

USR-G800V2 AT Commands

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1 Quick Start

This chapter is a quick introduction. It is recommended that users read this chapter and follow the instructions to operate it again. Users will have a systematic understanding of this 4G router product.

If user has any question, please submit it back to customer center: <http://h.usriot.com>

2 Product Overview

2.1 Product Introduction

USR-G800V2 support wired WAN port, LAN port, WLAN network, and 4G network interface, support serial port to network data transmission function.

2.2 Feature

- Support 4 wired LAN ports and 1 wired WAN port
- Support 1 WLAN
- Support Mini-PCIE interface of 4G communication module
- Support LED status monitoring (display power supply, Work, WAN, LAN, WIFI, 4G network mode and signal strength status)
- Supports transparent data transfer from RS232 to the network
- Support SSH, Telnet, Web multi-platform management configuration
- Support one-click restore factory settings
- Wired network ports all support 10/100mbps
- Support for multiple VPN Client (the PPTP, L2TP/GRE/OPENVPN/SSTP), and support the VPN encryption.
- Support APN automatic network checking, 2/3/4g standard switching, SIM information display, support APN dedicated network card
- Support wired wireless multi-network simultaneous online, multi-network intelligent switching backup function
- Support mandatory portal (WIFIDOG), this feature needs to be customized according to customer requirements
- Support dynamic domain name (DDNS), static routing, PPPOE, DHCP, static IP function.
- Support firewall, NAT, DMZ host, access control black and white list, IP speed limit, MAC speed limit
- Support QOS, traffic service, can limit speed according to the interface
- NTP support, built-in RTC
- Support external hardware watchdog design to ensure system stability

2.3 Basic Parameters

Operation band				
Network type		-E	-AU	-A
4G	FDD-LTE	1/3/5/7/8/20	1/2/3/4/5/6/7/8/28	1/3
	TDD-LTE	38/39/40/41	40	38/39/40/41
3G	WCDMA/HSPA/UMTS	1/8	1/2/5/8	1/8
2G	GPRS/GSM/EDGE	3/8	2/3/5/8	3/8

Item	Info	
Product	USR-G800V2	
Ethernet	WAN	WAN*1
	LAN	LAN*4
	Rate	10/100Mbps, Auto MDI/MDIX
WIFI	Wifi	Support 802.11b/g/n
	Antenna	Wifi antenna
	Distance	150m (open field)
SIM card	SIM/USIM card	3V/1.8V SIM card
Antenna	antenna	Full frequency chuck antenna
Button	Reload	Recovery to factory setting
Status light	Status light	Power, WIFI, signal strength, WAN, LAN
Serial port	RS232	*1
	Function	Transparent transmission
Temperature	Work temperature	-20° C~+70° C
	Storage temperature	-40° C~+125° C
Humidity	Work humidity	5%~95%
	Storage humidity	1%~95%
Power	Power	DC 9~36V
	Current	Under DC12V power supply, average 170mA, maximum 289mA

Power consumption parameters

Work style	Voltage	Average current	Max current
LAN(*4)+WAN transmission data (4G normal)	DC 12V	338mA	424mA
LAN(*1)+WAN transmission data (4G normal)		286mA	362mA
LAN(*4)+WAN transmission data (no 4G, WLAN normal)		268mA	314mA
WAN transmission data (WALN normal)		235mA	303mA

3 AT commands

Num	Command	Function
Version		
1	AT+VER	Query firmware version
2	AT+MAC	Query MAC
3	AT+ICCID	Query ICCID
4	AT+IMEI	Query IMEI
4G		
5	AT+SYSINFO	Query device network information
6	AT+APN	Query/set APN
7	AT+CSQ	Query signal strength
8	AT+TRAFFIC	Query traffic information
System		
9	AT+UPTIME	Query running time
10	AT+WWAN	Query IP of device
11	AT+LANN	Query/set LAN IP(effect when G800V2 work as router)
12	AT+WEBU	Query/set account and password of webpage
13	AT+PLANG	Query/set the default language of webpage
14	AT+RELD	Restore to factory setting
15	AT+Z	Reboot. Note: return +ok
16	AT+DHCPEN	Enable/disable DHCP server
Transparent		
17	AT+SOCKALK	Query connect status
18	AT+SOCK	Query/set format of network protocol parameters
19	AT+UART	Query/set serial port parameters
20	AT+REGEN	Query/set transparent register package
21	AT+HTBT	Query/set transparent heartbeat package
System Shell Command		
22	AT+LINUXCMP	Execute system shell command

3.1 AT+VER

Function: Firmware version of query module

Format:

```
Query: AT+VER<CR>
<CR><LF>+VER:<ver><CR><LF>
```

Parameters:

ver: Firmware version of query module, no space after colon, the same as below

The general version is AA.BB.CC; AA stands for large version, BB stands for small version, CC stands for hardware version C.C.

