USR-G800V2 AT Commands

File version: V1.0.1

Content

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:
Openrator:
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

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

5. Disclaimer

This document provides the information of USR-G800V2 products, it hasn't been granted any intellectual property license by forbidding speak or other ways either explicitly or implicitly. Except the duty declared in sales terms and conditions, we don't take any other responsibilities. We don't warrant the products sales and use explicitly or implicitly, including particular purpose merchant-ability and marketability, the tort liability of any other patent right, copyright, intellectual property right. We may modify specification and description at any time without prior notice.

6. Updated History

2019-1-28 V1.0.1 established