

USR-C216 AT Commands

File Version: V1.0.0



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Feature

- Support WiFi@2.4 GHz 802.11b/g/n wireless standards
- Support WEP/WPA/WPA2 security mode
- Support AP, STA, AP+STA working mode
- Completely integrated serial-to-wireless TCP/UDP transmission function, multiple serial rate selection
- Local area network search and wireless parameter setting function
- Support TCP/UDP client registration packet mechanism
- Supporting simple Config/ usrlink fast networking configuration
- Support similar RFC2217 automatic baud rate adaptation function
- Supporting simple AT commands
- Support Httpd client function
- 3.3V single power supply
- Selection of built-in antenna and external antenna (antenna pad)
- Ultra-small size: 22.0mm x 13.5mm x 2.7mm, SMT package

1. AT Command Setting

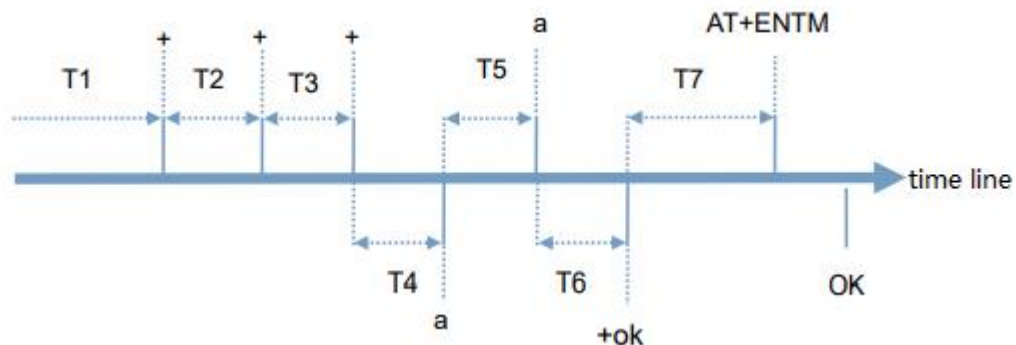
Steps to switch from other modes to command mode:

1. send +++ from serial port to module, when module receive +++, it will return "a";
2. after serial port receive a ,send another "a" to module,module will return"+OK"when reveive,then enter AT command mode.

Users can send"++a ",when module return"+OK",it work at AT command mode.

Illustration:

Send +++ and "a" need finish in time:



Requirement: T1> packing interval

T2,T3<=300ms

T5<=3s

You can switch from command mode to transparent mode when you enter AT+ENTM and "enter key" in command mode.

1.1. Error Table

Error code	Intro
-1	Invalid command format
-2	Invalid command
-3	Invalid operate code
-4	Invalid parameters
-5	Operation not permitted

1.2. AT Commands

Command	Function
E	Open/close instruction recall
WKMOD	Query / setup work mode
ENTM	Exit command mode
MID	Query module ID
RELD	Restore factory settings

Z	Reboot module
VER	Query software version
CFGTF	Copy user configuration parameters to factory configuration settings
UART	Query/setup the parameter of serial port
UARTTE	Set/query the interval of every two bytes
NETP	Query/setup the parameter of net protocol
TCPTO	Set/query timeout of socket A
TCPLK	Query TCP connection status
TCPDIS	Set/query socket A auto-connection or not, or disconnect
SOCKB	Set/query socket B parameters
TCPTOB	Set/query timeout of socket B
TCPLKB	Query socket B status
TCPDISB	Set/query socket B auto-connection or not, or disconnect
WSKEY	Set / query encryption parameters in WIFI STA mode
WSSSID	Set / query AP SSID in WIFI STA mode
WANN	Setting / querying WAN settings is valid only in STA mode.
WSMAC	Query MAC of STA
WSLK	Query wireless connection status of STA
WSLQ	Query wireless signal intensity of STA
WSCAN	Search AP
WSDNS	Query/set DNS server address in static configure when C216 work as STA
LANN	Setting / querying LAN settings is valid only in AP mode.
WAP	Setting / querying parameters in WIFI AP mode
WAKEY	Set / query encryption parameters in WIFI AP mode
WALK	Query the MAC of STA which connect to C216
TMODE	Set / query data transfer mode (transparent transport mode or protocol mode)
HTPSV	Set / query server address and IP (HTTPD Client)
HTPTP	Set / query HTTP request type
HTPHD	Set / query HTTP header (HTTPD Client)
HTPURL	Set / query URL (HTTPD Client)
HTPFT	Filter the header or not
HTPTO	Query/set http request timeout time
PLANG	Set/query the language of webpage
WEBU	Set / query landing parameters for WEB pages
DTDDIS	Enable/disable D2D function
DTDID	Set/query D2D ID
CLOUDEN	Enable/disable USR-Cloud
CLOUDID	Query/set cloud ID
CLOUDPW	Query/set cloud password
REGDIS	Enable/disable customize register packet
REGUSR	Query/set the content of register package

