

File Version: V1.0.6





## Contents

USR-G808 User Manual	1
1. Get Start	4
1.1. Hardware Testing Environment	
1.2. Net Connecting	5
1.3. Web Log and Netting Testing	6
2. Product Overview	7
2.1. Brief Introduce	7
2.2. Features	
2.3. Basic Parameters	8
2.4. Hardware and Dimension	
3. Function	
3.1. User Configuring	
3.2. Common Function	
3.2.1. DDNS	13
3.2.2. WIFIdog	16
3.2.3. Remote Manager	
3.2.4. LAN Interface	21
3.2.5. DHCP	23
3.2.6. WAN Interface	
3.2.7. WLAN	25
3.2.8. Dual 4G Interface	28
3.2.9. APN Setting	29
3.2.10. Network Backup	
3.2.11. Load balancing	32
3.2.12. VPN Client (PPTP、L2TP、IPSEC、OPENVPN、GRE、SSTP)	
3.2.12.1. PPTP Client	
3.2.12.2. L2TP Client	
3.2.12.3. IPSEC	
3.2.12.4. OPENVPN Client	
3.2.12.5. GRE	
3.2.12.6. SSTP Client	
3.2.13. Static Routes	
3.2.14. Firewall	
3.2.14.1. Basic Setting	
3.2.14.2. Port Forwards	
3.2.14.3. Traffic rules	
3.2.14.4. Custom Rules	56
3.2.14.5. Restricting access	
3.2.14.6. Rate-limiting	
3.3. Basic Function	57
3.3.1. Network Diagnosis	57
3.3.2. Host Name and Time Zone	58



Be Hollest, Do Best !	USR-G808 User Manual	Technical Support: h.usriot.com
3.3.3. Web Server Passwo	ord	
3.3.4. Scheduled Tasks		59
3.3.5. Restore to Default	Factory Settings	
3.3.6. Introduce LED		
3.3.7. Upgrade Firmware	Version	
3.3.8. Reset		
3.3.9. NTP		
4. Configuring		
4.1. Webpage Setting		
4.2. Web Function		
5. Contact Us		65
6. Disclaimer		
7. Update History		





## 1. Get Start

USR-G808 is a dual SIM 4G LTE WiFi wireless outer, with SIM card slot. Dual SIM cards provide a auto fail-over for higher stability and convenience. Simple setting and the router can work, user no need to care about the details. Configuring the parameters via the webpage, save all the time.

In this character, we introduce the basic thing about the G808, users are suggested operating according to this instruction, then will have a systematic realization for it. Also you can read the character that you are interesting.

Product link: https://www.usriot.com/products/dual-sim-4g-lte-wifi-router.html

### Dual SIM 4G LTE WiFi Router

#### Model: USR-G808

USR-G808 is a Dual SIM 4G LTE WiFi Wireless Router, with SIM Card Slot. Dual SIM cards provide a auto fail-over for higher stablity and convenience.

- Working voltage: DC 9-36V
- Supports Dual SIM
- DIN-Rail Installing
- Europe / Australia/ North America Version





General Details	Specifications	Downloads	How to Buy	Models		
User Manual						
[User Manual]USR-G808-User-Manual-V1.0.4.1   download						
[Datasheet] USR-G808-Datasheet_V1.0.0   download						

### Diagram 1-1 Product Webpage

Any question please submit it into the USR Custom Supports: http://h.usriot.com/

## 1.1. Hardware Testing Environment

➢ USR-G808\*1



- ➢ PC\*1
- ➤ Cable\*1
- Power adapter(DC12V / 1A)
- ➢ 4G SIM cards \*2



Diagram1.1-1 Testing Connection

## 1.2. Net Connecting

Taking USR-G808 as an example

- Insert SIM cards, notice the direction
- Connect the WIFI and 4G antennas to the correspond interface
- Connect the net port of the PC to the LAN of the router via cable
- Configure the PC card, obtain an IP address automatically



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### Diagram 1.2-1 Local Connection of the PC

- Power on the router using the adapter
- > 2min waiting and the signal lights will on which means the 4G router connecting to the net.

## 1.3. Web Log and Netting Testing

Initial parameters:

Parameters	Initial value
Username	root
Password	root
IP	192.168.1.1

#### Form 1.3-1 Webpage Default Parameters

Fill:192.168.1.1 into the browser, both the username and password are root, then enter. The webpage are as following:



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	Authorization Required Please enter your username and password. Username: root Password:  Login Reset	
	Jinan USR IOT Technology Limited http://www.usriot.com	/

Diagram1.3-1 Login Webpage

### Note:

- Change language on the top right.
- Default username and pass word :root

Testing results in the testing tool( 4G cards are used in this testing. There might be difference between the regions. In theory the max value would be 50Mbps upstream and 150Mbps downstream, as below:

♥电脑管系	家-网络优化			- ×
流量监控 flow control	测试网速 testing speed	网络修复 net repair		
2 4 1 0 7	30 50 99 3MB/5	Testing speed more th 带宽超过40M, 一花一 Operator:China Mobile Location:Shandong Download:7.3MB/S	nan 40M -世界, 一秒一首歌 重新测试 IP address:117.136.94.176 upload:843.6KB/S	



## 2. Product Overview

## 2.1. Brief Introduce

Dual 4G wireless router, G808 provides a solution for user accessing to net via WIFI or net port of the 4G. Adopting industrial CPU, work speeds reaching 580MHz, G808 provides reliable data transmission networking for the intelligent



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power girds, personal medical, smart house and so on. Rich functions:dual 4G, net backups, APN, VPN, watchdog, firewall, NAT, DMZ and so on.

Wired WAN port, LAN port and wireless WLAN, dual 4G interface, several way to access the net.

## 2.2. Features

- Supports 4 LAN interface, 1 WAN interface, and a command serial port
- Supports 1 WLAN(802.11b/g/n)
- Supports LED indicators to show status( power, system, dual 4G type and signal power)
- Supports serial port, ssh, telnet and Web Server to manage and configure
- Supports Reload button to restore default settings by hardware way
- All Ethernet interface supports 10/100Mbps
- Supports VPN Client(PPTP, L2TP, IPSEC, OPENVPN, GRE, SSTP) and VPN encryption function
- Supports APN check the net, switching the net automatically, SIM information display and the APN special card
- Supports domain module, backup module, wired WAN online, several net to backup( can be select)
- Supports load balancing,
- Supports firewall, NAT, DMZ host, black and white list, IP speed, MAC speed limited
- Supports QOS, flow service and limiting speed according to interface
- Supports DDNS and port forwarding
- Supports WIFIDOG, this function need user custom according to own needs
- Supports static routes, PPPOE, DHCP/static IP
- Supports remote upgrade and remote monitoring
- Supports NTP, internal RTC
- Supports watchdog to guarantee the system stability