Customized version: AA.BB.CC.DD-ID; DD represents the customer's version, ID represents the customer's

ID number

e.g.

Send: AT + VER

Return: +VER: V1.0.9

3.2 AT+MAC

Function: Query Module MAC

Format:

Query

AT+MAC<CR>

<CR><LF>+MAC=<mac><CR><LF>

Parameters:

Mac: Module MAC (e.g. 01020304050A)

e.g.

Send: AT + MAC

Return: +MAC: D8B04CD01234

3.3 AT+ICCID

Function: Inquire ICCID code of equipment.

Format:

Query:

AT+ICCID{CR}

{CR} {LF} + ICCID: code {CR} {LF} {CR} {LF}

Parameters:

Code: ICCID code.

e.g.

Send: AT + ICCID

Return: +ICCID: 898600161515AA709917

3.4 AT+IMEI

Function: Inquiry device IMEI code.

Format:

Query:

AT+IMEI{CR} or AT+IMEI? {CR}

{CR} {LF} + IMEI: code {CR} {LF} {CR} {LF} {LF} OK {CR} {LF}

Parameters:

Code: IMEI code.

Example

Send: AT + IMEI

Return: +IMEI: 868323023838378

3.5 AT+SYSINFO

Function: Inquiry device network information

Format:

Query:

```
AT+SYSINFO{CR}
{CR} {LF} + SYSINFO: operator, mode {CR} {LF} {CR} {LF}
```

Parameters:

Operator:

Mode: 2G mode

3G mode

4G mode

Example

Send: AT + SYSINFO

Return: +SYSINFO: CHINA-MOBILE, 4G mode

3.6 AT+APN

Function: Query / Set APN code.

Format:

Query:

```
AT+APN{CR}
{CR} {LF} + APN: code, user_name, password {CR} {LF} {CR} {LF} OK {CR} {LF}
```

Set up:

```
AT + APN = code, user_name, password {CR}
{CR} {LF} OK {CR} {LF}
```

Parameters:

Code:APN

User_name: User name

Password: password

Example:

Send: AT + APN

Return: +APN:3gnet

3.7 AT+CSQ

Function: Query the current signal strength information of the device.

Format:

```
AT+CSQ{CR}
{CR} {LF} + CSQ: RSSI < CR > < LF >
```

Example

Send: AT + CSQ

Return: +CSQ:31

Note: Signal quality should be differentiated according to the current 2\3\4G network format.

3.8 AT+TRAFFIC

Function: Query traffic information

Format

```
AT+TRAFFIC<CR>
```

```
<CR><LF>+TRAFFIC:<dev_down, dev_up, pro_time, at_time>, <CR><LF>
```

Example

Send: AT+TRAFFIC

Return: +TRAFFIC: 111000000B, 2000000B, 1486379553, 1486380161

3.9 AT+UPTIME

Function: query running time

Format

```
AT+ UPTIME<CR>
```

```
<CR><LF>+UPTIME:<seconds,time><CR><LF>
```

Parameters:

Seconds: the total number of seconds the system runs

Time: Days, hours and minutes of system operation

Example:

Send: AT + UPTIME

Return: +UPTIME: 2096, 34

3.10 AT+WANN

Function: Query the WAN port IP (DHCP/STATIC) acquired by query module

Format:

```
AT+WANN<CR>
```

```
<CR><LF>+WANN=<mode,address,mask,gateway><CR><LF>
```

Parameters:

Mode: Network IP mode.

Static: static IP

DHCP: Dynamic IP (address, mask, gateway parameter omitted)

Address: IP address.

Mask: Subnet mask.

Gateway: gateway address.

Example

Send: AT + WWAN

Return: +WANN: DHCP, 10.1.179.202, 255.255.255.252, 10.1.179.201

3.11 AT+LANN

Function: Query/setting LAN gateway, mask

Format:

```
AT+LANN<CR>
<CR>LF>+LANN:ip,netmask<CR>LF>
```

Example:

Send: AT + LANN

Return: +LANN: 192.168.1.1, 255.255.255.0

Set up:

```
AT+LANN=ip, netmask<CR>
<CR>LF>LANN:OK<CR>LF>
```

Example

Send: AT + LANN = 192.168.2.1, 255.255.255.0

Return: +LANN: OK

3.12 AT+WEBU

Function: Query/Set Query Login Password

Query:

```
AT+RELD<CR>
<CR>LF>WEBU:username,passwd<CR>LF>
```

Example:

Send: AT + WEBU

Return: +WEBU:OK

Set up:

```
AT + WEBU = username, passwd < CR >
<CR>LF>WEBU:ok<CR>LF>
```

3.13 AT+PLANG

Function: Set default language

Format:

```
AT + PLANG = LANGUAGE < CR >
<CR>LF>PLANG:ENGLISH<CR>LF>
```

Example:

Send: AT + PLANG = EN

Return: +PLANG:ok

Parameters:

```
LANGUAGE:
EN--English
ZH_CN--Chinese
```

3.14 AT+RELD

Function: Reply to default settings

Format:

```
AT+RELD<CR>
<CR>LF>RELD:ok<CR>LF>
```

Example:

Send: AT + RELD

Return: +RELD: OK

3.15 AT+Z

Function: Restart

Format:

```
AT+Z<CR>
<CR>LF>REBOOT:OK<CR>LF>
```

Example:

Send: AT + Z = 0

Return: +Z:OK

3.16 AT+DHCPEN

Function: Open and close DHCP server

Format:

```
AT+DHCPEN=SWITCH<CR>
<CR>LF>DHCPEN:ok<CR>LF>
```

Example:

Send: AT + DHCPEN = ON

Return: +DHCPEN:ON

Parameter:

Status: ON, OFF

3.17 AT+SOCKALK

Function: Query whether socket A has established connection.

Format:

```
AT+SOCKALK{CR}
{CR} {LF} + SOCKALK: status {CR} {LF}
```

Parameters:

Status: socket A connection status, including:

ON: Connected

OFF: Unconnected

Example:

Query whether a socketA connection is established

Send: AT + SOCKALK

Return: +SOCKALK:ON

3.18 AT+SOCK

Function: Query/setting parameters of network protocol for data transmission

Query:

AT+SOCK<CR>

< CR > < LF > + SOCK: protocol, ip, Port < CR > < LF >

Example:

Send: AT + SOCK

Return: +SOCK: TCP Server, 192.168.1.110, 3001

Set up

AT + SOCK = protocol, ip, Port < CR >

<CR>LF>SOCK:OK<CR>LF>

Example:

Send: AT + SOCK = TCP Server, 192.168.1.110, 3001

Return: +SOCK:OK

Parameters:

Protocol: Protocol types,

Including:

TCP Server

TCP client

UDP server

UDP client

IP: the IP address of a remote server or client

Port: Protocol port, remote port number when module is Client

3.19 AT+UART

Function: Setting/query UART interface parameters

Format:

Query:

AT+UART<CR>

<CR>LF>+UART:<baudrate,data_bits,stop_bit,parity<CR>LF>

Example:

Send: AT + UART

Return: +UART: 115200, 8, 1

Set up:

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

<CR>LF>REGEN:OK<CR>LF>

Example:

Send: AT + UART

Return: +UART:OK

Parameters:

Baudrate: baud rate

4800, 9600, 19200, 38400, 57600, 115200 (optional)

Data_bits: Data bits 5, 6, 7, 8

Stop_bits: stop bits 1, 2

Parity: test point

NONE

EVEN

3.20 AT+REGEN

Function: Query Setting Pass-through Registration Packet Mechanism

Query:

```
AT+REGEN<CR>
```

```
<CR>LF>+REGEN:<status,mode,data type,data>CR>LF>
```

Example:

Send: AT + REGEN

Return: + REGEN: on, start packet, 89860315745311962568

Set up

```
AT + REGEN = status, mode, data type, data < CR >
```

```
<CR>LF>REGEN:OK<CR>LF>
```

Example:

Send: AT + REGEN = OFF

Return: + REGEN: OK

Parameter:

Status: ON, off

Mode:

- Start packet--sends a registration package when it establishes a connection with the server
- Every package--sends registered packets before each packet
- Support all--supports these two ways

Data type:

- ICCID registration package data is ICCID code
- IMEI registration package data is IMEI code
- User-defined--user-defined packet

Data: This is valid when data type selects user-defined data packets. The data is hexadecimal and the length of the data is 100 bytes.

3.21 AT+HTBT

Function: Query/setting heartbeat package

Query:

```
AT+ HTBT<CR>
```

```
< CR > < LF > + HTBT: status, interval, send type, data < CR > < LF >
```

Example:

Send: AT + HTBT

Return: + HTBT: on, 10, send to net, 12

Set up

AT + HTBT = status, interval, send type, data < CR >
<CR>LF>HTBT:OK<CR>LF>

Example:

Send: AT + HTBT = on, 10, send to net, 12

Return: + HTBT: OK

Parameter:

Status: ON, OFF

Interval: Heart Packet Interval Time

Send type:

- Send to net--to send heartbeat packets to the server
- Send to serial--to send heartbeat packets to serial port

Data: Heartbeat Packet Data, Hexadecimal Number Send, Data Length 100 Bytes

3.22 AT+LINUXCMP

CMP: Linux command

Function: Execute Linux commands and return execution information

Format:

AT+LINUXCMP=cmp<CR>
< CR > < LF > + LINUXCMP: result < CR > < LF >

Example:

Send: AT + LINUXCMP = PWD

Return: +LINUXCMP:/bin

Note:

1. Returns more than 10 lines show only the contents of the first 10 lines.
2. Use the CD command to switch directories

4. Contact us

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6. Updated History

2019-1-28 V1.0.1 established