REGENA	Query/set register packet
DTTY	Query/set register packet mechanism
PING	Network ping command
WRMID	Set the ID of C216
SEARCH	Set/query C216 search port
ASWD	Set/query C216 search key
USERVER	Query custom version number
RPTMAC	Query report MAC function open or not
WRRPTMAC	Set the report MAC function
NTPEN	Enable/disable NTP network clock
NTPTM	Query the time of network clock
NTPSER	Query/set NTP server and time zone
NTPRF	Query/set interval of NTP calibration time
WAPM	Set display the MAC suffix or not
HEARTEN	Query/set enable/disable heartbeat packet function
HEARTTP	Query/set the send type of heartbeat packet
HEARTDT	Query/set heartbeat packet data
HEARTTM	Query/set the interval of sending heartbeat packet
MDCH	Query/set Wi-Fi exception handling status

1.2.1.AT+E

Function: Setting/query module AT command echo settings

Format:

Query

AT+E <CR>

+ OK=<on/off><CR><LF><CR><LF>

Set

AT+E=<on/off><CR>

+ OK<CR><LF><CR><LF>

Parameters:

On: Open the echo and echo the command entered under the AT command.

off: when work in AT command mode, the input command does not echo.

1.2.2.AT+WMODE

Function: Set/query WIFI operation mode (AP/STA/APSTA);

Format:

Query

AT+WMODE<CR>

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

Set

AT+WMODE=<mode><CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

Mode: WI-FI working mode

AP

STA

APSTA

1.2.3.AT+ENTM

Function: quit AT command mode;

Format:

AT+ENTM<CR>

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

1.2.4.AT+MID

Function: query the ID of module

Format:

AT+MID<CR>

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

Parameters;

Module ID: C216

Note: this parameters can be set by AT+WRMID

1.2.5.AT+RELD

Function: restore to factory settings

Format:

AT+RELD<CR>

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

1.2.6.AT+Z

Function: reboot the module

Format:

AT+Z<CR>

1.2.7.AT+VER

Function: query firmware version;

Format:

AT+VER<CR>

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

Parameters:

ver : Firmware Version

1.2.8. AT+CFGTF

Function: Copy user configuration parameters to factory configuration settings;

Format:

Query

AT+CFGTF<CR>

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

Parameters:

Status: Return to operation status;

SAVED: Successful setup

NON-SAVED: Setup failed

1.2.9. AT+UART

Function: Setting /query serial port operation

Format:

Query:

AT+UART<CR>

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

Set:

AT+UART=<baudrate, data_bits, stop_bit, parity, flow ctrl><CR>

+OK <CR> <LF> <CR> <LF>

Parameters:

Baudrate: baud rate

1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, 115200, 128000,
230400, 460800 bit/s

Data_bits: Data bit

7,8

Stop_bits: stop bit

1,2

Parity: check bit

NONE

EVEN

ODD

MARK

SPACE

Floctrl: Hardware Flow Control (CTSRTS)

NFC: No Hardware Flow Control

1.2.10. AT+UARTTE

Function: Set/query packing interval

Format:

Query

AT+UARTTE<CR>

+ OK=<num><CR><LF><CR><LF>

Set up

AT+UARTTE=<num><CR>

+ OK<CR><LF><CR><LF>

Parameters:

Num: 20-250

Note: This parameter will change automatically when setting baud rate. If you need to change the packing interval, please set baud rate first and then change it.