## 2.3. Basic Parameters

Model	Carrier/Region	Bands
—Е	Europe/International	FDD:B1/2/3/5/7/8/20
	(EMEA,Korea,Thailand,India)	TDD:B38/40/41
	(HongKong,China)	HSPA/UMTS: B1/2/5/8
	Southeast Asia	GSM/EDGE: B2/3/5/8
—AU	Australia	FDD:B1/2/3/5/7/8/28
	(Taiwan,China)	TDD:B38/40/41
	New Zeland	HSPA/UMTS: B1/2/5/8
	Latin America	GSM/EDGE: B2/3/5/8
—A	AT&T,T-Mobile/North America	FDD:B2/4/12
		WCDM:B2/4/5

#### Form 2.3-1 Model and Bands

Project		Instr
Name	USR-G808	4G wireless



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	Wired WAN port	WAN * 1	
Wired port	ired port Wired LAN port LAN * 4		
	Net speed	10/100Mbps,Auto MDI/MDIX	
	WIFI wireless LAN	Support 802.11b/g/n	
WIFI	Antenna	WIFI antenna * 2	
	Cover range	Open filed radius is 150m	
SIM card and	SIM/USIM card	Standard pin SIM card interface, 3V/1.8V SIM card *2	
antenna	Antenna	3/4G full frequency antenna*2(4G-M/4G-A)	
Button	Reload	One button to restore to the fault setting	
LED	States instr light	Power, WIFI, Work, 2/3/4G(divide into SIM1 and SIM2),the indicators for the strength of the signal (for SIM1and SIM2), WAN*1, LAN*4,	
Serial port	Console port	Manage the command serial port by webpage register.	
	Work temperature	-20℃~ +70℃	
Temperature	Storage temperature	-40℃~ +125℃	
	Work humidity	5%~95%	
Humidity	Storage humidity	1%~95%	
	Supply voltage	DC9~36V	
Supply	Current consumption	Under DC12V, average:391mA, maximum:578mA	

### Form 2.3-1 Basic Parameters

### Consumption parameters:

The values are acquired under the full speed work, transmit with 1 WIFI access, 4 LAN ports access, WAN port access and dual 4G access and 10KByte/s.

Work mode	Running	Average	Max current
	voltage	current	
LAN+WAN speed communication(4G normal +WALN	DC12V	391mA	578mA
normal )			
Single LAN port full speed communication(4G normal	DC12V	265mA	445mA
+WALN normal )			
LAN+WAN full speed communication(no 4G+WALN	DC12V	230mA	345mA
normal)			
Single WAN $\square$ full speed communication(no 4G+WALN	DC12V	265mA	381mA
normal )			

### Form 2.3-2 Consumption Parameters



### 12V power supply and full speed work:

Average consumption: 4.7W, max consumption 6.9W. Average current 391mA, max current 578mA

## 2.4. Hardware and Dimension



### Diagram 2.4-1 Outlook

Num.	Name	Note	
1	DC power	Supply DC:9-36V, standard5.5*2.1 supplier	
2	DC terminal power	Supply range DC:9-36V, green terminal, size is 5.08mm-2P, note anti reverse	
3	WAN port	WAN interface, 10/100Mbps, support Auto MDI/MDIX	
4	LAN port	LAN interface, 10/100Mbps, support Auto MDI/MDIX	

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5	Console port	Manage the command serial port information via net to	
		registration.	
6	Instr light	20 road instr LED for status, the	e details are in the
		specific chapter.	
7	SIM card seat	Drawer style SIM card seat, if need to installed SIM card,	
		push the yellow button with a sharp	er, and exit the card.
8	Reload button	Reload: press for more than 5s and loosen, restore to	
		default setting	
9	WIFI antenna	2* 2.4G stick antenna	
10	Full frequency antenna	2* full frequency sucker antenna.	

Form 2.4-1 G808 Interface Parameters

45

Note: please distinguish the WIFI antenna and 4G antenna via the mark .



Diagram 2.4-2 Dimension

Note: 160\*122.46\*45mm( no power terminal, antenna and antenna seat)

60



## 3. Function

Introduce the functions of the G808 in this characters, including the user configuring , networking, common function and basic function introduce.



diagram 3-1 Product Function

Card name	Net card code name	Respond net interface name
LAN interface	br-lan	LAN
Default WIFI AP interface	ra0	LAN
WAN interface	eth0.2	WAN_WIRED
4G1 interface	eth1	WAN_4G1
4G2 interface	eth2	WAN_4G2

Form 3-1 Interface

## 3.1. User Configuring

After USR-G808 powered, it will access to 4G net and allow the devices under LAN access the external net. Please ignore the configuring if you using the common SIM card, powering on is ok. if you using APN card, setting the accurate address, if you need to use the VPN, port mapping and so on, reference to the related function chapter.



1.Power off the G808 and insert SIM card.

2.Connect WIFI antenna and 4G antenna.(the longer one is 3G/4G antenna and shorter one is EIFI antenna) 3.Power on the G808 by 12V power supply.

4.Waiting about 2 min, 2/3G instr LED begin light, and success. Then you can be online.

5. connect PC or mobile to the G808 router via LAN interface or WIFI interface. The pass word of the WIFI is "www.usr.cn"

6. Then you can log in the webpage of the router(default address is:192.168.1.1. both the username and password are "root")

Application diagram as follow, user can access internet through LAN interface or WLAN interface of G808:



Diagram 3.1-1 Application diagram

## 3.2. Common Function

### 3.2.1. DDNS

There are two situations to adopt DDNS function:

G808 supports, user can choose one operator on 'Service' (here we use the ddns.oray.com)



 

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 USR-G808
 Dynamic DNS Dynamic DNS allows that your router can be reached with a fixed hostname while having a dynamically changing IP address.

	Duramic DNS allows that w	eur reuter can be reached with a fixed bestname while basing a dwamically changing IP address
status	Bynamic Divs allows that ye	ou router can be reached with a fixed hostname while having a dynamically changing in address.
Services		
private ip ddns		Delete
Dynamic DNS	MYDDNS	
Captive Portals	Enable	
RemoteManager	Function for the second s	
> Network	Event interface	wan_wired `` Network on which the ddns-updater scripts will be started
> Firewall	Service	ddns.oray.com
> System		
> Logout	Hostname	mypersonaldomain.ddns.oray
	Username	myusername
	Password	
	Source of IP address	interface 💌

### Diagram 3.2.1-1 DDNS Configuration

**Note:** If user wants to enable this function, the network that G808 belongs to must be distributed independent public network IP.

Default disable, please enable it if you want to use.

