifi_mode: Wi-Fi mode, including:
11BGN
- SSID: The SSID in AP mode, up to 32 characters.
- channel: Wi-Fi channel selection: AUTO (default CH1) or CH1~CH11. ■

hideSSID: Hide the AP SSID

- 0 or leave blank: Do not hide,
- 1: Hidden

7.4. AT+WKEY: Set or query the encryption parameters of the AP. The settings take effect after resetting.

※ form :

■ query

AT+WKEY<CR>

+ok=<auth,encry,key><CR><LF><CR><LF>

■ set up

AT+WKEY=< auth,encry,key><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ auth: Authentication mode

OPEN

WPA2PSK

■ encry: Encryption algorithm, including

None: Valid when auth=OPEN.

AES: valid when "auth=WPA2PSK". ■

key: password, ASCII code, 8-63 bytes.

7.5. AT+WADHCP: Set or query the DHCP Server status of an access point. The settings take effect after resetting.

※ form :

■ query

AT+WADHCP<CR>

+ok=<status>,<ip1>,<ip2><CR><LF><CR><LF>

■ set up

AT+WADHCP=<status>[,ip1,ip2]<CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ Status: Whether the AP's DHCP server function is enabled:

on: DHCP Server is on.

off: DHCP Server is disabled.

■ ip1: The starting value of the DHCP IP address range

■ ip2: Maximum range of IP addresses assigned by DHCP

7.6. AT+WALK: Query the MAC address of the STA device connected to the AP module

※ form :

- query

AT+WALK<CR>

+ok=<status><CR><LF><CR><LF>

※ parameter :

- Status: The MAC address of the STA device connected to the upper-level AP module.

No Connection: No STA device is connected to the module AP.

7.7. AT+WALKIND: Enables/disables connection status indication in AP mode

※ form :

- query

AT+WALKIND<CR>

+ok=<status><CR><LF><CR><LF>

- set up

AT+WALKIND=<status><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- Status: Connection status indicator in AP mode

On (default): Enables the nLink status indicator. If a STA device is connected to the module AP, nLink outputs low; otherwise, it outputs high.

off: Turn off the nLink status indicator.

7.8. AT+WAPMXSTA: Query/Setup module for STA connections in AP mode

※ form :

- query

AT+WAPMXSTA<CR>

+ok=<num><CR><LF><CR><LF>

- set up

AT+WAPMXSTA=<num><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- num: Number of supported STA in AP mode

1 to 3: Supports up to 1 to 3 STA connections. 3 is the default value, which supports up to 3 STA connections by default.

8. Other Wi-Fi commands

8.1. AT+WFREQ: Set/Query Wi-Fi operating frequency

※ form :

■ query

AT+WFREQ<CR>

+ok=<status><CR><LF><CR><LF>

■ set up

AT+WFREQ=<status><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ Staus: Wi-Fi frequency

2G: Works only on 2.4G

5G: Only works on 5G

2G5G: Operating on both 2.4G and 5G frequency bands

8.2. AT+WMODE: Set or query the WIFI operating mode. The settings take effect after resetting.

※ form :

■ query

AT+WMODE<CR>

+ok=<mode><CR><LF><CR><LF>

■ set up

AT+WMODE=<mode><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ Mode: Wi-Fi working mode.

AP 、 STA 、 APSTA

8.3. AT+ASWD: Set or query the Wi-Fi configuration password for local network search

※ form :

■ query

AT+ASWD<CR>

+ok=<aswd><CR><LF><CR><LF>

■ set up

AT+ASWD =<aswd><CR><LF><CR><LF>

※ parameter :

- aswd: Wi-Fi password (20 characters), default is atnetcmd#.

8.4. AT+DISPS: Set/Query Wi-Fi Power Mode

※ form :

- query

AT+DISPS<CR>

+ok=<mode><CR><LF><CR><LF>

- set up

AT+DISPS=<mode><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- Mode: Disable Power Save parameter setting

Yes: Normal working mode

Auto: Auto mode (default on). After stopping data transmission for time seconds, it enters low-power mode.

No: Low-power mode

8.5. AT+WIFI: Turn Wi-Fi on/off

※ form :

- query

AT+WIFI<CR>

+ok=<status><CR><LF><CR><LF>

- set up

AT+WIFI=<status><CR>

+ok<CR><LF><CR><LF>

※ parameter :

- Staus: Wi-Fi status

UP (Default on when powered on): Turn on Wi-Fi

DOWN: Turn off Wi-Fi. The process takes up to 10 seconds. If the response is +ERR=-5, it means the turn-off failed. This usually indicates the Wi-Fi is already turned off.