When the baud rate <= 1200, num = 250ms;

When baud rate >= 20000, num = 20ms;

When 1200 < baud rate < 20000, num = 265 - baud rate * 0.01223, num takes integer.

1.2.11. AT+NETP

Function: Setting/query network protocol parameters

Format:

Query

AT+NETP<CR>

+ OK = < protocol, CS, port, IP > < CR > < LF > < CR > < LF >

Set

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

+ OK < CR > < LF > < CR > < LF >

Parameters:

Protocol: Protocol type, including

TCP

UDP

CS: Network Model

SERVER: Server

CLIENT: Client

Port: Protocol port, decimal number, less than 65535

IP: When the module is set to "CLIENT", the IP address of the server

If set to UDP, SERVER mode of work, with IP address and port saving function, the module automatically saves the latest received UDP packet IP address and port. When sending data, it sends the saved IP address and port to the module. When the module initializes, it defaults to send data to the IP address and port set by this instruction.

If set to UDP, CLIENT working mode, no memory function.

1.2.12. AT+TCPTO

Function: Set/query timeout

Format:

Query

AT+TCPTO<CR>

+ OK = < time > < CR > < LF > < CR > < LF >

Setting up

AT+TCPTO=<time><CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

Time: 60-600 seconds

0 means that the function is turned off (by default)

1.2.13. AT+TCPLK

Function: Query whether the TCP connection has been established;

Format:

AT+TCPLK<CR>

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

Parameter

Sta.: Whether to establish TCP links

On: TCP Connected

Off: TCP not connected

1.2.14. AT+TCPDIS

Function: Establish/disconnect TCP links;

Format:

Query

AT+TCPDIS<CR>

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

Set up

AT+TCPDIS=<on/off><CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

sta: Returns whether TCP Client is a linkable state, such as

On, denoted as a linkable state

Off, denoted as an unreachable state

1.2.15. AT+SOCKB

Function: Setting/query SOCKB network protocol parameters

Format:

Query

AT+SOCKB<CR>

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

Setting up

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

+ OK < CR > < LF > < CR > < LF >

Parameters:

Protocol: Protocol type, including

TCP, representing only TCP Client

UDP, representing UDP Client

UDPS, for UDP Server

Port:: Protocol port, decimal number, so small 65535

IP: Target IP Address, Support Domain Name

Note: users can disable socket B by AT+SOCB=NONE

1.2.16. AT+TCPTOB

Function: Set/query timeout

Format:

Query

AT+TCPTOB<CR>

+ OK = < time > < CR > < LF > < CR > < LF >

Setting up

AT+TCPTOB=<time><CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

Time: 60-600 seconds

0 means that the function is turned off (by default)

1.2.17. AT+TCPDISB

Function: Establish/disconnect TCP_B connection

Format:

Query

AT+TCPDISB<CR>

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

Setting up

AT+TCPDISB=<on/off><CR>

+ OK < CR > < LF > < CR > < LF >

1.2.18. AT+TCPLKB

Function: Query whether TCP_B links have been established;

Format:

AT+TCPLKB<CR>

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

Parameter

Sta.: Whether to establish TCP_B links

On: TCP connected

Off: TCP disconnected

1.2.19. AT+WSTA

Function: Set/query SSID and password of associated AP;

Format:

Query

AT+WSTA<CR>

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

Setting up

AT + WSSSID = < ssid, password > < CR >

+ OK < CR > < LF > < CR > < LF >

Parameters:

ssid: SSID of AP (up to 32 bytes);

Password: AP's password, up to 64 bytes, space-time password here is "NONE"

1.2.20. AT+WSSSID

Function: Set/query SSID of associated AP;

Format:

Query

AT+WSSSID<CR>

+ OK = < ap's SSID > < CR > < LF > < CR > < LF >

Setting up

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

+ OK < CR > < LF > < CR > < LF >

Parameters:

Ap's ssid: AP's SSID (up to 32 bytes)

1.2.21. AT+WSKEY

Function: Set/query the encryption parameters of STA;

Format:

Query

AT+WSKEY<CR>

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

Setting up

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

+ OK < CR > < LF > < CR > < LF >

Parameters:

Auth: Authentication mode, including

OPEN

WPAPSK

WPA2PSK

SHARED

Entry: Encryption algorithms, including

NONE: "auth = OPEN" is valid

TKIP: "auth = WPAPSK or WPA2PSK" is valid

AES: "auth = WPAPSK or WPA2PSK" is valid

WEP-A: "auth = SHARED" is valid

WEP-H: "auth = SHARED" is valid

Key:

Auh = OPEN: NONE

Auh = WPA/WPA2: ASCII code, 8-64 bits.

Entry = WEP-A: 5 or 13 bits ASCII code

Entry = WEP-H: 10 or 26-bit HEX strings

1.2.22. AT+WANN

Function: Setting/querying network parameters of STA;

Format:

Query

AT+WANN<CR>

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

Set

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

+ OK < CR > < LF > < CR > < LF >

Parameters:

Mode: STA's Network IP Mode

Static: Static IP

DHCP: Dynamic IP

Address: IP address of STA;

Mask: Subnet mask of STA;

Gateway: STA's gateway address

1.2.23. AT+WSMAC

Function: Query the MAC address parameters of STA;

Format:

Query

AT+WSMAC<CR>

+ OK = < mac_address > < CR > < LF > < CR > < LF >

Parameters:

Mac_address: MAC address of STA; e.g. D8B0CFFF1234

1.2.24. AT+WSLK

Function: Query STA's wireless Link status;

Format:

Query

AT+ WSLK<CR>

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

1.2.25. AT+WSLQ

Function: Query the radio signal strength of STA;

Format:

Query

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

1.2.26. AT+WSCAN

Function: Search AP;

Format:

query

AT+WSCAN<CR>

+ok=<LF><CR>Ch,SSID,BSSID,Security,Indicator<LF><CR>ap_site_1<LF><CR>ap_site_2<LF><CR>ap_site_3<LF><CR> <ap_site_N>< CR > < LF > < CR > < LF >

Parameters:

Ap_site_N: Searched AP site; format: <Ch, SSID, BSSID, Security, Indicator>.

Ch: The channel number of the WiFi network.

SSID: SSID of the router.

BSSID: The MAC address of a router.

Security: Router security mode.

Indicator: Signal strength

1.2.27. AT+WSDNS

Function: Set / query the address of DNS server under static configuration of STA mode;

Format:

Query by query

AT+WSDNS<CR>

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

Setting up

AT + WSDNS = < address > < CR >

+ OK < CR > < LF > < CR > < LF >

1.2.28. AT+LANN

Function: Set/query AP network parameters;

Format:

Query

AT+LANN<CR>

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

Set

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

+ OK < CR > < LF > < CR > < LF >

Parameters:

IP address: IP address in AP mode;

Mask: Subnet mask in AP mode

1.2.29. AT+WAP

Function: Set/query the Wi-Fi configuration parameters of AP;

Format:

Query

AT+WAP<CR>

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

Setting up

AT + WAP = wifi_mode, ssid, channel > < CR >

+ OK < CR > < LF > < CR > < LF >

Parameters:

Wifi_mode: Wi-Fi mode, including:

11B

11BG

11BGN (default)

Ssid: SSID in AP mode;

Channel: Wi-Fi channel selection: AUTO or CH1-CH11; (currently default CH6)

1.2.30. AT+WKEY

Function: Set/query the encryption parameters of AP;

Format:

Query

AT+WKEY<CR>

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

Set

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

+ OK < CR > < LF > < CR > < LF >

Parameters:

Auth: Authentication mode, including

OPEN

WPA2PSK

Entry: Encryption algorithms, including

NONE: "auth = OPEN" is valid;

AES: "auth = WPA2PSK" is effective;

Key: Password, ASCII code, less than 64 bits, greater than 8 bits

1.2.31. AT+WALK

Function: Query the MAC address of STA device connected to module AP.