Setting step are as bellow:

USR-G808	Enable		
	Event interface	wan_wired <b>*</b>	
		Network on which the ddns-up	dater scripts will be started
Status	Service	ddns oray com	
<ul> <li>Services</li> </ul>	Service	dansfordyreeni	
private ip ddns	Hostname	mypersonaldomain.ddns.ora	
Dynamic DNS	Username	myusername	
Captive Portals	Password	•••••	2
RemoteManager			
> Network	Source of IP address	interface 🔻	
> Firewall	Interface	eth0.2 T	
> System	Check for changed IP	10	
> Logout	every		
	Check-time unit	min <b>v</b>	
	Force update every	72	
	Force-time unit	h v	

### Diagram 3.2.1-2 DDNS Setting Webpage

### Please fill the parameters as the form below:

Function	Content	Note
Enable	Choose the DDNS function	Default disable, users can



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		choose to enable
Event interface	Choose the WAN port according your requirement	E.g.choose wan_wired
Service /URL	Fill the DDNS server address	E.g. ddns.oray.com
Domain name	Fill the domain name you apply	E.g. 1a516r1619.iask.in
Username	Username	E.g. ouclihuibin123
Password	Password	E.g. ouclihuibin1231
IP original	Choose the interface here	Select interface
Interface	Name of the interface	E.g. choose eth0.2 here,
Check the	Check the interval for IP changing for IP might	E.g. 1 min
interval of the IP	changing commonly. The value is smaller and the	
changing time	check will be more frequency	
Forced update	Forced upgrade interval	E.g. 72min
interval		

### Form 3.2.1-1 Parameters for DDNS

### • G808 doesn't support, user need choose '--custom--' on 'Service' and write correct service provider.

USR-G808	Enable	0	
	Event interface	wan_wired <b>•</b>	
x - 2		Network on which the ddns-up	dater scripts will be started
> Status	Service	custom 🔻	
✓ Services	Service	cascom	
private ip ddns	Custom update-URL		
Dynamic DNS	Hostname	mypersonaldomain.ddns.ora	
Captive Portals	Username	myusername	
RemoteManager			
> Network	Password		iii
> Firewall	Source of IP address	interface 🔻	
> System	Interface	eth0.2 🔻	
> Logout	Check for changed IP	10	
	every		
	Check-time unit	min 🔻	
	Force update every	72	

Diagram 3.2.1-3 DDNS Setting Webpage

This function supports accessing to the router via domain name remotely Parameters filled as below: apply a hostname to point you IP of the WAN

10			Shine you in or the WAIN		
		username			
		Password			
	Function	Content		Note	
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De Honesi, Do Besi !	USR-G808 User Manual	Technical Support: h.usriot.co
Enable	Choose the DDNS function	Default disable, users can
		choose to enable
Event interface	Choose the WAN port according your requirement	E.g.choose wan_wired
Service /URL	Fill the DDNS server address	E.g.
	Format:	http://ouclihuibin123:ouc
	http://username:password@ddns.oray.com/ph/updat	lihuibin1231@ddns.oray.c
	e?hostname=domainname	om/ph/update?hostname
		=1a516r1619.iask.in
Domain name	Fill the domain name you apply	E.g. 1a516r1619.iask.in
Username	Username	E.g. ouclihuibin123
Password	Password	E.g. ouclihuibin1231
IP original	Choose the interface here	Select interface
Interface	Name of the interface	E.g. choose eth0.2 here,
		(wired WAN port)
Check the	Check the interval for IP changing for IP might	E.g. 1 min
interval of the IP	changing commonly. The value is smaller and the	
changing time	check will be more frequency	
Forced update	Forced upgrade interval	E.g. 72min
interval		

### Form 3.2.1-2 Parameters for DDNS

- Check the DDNS work or not( restart the router to make it work)
- Check your public IP
- > Then ping the domain name:1a516r1619.iask.in on the PC, if it is ok, the DDNS can be work

### • Function feature

- > User should choose 'Enable' on above figure to enable DDNS function at first
- Reset G808 to make new parameters take effect.
- Fill in the parameters strictly, make sure the accuracy of them like: service/URL, domain name, user name, password and the interface.
- > Even though the router under the subnet, this function can enable dynamic domain name
- > DDNS+port mapping can enable that remote access the subnet under the local router.
- Add more than one DDNS domain name.

### 3.2.2. WIFIdog

Have the device enter the external net. Then the first time for the device to enter the external net, login a certification webpage and do the certification.

The sense for WIFIdog: ① to keep the safety of the LAN, record the illegal behaviors such as net attack when using the public net. ② using in the advertisement. Collecting the information of he users under the router if they allow which is convenient for factories to promote.

Note: default disable, please enable it at first

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USR-G808

>	Status	General Settings white	list Advanced Settings
~	Services		
	private ip ddns	Enable	Image:
	Dynamic DNS	Blacklist and whitelist daemon	Blacklist and whitelist daemon, monitor the ip changes
	Captive Portals		eec57916f
	RemoteManager	AP ID	Fill with wifidog server's correct AP ID
	Network	wifidog server address	
	Firewall		② Domain name or ip
	System		
>	Logout		Save



>	Status	General Settings white	list Advanced Settings
~	Services		
	private ip ddns	Enable	🗹 🎯 Enable or Disable wifidog
	Dynamic DNS	daemon enable	Inable daemon for wifidog, ensure the thread always online
	Captive Portals	Blacklist and whitelist	Blacklist and whitelist daemon, monitor the ip changes
	RemoteManager	daemon	
	Network	AP ID	eec57916f
	THERMOTIK		[2] Fill with wifidog server's correct AP ID
	Firewall	wifidog server address	wifiauth.zhangkongbao.com
	System	willdog server address	Domain name or ip
	Logout		
			Save
		Diagram 3.2.2-2 \	VIFIdog Configuration 2



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USR-G808	General Settings white	list Advanced Set	tings
_	Encrypted transmission	🔲 👩 Enable SSL to ma	ake transmission safe
Status	Internal Interface	br-lan	•
<ul> <li>Services</li> </ul>		Configure Internal in	terface, default br-lan
private ip ddns	External Interface	eth0.2	v
Dynamic DNS		② Configure External in	nterface
Cantina Dartala	wifidog server port		
Captive Portais		🕝 default 2060	
RemoteManager	HTTP Port	80	
Network		🙆 default 80	
Firewall	wifidog server file path	/apps/wifiauth/	
System		End with '/', for exan	nple:'/', '/api/'
Logout	Maximum access number	40	
		determined by route	er ability, default 50
	Check interval	60	
		② Check interval for cli	ent access, default 60 second

Diagram 3.2.2-3 WIFIdog Configuration 3

User need choose 'Enable' and 'daemon enable' to use WIFI dog function. After configuring and clicking 'Save', user need reset G808 to make changing take effect.

Function	Parameters setting(if you want to use)	Note	
Enable certification	choose	Choose if you need, default keep disable	
Daemon enable	choose	Choose if you need, default keep disable	
AP ID	nfuold700	AP code	
WIFIdog server address	E.g. www.xxx.cn	Assist certification server address	
Internal interface	br-lan	The name of the LAN	
External interface	eth0.2	Wired WAN port name ( if you access the net via 4G ,	

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....

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		fill the eth1)
Certification server road	/apps/WIFIguanjia/	Certification server road

Form 3.2.2-1 WIFIdog Default Parameters List

Fill the parameters in the form and then open a browser enter a IP randomly, you can see the certification webpage, fill the phone number and enter.

Cooperating server to realize the SMS certificating login, we hat in and QQ in, of course you need custom the server software.

### Note:

- The WIFIdog function in this router is demo. Please contact us and have a custom if you need: http://www.usr.cn/Custom/index.html
- If you do not need it, please do not enable it, otherwise the router can not access the external net( certificate and you can access)
- > Please do not enable this function with MultiWAN!!! They can not be used at same time.