Note: To apply new Wi-Fi parameters (e.g., AT+WIFI=DOWN, AT+WMODE=STA, AT+WIFI=UP) without restarting the module, use the Wi-Fi switch command. The module will then operate in STA mode.

8.6. AT+SMARTAPCONFIG: Configure the SmartAPLink networking function for SoftAP mode

※ form :

■ query

AT+SMARTAPCONFIG<CR>

+ok=<status,[ap_prefix,ap_key]><CR><LF><CR><LF>

■ set up

AT+SMARTAPCONFIG=<status,[ap_prefix,ap_key]><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ Status: Enable/Disable SmartAPLink configuration

Enable SmartAPLink functionality. Once enabled, the network can be triggered by the AT+SMARTAPSTART command or a pin reload.

off (default): disable SmartAPLink

■ ap_prefix: AP module hotspot prefix, default hiflying_softap

■ ap_key: AP hotspot password for the module. If left blank, no password is set. Password length ranges from 8 to 20 characters.

8.7. AT+SMARTAPSTART: Initiate the SmartAPLink network configuration mode for SoftAP

※ form :

■ set up

AT+SMARTAPSTART<CR>

+ok<CR><LF><CR><LF>

Note: Resetting will exit this network mode.

9. Webpage instructions

9.1. AT+PLANG: Set/Query Language Mode of Webpage

※ form :

■ query

AT+PLANG<CR>

+ok=<language><CR><LF><CR><LF>

■ set up

AT+PLANG =<language><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ Language: The language mode for web pages. The 1MB Flash version cannot be selected. The 2MB/4MB Flash versions support this command:

CN: Chinese (default)

EN: English

9.2. AT+WEBU: Set or check the login username and password for the web page. The settings take effect after resetting.

※ form :

■ query

AT+WEBU<CR>

+ok=<username,password><CR><LF><CR><LF>

■ set up

AT+WEBU =<username, password><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ username: Username, up to 15 characters, cannot be empty.

■ password: Password, up to 15 characters, cannot be empty.

10. Network clock instruction

10.1. AT+NTPEN: Enable or disable network clock calibration. The setting takes effect after resetting.

num: Calibration interval, default is 30 minutes, increments by 10 minutes, supports 0 to 720, where 0 means no automatic calibration.

※ form :

■ query

AT+NTPEN<CR>

+ok=<status><CR><LF><CR><LF>

AT+NTPEN=tz<CR>

+ok=<timezone><CR><LF><CR><LF>

■ set up

AT+NTPEN=<status[,timezone]><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ Status: Network clock calibration status

on: enable 。

off: close 。

■ Time Zone: Network clock timezone information. The default is 8, with a range of -12 to 12.

10.2. AT+NTPTM: Querying the network clock

※ form :

■ query

AT+NTPTM<CR>

+ok=<time><CR><LF><CR><LF>

AT+NTPTM=F<CR>

+ok=<time><CR><LF><CR><LF>

※ parameter :

■ time: Network clock. Example: 2013-10-9 16:10:42 Wed. If 'Not Available' is displayed, it means the clock calibration function is disabled or the module is not connected to the network.

The AT+NTPTM operates on internal time. During network connection, it performs a NTP server calibration, followed by periodic calibration via AT+NTPRF.

The AT + NTPTM=F command is a real-time calibration, that is, each command sends NTP to the server to get the time.

10.3. AT+NTPSER: Set NTP server

※ form :

■ query

AT+NTPSER<CR>

+ok=<ipaddress><CR><LF><CR><LF>

■ set up

AT+NTPSER=< ipaddress ><CR>

+ok<CR><LF><CR><LF>

※ parameter :

■ ipaddress: Network clock server, default is cn.ntp.org.cn, IP address or domain name, 50 characters or less.

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2. Update History

Manual Version	update content	Update time
V1.0.0	Create documents and complete relevant functional descriptions	20 22 - 02 - 19
V1.0.1	Optimize description information and add WIFI version description	2022-09-10
V1.0.2	Optimize the description information and list the WIFI version as the standard version	2022-10-27
V1.0.3	Optimization information	2022-12-10
V1.0.4	Optimized the description information and added the global version and 5G LAN version options	2023-04-27



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