Format:

Query by query

AT+WALK<CR>

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

Parameters:

Status
no connection

1.2.32. AT+TMODE

Function: Query Setting Working Mode

Format:

Query by query

AT+TMODE<CR>

+ OK = < status > < CR > < LF > < CR > < LF >

Setting up

AT+TMODE=<status>CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

throughput: transparent transmission mode

htpc: HTTPD Client mode

1.2.33. AT+HTPSV

Function: Query Setting HTTPD Server Address and Port

Format:

Query by query

AT+HTPSV<CR>

<CR><LF>+OK=<address,port><CR><LF>

Setting up

AT+HTPSV=<address, port><CR>

+ok<CR><LF>

Parameters:

Address: Server address, example test. usr. cn

Port: Server port, example 80

1.2.34. AT+HTPTP

Function: Query/Set HTTPD Request Mode

Format:

Query

AT+HTPTP<CR>

<CR><LF>+OK=<type><CR><LF><CR><LF>

Setting up

AT + HTPTP = < type > < CR >

+ OK < CR > < LF > < CR > < LF >

Parameters:

Type:

GET

POST

1.2.35. AT+HTPHD

Function: Query / Set HTTPD Header Information

Format:

Query

AT+HTPHD<CR>

<CR><LF>+OK=<head><CR><LF>

Setting up

AT + HTPHD = < head > < CR >

+ OK < CR > < LF > < CR > < LF >

Note: header must end with [0D][0A]

1.2.36. AT+HTPURL

Function: query/set HTTPD request URL

Format:

Query

AT+HTPURL<CR>

+ ok=<url>< CR > < LF > < CR > < LF >

Set

AT+HTPURL=<url><CR>

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

Parameters:

Url: HTTP requests url, such as: / 1. php?

1.2.37. AT+HTPFT

Function: Query/set whether to filter the header information returned by HTTPD.

Format:

Query

AT+HTPFT<CR>

<CR><LF>+OK=<sta>< CR > < LF > < CR > < LF >

Setting up

AT+HTPFT=<sta><CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

Sta:

On: Open

Off: Close

1.2.38. AT+HTPTO

Function: Set/query HTTPD request timeout

Format:

Query by query

AT+HTPTO<CR>
+ OK = < time > < CR > < LF > < CR > < LF >
Setting up
AT+HTPTO=<time><CR>
+ OK < CR > < LF > < CR > < LF >
Parameters:
Time:
1-30 seconds (default 10)

1.2.39. AT+PLANG

Function: Set/query the language mode of web pages;
Format:
Query
AT+PLANG<CR>
+ ok=<language> < CR > < LF > < CR > < LF >
Setting up
AT+PLANG=<language><CR>
+ OK < CR > < LF > < CR > < LF >
Parameters:
Language:
CN Chinese
EN English

1.2.40. AT+WEBU

Function: Query/set user name and password of web page.
Format:
Query
AT+WEBU<CR>
+ OK = < user, password > < CR > < LF > < CR > < LF >
Setting up
AT + WEBU = user, password > < CR >
+ OK < CR > < LF > < CR > < LF >
Parameters:
User: User name (less than 16 bits)
Password: Password (less than 16 bits)

1.2.41. AT+DTDDIS

Function: Open/close the function of sending D2D registration package
Format:
Query
AT+DTDDIS<CR>
+ ok=<status>< CR > < LF > < CR > < LF >

Setting up

AT+DTDDIS=<status>CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

Status: Status

On: Enable

Off: Close

1.2.42. AT+DTDID

Function: Query / Set the Registration ID of D2D

Format:

Query

AT+DTDID<CR>

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

Set

AT+DTDID=<id>CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

ID: Registration ID, range: 1-65535

1.2.43. AT+CLOUDEN

Function: Turn on/off theUSR-cloud

Format:

Query by query

AT+CLOUDEN<CR>

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

Setting up

AT+CLOUDEN=<sta><CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

sta:

ON: Open

OFF: Close

1.2.44. AT+CLOUDID

Function: Query / set ID of USR-cloud

Format:

Query

AT+CLOUDID<CR>

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

Setting up

AT+CLOUDID=<id>CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

ID: Transport cloud ID, format: 32 bits

1.2.45. AT+CLOUDPW

Function: Query/set password for USR-Cloud

Format:

Query by query

AT+CLOUDPW<CR>

+ ok=<pw> < CR > < LF > < CR > < LF >

Setting up

AT+CLOUDPW=<pw>CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

pw: password, less than 8 bits

1.2.46. AT+REGDIS

Function: Turn on/off the custom registry package function

Format:

Query

AT+REGDIS<CR>

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

Setting up

AT+REGDIS=<sta>CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

Sta:

On

Off

1.2.47. AT+REGUSR

Function: Query / set the content of custom registry pack

Format:

Query

AT+REGUSR<CR>

+ OK = < reg > < CR > < LF > < CR > < LF >

Setting up

AT+REGUSR=<reg>CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

reg: Custom registry package content, less than 32 bits in length

1.2.48. AT+REGENA

Function: Setting up query registration package mechanism

Format:

Query

AT+REGENA<CR>

+ OK = < status, method > < CR > < LF > < CR > < LF >

Setting up

AT+REGENA=<status, method>CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

Status:

ID: Enables ID to register packet mechanism, registered packet is 2 byte ID + 2 byte ID inverse code

MAC: Enables MAC to register packets with 6 bytes of MAC

USR: User-defined registration package (less than 32 bytes)

CLOUD: USR- Cloud (FIRST only supported)

OFF: Banned Energy Registry Packet Mechanism

Method

EVERY adds registration packages before each packet of data

FIRST only connects to the server for the first time to send the registration package (USR- cloud only support the first)

Note: When the packet registration mechanism is disabled, send AT+REGENA=OFF<CR><LF>

1.2.49. AT+DTTY

Function: Query/set up registration mechanism

Format:

Query

AT+DTTY<CR>

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

Set

AT+DTTY=<sta>CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

Sta:

FIRST:

EVERY

1.2.50. AT+PING

Function: Network "PING" instruction.

Format:

Setting up

AT+PING=<IP_address>CR>

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

Return value:

Sta
Success
Timeout
Unknown host

1.2.51. AT+WRMID

Function: Setting Module ID

Format:

Setting up

```
AT+WRMID=<wrmid>< CR > < LF > < CR > < LF >  
+ OK < CR > < LF > < CR > < LF >
```

Parameters:

wrmid: Set the ID of the module (within 20 characters)

1.2.52. AT+SEARCH

Function: Setting/query module search port

Format:

Query

```
AT+SEARCH<CR>  
+ ok=<port> < CR > < LF > < CR > < LF >
```

Setting up

```
AT+ASWD=<port> < CR > < LF > < CR > < LF >
```

Parameters:

Port: Module Search Ports (1-65535)

1.2.53. AT+ASWD

Function: Setting/query module search password

Format:

Query

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

Setting up

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

Parameters:

aswd: Module search password (within 20 characters)

1.2.54. AT+USERVER

Function: Query customer version number and compile time

Format:

```
AT+USERVER<CR>  
+ ok=<user_version, generated_time><CR><LF><CR><LF>
```

Parameters:

User_version: Customer Version Number

V1.1

Gene_time: Compile time

2014-08-15 10:15

1.2.55. AT+RPTMAC

Function: Query whether to report MAC

Format:

AT+RPTMAC<CR>

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

Parameters:

Status: Status

ON

OFF

1.2.56. AT+WRRPTMAC

Function: set whether to report MAC

Format:

AT+WRRPTMAC<CR>

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

Parameters:

Status: Status

ON

OFF

1.2.57. AT+NTPEN

Function: Query/ set whether enable NTP network clock function

Format:

Query

AT+NTPEN<CR>

+OK = < status > < CR > < LF > < CR > < LF >

Setting up

AT+NTPEN=<status>CR>

+OK < CR > < LF > < CR > < LF >

Parameters:

ON

OFF

1.2.58. NTPTM

Function: Query the time of network clock

Format:

Query

AT+NTPTM<CR>
+ ok=<TM>< CR > < LF > < CR > < LF >

1.2.59. AT+NTPSER

Function: Query /Set NTP server and time zone

Format:

Query

AT+NTPSER<CR>

+ OK < ip, tmzone > < CR > < LF > < CR > < LF >

Setting up

AT+NTPSER=<ip,tmzone><CR>

+ OK < CR > < LF > < CR > < LF >

1.2.60. AT+NTPRF

Function: Query /set the interval of calibration time in minutes

Format:

Query

AT+NTPRF<CR>

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

Setting up

AT+NTPRF=<status><CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

Status: Range 10-720, 0 is to turn off automatic calibration time

1.2.61. AT+WAPM

Function: Set whether the SSID of AP displays the MAC suffix

Format:

Setting up

AT+WAPM=<ssid,len>CR>

+ OK < CR > < LF > < CR > < LF >

Parameters:

SID: SID name prefix in AP mode. Note that the sum of the length of SSID and Len should not exceed 32 bytes.

Len: 0 means no MAC suffix, 6 means 6 bits after MAC address, and 12 means complete mac

1.2.62. AT+HEARTEN

Function: Query settings to turn on heartbeat packet

Format:

Query

AT+HEARTEN<CR>

+ OK = < status > < CR > < LF > < CR > < LF >

Set

AT+HEARTEN=<status>CR>
+ OK < CR > < LF > < CR > < LF >
Parameter: status
ON
OFF

1.2.63. AT+HEARTTP

Function: Query/Set heartbeat packet sending mode
Format:
Query
AT+HEARTTP<CR>
+ ok=<type>< CR > < LF > < CR > < LF >
Set
AT+HEARTTP=<type>CR>
+ OK < CR > < LF > < CR > < LF >
Parameter: type
NET: Send Heart Packet to Server
COM: Send Heart Packet to Serial Port

1.2.64. AT+HEARTDT

Function: Query /Set heart packet data
Format:
Query
AT+HEARTDT<CR>
+ ok=<data>< CR > < LF > < CR > < LF >
Set
AT+HEARTDT=<data>CR>
+ OK < CR > < LF > < CR > < LF >
Parameter: data
Data: Heartbeat Packet Data, Hexadecimal String, Maximum Length 80 Bytes

1.2.65. AT+HEARTTM

Function: Query/Set heart packet delivery interval
Format:
Query
AT+HEARTTM<CR>
+ OK = < time > < CR > < LF > < CR > < LF >
Setting up
AT+HEARTTM=<time>CR>
+ OK < CR > < LF > < CR > < LF >
Parameter: time
By default 30, you can set 1-6000 seconds

1.2.66. AT+MDCH

Function: Query /Set Wi-Fi exception handling status

Format:

Query

AT+MDCH<CR>

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

Set

AT+MDCH=<sta><CR>

+OK <CR><LF><CR><LF>

Parameter: sta

OFF: Turn off exception handling

ON: Open Wi-Fi mode switching function and automatically switch to APSTA mode when connection fails in STA mode.

In APSTA mode:

(1) APSTA mode set manually by user, module does not perform any operation.

(2) APSTA mode which is automatically switched by STA mode, if the connection router succeeds, the module will automatically switch back to STA mode.

2-240: In minutes, set the Wi-Fi anomaly detection interval (default 10 minutes), and reinitialize Wi-Fi when the anomaly occurs.

2. Contact Us

Company: Jinan USR IOT Technology Limited

Address: Floor 11, Building 1, No. 1166 Xinluo Street, Gaoxin District, Jinan, Shandong, 250101, China

Web: www.usriot.com

Support: h.usriot.com

Email: sales@usr.cn

Tel: 86-531-88826739/86-531-55507297

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4. Update History

Edition	Describe
V1.0.0	2019-3-15 establish