### 3.2.3. Remote Manager

### Remote Firmware Upgrade

User can configure this function by Web Server as follow:

>	Status	Configuration	
~	Services	FirmwareUpgrade	usMonitor
	private ip ddns		
	Dynamic DNS	Enable Remote Firmware Upgrade	
	Captive Portals	Remote Address	ycsj1.usr.cn
>	Network	Port	30001
Σ	Firewall	Interval(seconds)	1800
>	System		
>	Logout		Save Apply
_		Diagram 3.2.3-1 Remote Firmv	vare Upgrade
	Function	Parameters setting (if will be	need) Note



Be Honest, Do Best !	USR-G808 User Manual	Technical Support: h.usriot.com	
Enable remote firmware	Choose	Default enable	
function			
Remote address	Remote firmware upgrade server address	Default ycsj1.usr.cn	
Port	Remote upgrade firmware server port	Default 30001	
Interval	The interval device sending information to	Default 1800s	
	server		

Form 3.2.3-1 Remote Upgrade Default Parameters

### Remote Monitor

This function can realize reporting G808 information(Such as flow, firmware version, RSSI, IMEI) to Remote Monitor server and Remoter Monitor server can also send commands to control G808. User can configure this function by Web Server as follow:

	USR-G808	Configuration	
>	Status	FirmwareUpgrade	usMonitor
~	Services	Enable Remote Monitor	
	private ip ddns	Remote Address	ycsj1.usr.cn
	Dynamic DNS	Port	30001
	Captive Portals	Heartpkt Content	Heartpkt
	RemoteManager		
>	Network	Heartpkt Interval(seconds)	30
>	Firewall	Interval(seconds)	600
>	System		
>	Logout		Save Apply

Diagram 3.2.3-2 Remote Monitor

Function	Parameters setting (if will be used)	Note
Enable remote monitor	choose	Default is disable
Remote address	Remote firmware upgrade server address	Default ycsj1.usr.cn
Port	Remote monitor server port	Default 30001
Heartpkt content	The heartbeat package content	Default heartpkt

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		that device send to serve.		
	Heartpkt interval	The interval that device send heartbeat package.	Default 30s	
	Interval	the interval that device submit the operating information.	Default 600s	

### Form 3.2.3-2 Remote Monitor Default Parameters

Note: the detailed using of remote monitor and remote upgrade, please login ycsj1.usr.cn

### 3.2.4. LAN Interface

- ➢ G808 supports four wired LAN interfaces(LAN1∼LAN4).
- > WIFI interface also belongs to LAN interface(wireless LAN interface).
- Default settings: Static IP (IP address: 192.168.1.1);
- Subnet mask: 255.255.255.0;
- Enable DHCP Server function.
- > LAN interface functional diagram as follow:
- Supports simple status statistics function





User can configure LAN interface as follows:



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Status 🔷	Internace Overv	iew	
Services	Network	Status	Actions
Network	LAN	Uptime: 0h 57m 50s MAC-Address: D8:B0:4C:D9:4F:30	a Connect
Interfaces APNSET	<b>₫ (ഈ⊛)</b> br-lan	RX: 1.54 MB (18252 Pkts.) TX: 1.35 MB (9755 Pkts.) IPv4: 192.168.1.1/24	C Edit 💼 Delete
IPSECSET	WAN_4G1	Uptime: 0h 0m 0s	Stop
Wifi DHCP and DNS	eth2	MAC-Address: E2:7C:98:39:B0:38 RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.)	🗹 Edit 💼 Delete
Hostnames	WAN_4G2	Uptime: 0h 0m 0s	🖉 Connect 🛛 🙆 Stop
Static Routes	eth1	MAC-Address: 00:A0:C6:00:00:00 RX: 0.00 B (0 Pkts.) TX: 10.14 KB (38 Pkts.)	🕝 Edit 💼 Delete
Diagnostics	WAN WIRED	Uptime: 0h 0m 0s	
Qos Load Balancing	eth0.2	MAC-Address: D8:B0:4C:D9:4F:30 RX: 0.00 B (0 Pkts.) TX: 395.76 KB (1160 Pkts.)	Connect Stop
Firewall			
System	🛃 Add new interfa	ace	

### Diagram 3.2.4-2 LAN Interface configuration 1

	USR-G808	General Setup	hysical Setti	ngs	Firewall Settings
>	Status Services	Sta	atus	ള്ള or-lan	Uptime: 0h 59m 10s MAC-Address: D8:B0:4C:D9:4F:30 RX: 1.60 MB (18857 Pkts.) TX: 1.46 MB (10219 Pkts.) IPv4: 192.168.1.1/24 IPv6: FDD1:B494:14C5:0:0:0:0:1/60
	Network				
	System	Proto Really switch proto	col?	tic add Switch	h protocol
	Logout	IPv4 addr	ress 19	2.168.	.1.1
		IPv4 netm	nask 255	5.255.2	255.0 🔹
		IPv4 gates	way		
		IPv4 broad	cast		
		Use custom DNS serv	vers 8.	8.8.8	<u> </u>
			8.	8. <mark>4.4</mark>	G

### Diagram 3.2.4-3 LAN Interface configuration 2



### 3.2.5. DHCP

Default DHCP sever function of the LAN enable(choose to disable) all the device access to the LAN interface can obtain IP address automatically.

DHCP Server default range of distribution is from 192.168.1.100 to 192.168.1.250

Default address lease time is 12 hours. Address range and lease time can be changed.

After entering Web Server LAN interface configuration web page, user can find 'DHCP Server' on Web Server as follow:

> Status		
> Services	DHCP Server	
✓ Network		
Interfaces	General Setup	
APNSET	Ignore interface	Disable DHCP for this interface.
IPSECSET	Start	100
Wifi		Output Lowest leased address as offset from the network address.
DHCP and DNS	Limit	150
Hostnames		Maximum number of leased addresses.
Static Routes	Leasetime	12h
Diagnostics		Expiry time of leased addresses, minimum is 2 minutes (2m).
QoS		
Load Balancing		
> Firewall		Save Apply
> System		

Diagram 3.2.5-1 DHCP Server Configuration

### 3.2.6. WAN Interface

- ➢ G808 supports one wired WAN interface.
- > WAN interface supports DHCP Client, static IP and PPPOE mode.
- > Default setting is DHCP Client mode.

User can configure WAN interface as follows:



	Network	Status	Actions
USR-G808	LAN	Uptime: 1h 5m 11s MAC-Address: D8:B0:4C:D9:4F:30	@ Connect
> Status	ø (∰⊛) br-lan	RX: 1.84 MB (21438 Pkts.) TX: 1.78 MB (12044 Pkts.) IPv4: 192.168.1.1/24 IPv6: FDD1:B494:14C5:0:0:0:0:1/60	Connect Stop
Network 1 Interfaces 2	WAN_4G1	Uptime: 0h 0m 0s MAC-Address: E2:7C:98:39:B0:38 <sup>3</sup> RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.)	Connect Stop
APNSET	WAN_4G2	Uptime: 0h 0m 0s	Connect 🔞 Stop
IPSECSET Wifi	eth1	MAC-Address: 00:A0:C6:00:00:00 RX: 0.00 B (0 Pkts.) TX: 33.15 KB (120 Pkts.)	C Edit Delete
DHCP and DNS	WAN WIRED	Uptime: 0h 0m 0s	Connect Con
Hostnames	22	MAC-Address: D8:B0:4C:D9:4F:30 RX: 0.00 B (0 Pkts.)	Stop
Static Routes	eth0.2	TX: 446.03 KB (1307 Pkts.)	🗹 Edit 🧰 Delete
Diagnostics	🖪 Add new interfa	ace	
QoS			

### Diagram 3.2.6-1 WAN Interface Configuration 1



Diagram 3.2.6-2 WAN Interface Configuration 2



## 3.2.7. WLAN

- ➢ G808 is a AP actually and supports other STA devices connecting to.
- G808 supports at most 24 STA devices to connect
- About 150 meters radius WIFI coverage area in open field.
- LAN and WLAN can be exchange
- Radio on/off default be on
- WIFI interface functional diagram as follow:



Diagram 3.2.7-1 WIFI Interface Functional Diagram

Default settings of WIFI interface as follows:

Parameters	Default setting
SSID	USR-G808-XXXX(XXXX is MAC address)
Password	www.usr.cn
Channel	Auto
Bandwidth	40MHz
Encryption method	WPA2-PSK

Form 3.2.7-1WIFI Interface Default Settings

User can configure WIFI interface as follow:

![](_page_25_Picture_0.jpeg)

Technical Support: h.usriot.com

>	Status	multi-SSID capable). Per ner	multi-SSID capable). Per network settings like encryption or operation mode are grouped in the <i>Interface</i>		
>	Services	Configuration.			
~	Network	Device Configuration	Device Configuration		
	Interfaces	General Setur	red Settings		
	APNSET	Schold Schip	set settings		
	IPSECSET	Status	Mode: Master   SSID: USR-G808-4F30		
	Wifi		Channel: 4   Bitrate: 300.0 Mbit/s		
	DHCP and DNS				
	Hostnames	Radio on/off	on 🔻		
	Static Routes	N <mark>etwork Mode</mark>	802.11b/g/n ▼		
	Diagnostics	Channel	auto 🔻		
	QoS	Rand Width	40MHz ¥		
	Load Balancing	Band Wider	101112		
>	Firewall				
>	System	Interface Configuration	n		

### Diagram 3.2.7-2 WIFI Setting Webpage

![](_page_25_Figure_5.jpeg)

![](_page_25_Figure_6.jpeg)

![](_page_26_Picture_0.jpeg)

	Be Honest, Do Best !	USR-C	5808 User Manual	Technical Support: h.usriot.com
Ľ	Network	Channel Band Width	auto 40MHz V	T
	APNSET			
	IPSECSET	Interface Configuration	l .	
[	Wifi	General Setup Wireless	s Security	
	DHCP and DNS			
	Hostnames	Encryption	WPA2-PSK	
	Static Routes	Cipher	Force CCMP (AES)	×
	Diagnostics	Кеу	•••••	a a
	QoS			
	Load Balancing			
>	Firewall		Save	Apply
>	System			

### Diagram 3.2.7-4 Setting the WIFI Password

User can change Radio on/off to off to close WIFI interface( effect immediately), network mode, channel and band width

>	Status	•	Configuration.	
>	Services			
~	Network		Device Configuration	
	Interfaces		General Setup Advance	ed Settings
	APNSET		Status	Mode: Master   SSID: USR-G808-4F30
	IPSECSET			BSSID: D8:B0:4C:D9:4F:2F
	Wifi			
	DHCP and DNS		Radio on/off	on 🔻
	Hostnames		Network Mode	802 11b/g/n ¥
	Static Routes		Network Hode	5521115/ g/ m
	Diagnostics		Channel	auto
	QoS		Band Width	40MHz •
	Load Balancing			
	Firewall		Interface Configuration	
>	System		General Setup	Security
			Diagra	am3.2.7-5 Other WIFI Setting

![](_page_27_Picture_0.jpeg)

### 3.2.8. Dual 4G Interface

![](_page_27_Figure_4.jpeg)

![](_page_27_Figure_5.jpeg)

		Di	agram 3.2.8-1 4G Interface Function	al		
	User can configure	e 4G interfaces by V	Veb Server as follow:			
>	Status	Network	Status	Actions		
~	Services Network Interfaces	LAN 多 (変変) br-lan	Uptime: 1h 18m 45s MAC-Address: D8:B0:4C:D9:4F:30 RX: 2.33 MB (26754 Pkts.) TX: 2.34 MB (15554 Pkts.) IPv4: 192.168.1.1/24 IPv6: FDD1:B494:14C5:0:0:0:0:1/60	Connect Stop		
	IPSECSET Wifi	WAN_4G1	Uptime: 0h 0m 0s MAC-Address: E2:7C:98:39:B0:38 RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.)	Connect Stop		
	DHCP and DNS Hostnames Static Routes	WAN_4G2	Uptime: 0h 0m 0s MAC-Address: 00:A0:C6:00:00:00 RX: 0.00 B (0 Pkts.) TX: 33.38 KB (120 Pkts.)	Connect Stop		
	Diagnostics QoS Load Balancing	WAN_WIRED	Uptime: 0h 0m 0s MAC-Address: D8:B0:4C:D9:4F:30 RX: 0.00 B (0 Pkts.) TX: 538.72 KB (1578 Pkts.)	Connect Stop		
>	Firewall System	🖪 Add new interfa	ice			
	Diagram 3.2.8-2 4G Interface Configuration					

- > The protocol of the 4G interface: please keep default and do not modify
- > The router using wired WAN port at first, then are the 4G nets.choose one interface in one application
- ▶ If you using APN private card, refer to the APN setting chapter.

![](_page_28_Picture_0.jpeg)

### 3.2.9. APN Setting

APN parameters setting are as fellows, including SIM 1 setting and SIM2 setting:

When user want to configure and use G808, the first and most important step is to configure APN settings. Different operator have different APN(access point name). If user uses the SIM card from the operator, must know the APN. User can ask SIM card operator for APN information. There are three main parameters about APN: APN address, username and password. Sometimes only configuring APN address is enough.

APN configuration by Web Server as follow:

4 USR-G808	SIM1 Configuration	APN LTE Config	SIM Info	
	1	APNAddress	AutoCheck	
> Status		Username		
> Services		Password		
Interfaces		AuthType	PAP	٣
APNSET		Check Registered	30	
IPSECSET		WAN Priority	wanfirst <b>T</b>	
Wifi		Reference Mode	Custom	
Hostnames				-
Static Routes		Reference Address(Can only enter the IP)	8.8.8.8	•
Diagnostics				
QoS		SIM2 Configuration		
Load Balancing				

Diagram 3.2.9-1 APN configuration

APN Address: Default is AutoCheck, user can choose '--custom--' and write correct SIM card APN address. And user can keep AuthType and Check Registered (Seconds) as default settings.

APN	LTE Config	SIM Infe	D			
	APNAddres	s Auto	Check	9	•	
	Usernam	e Auto	Check stom	0		
	Diagram 3.2.9	9-2 APN Ad	dress Sele	ct		
Parameters name	Functior	า				
APN address	Please	fill the fi	ght APN	address, default	is	check
	automat	tically.				
Jsername	Default	none, pleas	e fill if you	u use the APN		

![](_page_29_Picture_0.jpeg)

USR-G808 User ManualTechnical Support: h.usriot.compasswordDefault none, please fill if you use the APNPDP typeDefaultAuth TypeDefaultOthersPlease keep default

### Form 3.2.9-1 APN Parameters

- Common phone card, please ignore it.
- ▶ If using the APN card, please fill the APN address , username and the password.
- > The configuring way for SIM 1 and SIM2 are same.
- > After user configuring successfully, user can click 'SIM Info' above to check SIM card 1 and SIM card 2 information.

### Modify APN

Firstly, select the "custom" in the APN, and fill the right APN address in it. After setting ,please restart the router.

![](_page_29_Figure_9.jpeg)

![](_page_29_Figure_10.jpeg)

#### • Network format selection

The network format, default is automatically:  $4G \rightarrow 3G \rightarrow 2G$ , and access to the net automatically. If what you need

![](_page_30_Picture_0.jpeg)

Technical Support: h.usriot.com

is not the 4G SIM card, or the net need to appoint( such as using the 2G or 3G), please select the network format, otherwise it will be affect for the netting rate.

![](_page_30_Figure_4.jpeg)

![](_page_30_Figure_5.jpeg)

If you choose the 3G mode or 3G at first, when connecting the net, the router will connect the 3G net more accuracy.

Selection	Means	Order	Note
Automatic	Select automatically	4G>3G>2G	Default
2G	Using 2G	2G>3G>4G	When using the 2Gcard
3G	Using 3G	3G>2G>4G	When using the 3G card
4G	Using 4G	4G>3G>2G	When using the China
			Mobile/China Unicom/
			China Telecom 4G
Others			

### Form 3.2.9-2 Network Format Selection

### • SIM card information display

In this webpage, there is the information of the SIM1 and SIM2 where display the detailed parameters to configuring. If there is some issue for netting, check here and you might find the question.

![](_page_31_Picture_0.jpeg)

### 3.2.10. Network Backup

Network backup determine whether the net is still work via ping one time according to the order of the priority, can be enable from the timing task. Mode option: wired priority, hot mode and cold mode(default is hot mode)

Wired priority: choose the wired priority in APN, testing ping or not, if it ok ,using wired, otherwise choose 4G.

**Heat mode:** choose hot mode in the SIM card of the APN, and the two 4G connect the module in time, but current only using SIM1, using SIM2 if the SIM1 can not work.

**Cold mode**: choose the cold mode ,only enable one SIM card, only using SIM1, using SIM2 if the SIM1 can not work.(default the SIM2 disable)

	(Seconds)	
USR-G808	Reference Mode	Custom T
	Reference Plote	Custom
	Reference Address(Can	8.8.8.8
Status	only enter the IP)	
> Services		
✓ Network		
Interfaces	SIM Work Mode Config	uration
APNSET	Work Mode Select	
IPSECSET	WORK WODE Select	
Wifi	Work Mode	Heat Mode V
DHCP and DNS		Cold Mode me time in hot mode, and only one module is activated in cold mode
Hostnames		
Static Routes		
Diagnostics		Save Apply
QoS		
Load Palancing		

#### Diagram 3.2.10-1 Dual 4G Working

### 3.2.11. Load balancing

Load balancing function will configure dual 4G interfaces to realize dual 4G interfaces load balancing. User can configure this function by Web Server as follow:

- Setting the different gateway hops to the interface, then submit.
   For example: set the gateway hop of the 4G1 as 40, 4G2 as 43 (note: no setting and no load balancing)
- ✓ Create two interfaces, here is wan\_4g1 and wan\_4g2, then add. Note: the name of the interface as same as the above.

![](_page_32_Picture_0.jpeg)

Be Honest, Do Best !	USR-G808 User Manual	Technical Support: h.usriot.com
> Status		
> Services		
✓ Network	Overview Configu	uration Advanced
Interfaces	Interface Status	Detailed Status
APNSET		
IPSECSET	NAMANI T. A	
Wifi		
DHCP and DNS	No www.an interfact	es lound
Hostnames	MWAN Interface	e Systemlog
Static Routes	No MWAN system	alog history found
Diagnostics		
QoS		
Load Balancing		
Firewall		
> System		
> Logout		

Diagram 3.2.11-2 Load Balancing Configuration

- ✓ Interface configuring
- ✓ Members configuring: setting the different weight for them:4G1:4G2=3:2=60%:40%
- ✓ Policies configuring: member used and standby member
- $\checkmark$  Rules configuring: set the remote IP , protocol and policies

Until now, save the 4G1 and 4G2 is ok. Please restart it.

From now, click the interface status in the overview, if the interface green, setting successful, otherwise is red. Also you can see the load weight.

Note: the below is my configuring file, copy it to advanced->MWAN configuring files, then restart G808.

config interface 'wan\_4g1'

option enabled '1' option count '1' option reliability '1' list track\_ip '114.114.114.114' option timeout '3' option interval '5' option down '3' option up '3'

config interface 'wan\_4g2' option enabled '1' option reliability '1' option count '1'

![](_page_33_Picture_0.jpeg)

list track\_ip '114.114.114.114' option timeout '3' option interval '5' option down '3' option up '3' config member 'wan 4g1 m w' option interface 'wan\_4g1' option weight '50' option metric '1' config member 'wan\_4g2\_m\_w' option interface 'wan\_4g2' option weight '40' option metric '1' config policy 'balanced' list use member 'wan 4g1 m w' list use\_member 'wan\_4g2\_m\_w' config rule 'default rule' option dest ip '0.0.0.0/0' option use policy 'balanced'

### 3.2.12. VPN Client (PPTP、L2TP、IPSEC、OPENVPN、GRE、SSTP)

VPN(Virtual Private Network) has Client and Server two parts and protocols includes PPTP, L2TP, ipsec, openvpn, gre, sstp and so on.

**Note:** the below VPN default have not configured, choose the related VPN protocol to connect according to the related demand.

### 3.2.12.1. **PPTP Client**

PPTP is point-to-point tunnel protocol which uses one TCP connection(port 1723) to maintain tunnel. PPTP protocol will use GRE technology to encapsulate data into PPP data and transmit through tunnel, then encrypt or compress the PPP data.

• The setting way for the PPTP

E.g. a enterprise located in Jinan, and branches in Shenzhen, now it need to build a network to allow the employees in shenzhen to access the head office net. If the PPTP has built(according to the different setting way to the different server, you can refer to the server configuring instr)

Configuring PPTP client:

If PPTP Server has been established, user can configure PPTP Client by Web Server as follows:

![](_page_34_Picture_0.jpeg)

Technical Support: h.usriot.com

USR-G808		
	Create Interface	
> Status	Name of the new interface	test [2] The allowed characters are: A-Z, a-Z, 0-9 and
<ul> <li>Services</li> <li>Network</li> </ul>	Protocol of the new interface	Static address 🔹
Interfaces APNSET	Create a bridge over multiple interfaces	DHCP client Unmanaged DHCPv6 client
IPSECSET	Cover the following interface	PPtP PPPoE er: "apcli0" PPPoATM h: "eth0"
Wifi		UMTS/GPRS/EV-DO L2TP : "eth0.1" (lan)
DHCP and DNS		GRE : "eth0.2" (wan_wired)
Hostnames		TAP er: "eth1" (wan_4g2) SSTP er: "eth2" (wan_4g1)
Static Routes		Relay bridge Ethernet Adapter: "ra0"
Diagnostics		Ethernet Adapter: "teql0"     Ethernet Adapter: "wds0"
QoS		Ethernet Adapter: "wds1"
Load Balancing		Ethernet Adapter: "wds2"

![](_page_34_Figure_4.jpeg)

USR-G808	WAN_4G1 WAN_WIRED WAN_4G2 LAN TEXT
> Status	Interfaces - TEXT
Services     Vetwork	On this page you can configure the network interfaces. You can bridge several interfaces by tick names of several network interfaces separated by spaces. You can also use <u>VLAN</u> notation INTER
Interfaces	Common Configuration
IPSECSET	General Setup Advanced Settings Firewall Settings
Wifi DHCP and DNS	Status         RX: 0.00 B (0 Pkts.)           pptp-text         TX: 0.00 B (0 Pkts.)
Hostnames	Protocol PPtP v
Diagnostics	VPN Server
QoS	PAP/CHAP username
Load Balancing	PAP/CHAP password

### Diagram 3.2.12.1-3 PPTP Client Configuration 1

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- ✓ User can choose only MSChapV2 encryption in 'Advanced Settings' according to whether PPTP Server only supports MPPE encryption.
- ✓ And in Firewall Settings, user can choose WAN or LAN according to dialing way.
- ✓ Then there is some running time in the webpage of the VPN interface, means the VPN has work, you can access the VPN network.

### 3.2.12.2. L2TP Client

L2TP is Layer 2 Tunneling Protocol which is similar to PPTP protocol. G808 supports multiple authentication methods such as tunnel password authentication and CHAP, and supports MPPE and L2TP OVER IPSEC encryption way. User can add a new interface with L2TP protocol by **3.2.12.1PPTP Client** way and configure by Web Server as follow:

×	Status	Common Configuration			
>	Services	General Setup Advanced Settings Firewall Settings			
~	Network				
	Interfaces	Auth Type No Authby T			
	APNSET	Set Static Ip MSChapV2 MSChapV2 EAP PAP CHAP			
	IPSECSET	L2TP OVER IPSEC			
	Wifi	Enable			
	DHCP and DNS	Enable IPv6 negotiation on logotiation by the PPP link			
	Hostnames				
	Static Routes	Use default gateway 🛛 🕜 If unchecked, no default route is configured			
	Diagnostics	Use gateway metric 0			
	QoS	Custom Subnet Mask 🔲 🍘 If unchecked, default Subnet Mask is 255.255.255.255			
	Load Balancing	Ellabled			
	Firewall	Use DNS servers 🕜 😰 If unchecked, the advertised DNS server addresses are ignored advertised by peer			
	System	LCP echo failure threshold 3			

Diagram 3.2.12.2-1 L2TP Client configuration 1

![](_page_36_Picture_0.jpeg)

Be Honodi, Bo Beat	USR	-G808 User Manual	Technical Support: h.usriot.com
> Status	Common Configuration	n	
> Services	General Setup Advanc	ed Settings Firewall Settings	
✓ Network			
Interfaces	Auth Type	No Authby 🔻	
APNSET	Set Static Ip		
IPSECSET	Tunnel Auth Password	2	1
Wifi	Enable		
DHCP and DNS	Tunnel Auth Password		
Hostnames		Character: 1-16	
Static Routes	Enable IPv6 negotiation on the PPP link		
Diagnostics	Use default dateway	🖉 🧑 If unchecked no default rou	te is configured
QoS	and a second gaterialy		te is configured
Load Balancing	Use gateway metric	0	
> Firewall	Custom Subnet Mask Enabled	🔲 👩 If unchecked, default Subnet	t Mask is 255.255.255.255
> System			
	Use DNS servers	If unchecked, the advertised	DNS server addresses are ignored

Diagram 3.2.12.2-2 L2TP Client configuration 2

### Note:

Subnet and LCP setting way can setting according to the notice

When you choose the L2TP OVER IPSEC encryption, the IPSEC configuring can refer the IPSEC.

### 3.2.12.3. IPSEC

IPSEC protocol isn't a separate protocol. It gives a complete architecture of network data security on the IP layer and application layer which includes Network Authentication Protocol AH, ESP, IKE and some algorithms for network authentication/encryption. AH protocol and ESP protocol are used to provide security service, IKE protocol is used to key exchange.

User can configure IPSEC by Web Server as follow:

![](_page_37_Picture_0.jpeg)

Technical Support: h.usriot.com

USR-G808	Configuration	
	conngulation	
> Status	General Setup Advance	ed Settings Connect Log
> Services	Connect Ture	Not to Not Made
✓ Network	Connect Type	Net-to-Net Mode
Interfaces	Transport Type	Road Warrior Mode
APNSET	Function Type	Client VPN 🔻
IPSECSET	Connect Name	
Wifi		
DHCP and DNS	Local Interface	ian •
Hostnames	Local Subnet	
Static Routes		Subnet expressed as network/netmask, e.g. 10.10.10.0/24
Disquestias	Local ID	
Diagnostics		ID expressed as IPv4 address e.g. 10.10.10.10,
QoS		or as fully-qualified domain name preceded by @ e.g. @domain
Load Balancing	Remote Address	

#### Diagram 3.2.12.3-1 IPSEC Configuration

1. Connect type: net to net mode(station to station or gateway to gateway), road warrior mode (terminal to station or PC to gateway)

- 2. Transport type: tunnel or transport, can be select
- 3. Function type: including VPN client and VPN server
- 4. Connect name: the name of this connection, the unique
- 5. Local interface: the local address passed, can choose the WAN,4G1,4G2
- 6. Local subnet: IPSEC local protection subnet and masks name, if choose the client of road warrior, no need to fill.
- 7. Local ID: tunnel local mark, can be IP or domain name,add @ when customize the domain name.
- 8. Remote address: the remote IP or address
- 9. Remote subnet: the terminal subnet and masks
- 10. Remote mark: tunnel remote mark, can be IP or domain name,add @ when customize the domain name

![](_page_38_Picture_0.jpeg)

Technical Support: h.usriot.com

	General Setup Advanc	ed Settings Connect Log	
R-G808	DPD Enable		
atus	DPD Delay	30	
acus		Onit: second, Range: 1-360	0, Default: 30
ervices	DPD Timeout	120	
etwork		O Unit: second, Range: 1-288	00, Default: 120
terfaces	DPD Action	Restart_by_peer •	
PNSET		Ø Default: restart_by_peer	
SECSET	IKE Algorithm	3DES-SHA1	
ifi	IKE Life Time	28800	
HCP and DNS		Onit: second, Range: 1-864	100 , Defalut: 28800
ostnames	SA Type	ESP •	
atic Routes	ESP Algorithm	3DES-SHA1 V	
agnostics			
oS	ESP Life Time	3600	

- 1. DPD enable: enable this function or not,  $\sqrt{m}$  means enable
- 2. DPD delay: setting connection testing interval
- 3. DPD timeout: setting connection testing timeout.
- 4. DPD action: setting connection testing operating
- 5. IKE algorithm: the first step including IKE encryption way, completely solution and DH exchange arithmetic
- 6. IKE life cycle: setting the IKE life cycle, the unit is second, default is 28800
- 7. SA type: in the second step can choose the ESP and AH.
- 8. ESP algorithm: choose the correspond way to encryption and complete solution
- 9. ESP life time: setting ESP life cycle, unit is S, default is:3600
- 10. Mode:negotiation mode default is main mode, can choose the aggr mode
- 11. Session key forward encryption(PFS): enable PFS if  $~\sqrt{}$
- 12. Auth by: current support enjoy the key to certification.

#### Note:

Configuring successful, mark it in the ISAKMP SA established of the connection log; which is mean you have succeed to build.

### 3.2.12.4. OPENVPN Client

OPENVPN is based on Openssl library. It supports bidirectional authentication based on certificate, that's to say Client needs to certificate Server and Server needs to certificate Client.

User can add a OPENVPN interface and configure it by Web Server as follow. Protocol can choose TUN(route mode) or TAP(bridge mode).

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![](_page_39_Picture_0.jpeg)

Technical Support: h.usriot.com

	JSR-G808
	Status
~	Network
C	Interfaces APNSET
	IPSECSET
	Wifi DHCP and DNS
ł	lostnames
Sta	tic Routes
Qc	s
Load I	Balancing

#### Diagram 3.2.12.4-1 OPENVPN Client configuration

	Common Configuration	n		
USK-G808	General Setup Advance	ed Settings	Firewall Set	tings
<ul><li>Status</li><li>Services</li></ul>	Status		tun-text	<b>RX</b> : 0.00 B (0 Pkts.) <b>TX</b> : 0.00 B (0 Pkts.)
<ul> <li>Network</li> </ul>	Protocol	TUN	¥	
APNSET	TCP/UDP Network	UDP	¥	
IPSECSET	Port	1194		
Wifi	Local Interface	lan	•	
DHCP and DNS	Local Tunnel Address			
Hostnames	Remote Address			
Static Routes	- Reinote Address			
Diagnostics	Remote Tunnel Address			
QoS				

### Diagram 3.2.12.4-2 General Setup

#### Basic parameters introduce

- 1. Protocol: can operating the TUN or TAP
- 2. Tunnel protocol: UDP/TCP
- 3. Port: OPENVPN client port listening port
- 4. Remote interface: WAN ,4G1, 4G2
- 5. Remote address: server IP or domain name
- 6. Local tunnel address:can setting the tunnel address of this port, e.g.192.168.10.1, default server distribute if not fill
- 7. Remote tunnel address:can setting the tunnel address of this port, e.g.192.168.10.1, default server distribute if not fill

![](_page_40_Picture_0.jpeg)

Be Honest, Do Best !	USR-G808 User Manu	ual Technical Support: h.usriot.com
	General Setup Advanced Settings Firewall S	ettings
	Encryption Standard Blowfish CBC *	
> Status	Use LZO Compression	
> Services	Keepalive Set 10 120	
V Network	Tun MTU Set 1500	
APNSET	TCP MSS 1450	
IPSECSET	TLS Auth Key	
Wifi		
DHCP and DNS	Public Server CA	
Hostnames	Certificate	
Static Routes		<i>h</i>
Diagnostics	Public Client Certificate	
OoS		/

### Diagram 3.2.12.4-3 OPENVPN Advanced Settings

#### Advance parameters introduce

- 1. Encryption standard:tunnel encryption including 5 ways:Blowfish CBC, AES-128 CBC, AES-192 CBC, AES-256 CBC, AES-512 CBC
- 2. Using LZO compression: enable or disable data transport using LZO compression
- 3. Keepalive set: default is 10 120
- 4. TUN MTU set: setting the value of MTU
- 5. TCP MSS: the maximum of the section of the TCP data.
- 6. TLS auth key: authority key of the TLS, the certification of safety transmission
- 7. Public server CA certification: server and client public CA certification
- 8. Public client certification: client certification
- 9. Client private key: client private key.

#### Note:

Before the connection of the client and server, CA certification, client certification, client private, TLS certification key, the server should provide these.

### 3.2.12.5. GRE

GRE(Generic Routing Encapsulation) protocol is the third layer tunnel protocol of VPN which adopts Tunnel technology. It can encapsulate some network layer protocols data(such as IP, IPX) to transmit on another network layer protocol. User can add a GRE interface and configure by Web Server as follow:

Create interface:

![](_page_41_Picture_0.jpeg)

Be Honest, Do Best !	USR-G808 User Manual	Technical Support: h.usriot.com
USR-G808	Create Interface	
<ul> <li>Status</li> <li>Services</li> <li>Network</li> </ul>	Name of the new interface test The allowed characters are: A-Z, a-Z, Protocol of the new interface GRE •	0-9 and
<ul><li>&gt; Firewall</li><li>&gt; System</li><li>&gt; Logout</li></ul>	Back to Overview	Submit

Diagram 3.2.12.5-1 GRE configuration

![](_page_41_Figure_3.jpeg)

#### Basic parameters introduce

- 1. Remote address: the WAN port, IP address of the remote GRE
- 2. Local address: local WAN, 4G1, 4G2, these need to fill in

![](_page_42_Picture_0.jpeg)

- 3. Remote tunnel address: remote GRE tunnel IP
- 4. Local tunnel IP: local GRE tunnel IP address

USR-G808	WAN 4G1 WAN WIRED WAN 4G2 LAN TEXT
> Status	Interfaces - TEXT
<ul> <li>Services</li> <li>Network</li> </ul>	On this page you can configure the network interfaces. You can bridge several interfaces by ticking the "bridge interfaces" field and enter the names of several network interfaces separated by spaces. You can also use <u>VLAN</u> notation INTERFACE. VLANNR (e.g.: eth0. 1).
APNSET IPSECSET	Common Configuration General Setup Advanced Settings Firewall Settings
Wifi DHCP and DNS	TTL Set 255
Hostnames Static Routes	Override MTU 1400
Diagnostics QoS	Save Apply
Load Balancing	

Diagram 3.2.12.5-3 GRE Advanced Settings

#### Advance parameters introduce

- 1. TTL setting:setting the GRE tunnel TTL, default is 255
- 2. Setting MTU; setting GRE tunnel MTU, default is 1400

### 3.2.12.6. SSTP Client

SSTP(secure socket tunnel protocol) is protocol which is applied for internet. It can create a VPN tunnel which can transmit on HTTPS. STTP can only used to remote access and doesn't support site-to- site VPN tunnel.

User can add a SSTP interface and configure by Web Server as follow:

![](_page_43_Picture_0.jpeg)

Technical Support: h.usriot.com

Create Interface	
tus Name of the new interface	test
ires	(2) The allowed characters are: A-Z, a-Z, 0-9 ar
Protocol of the new work interface	SSTP
all	
S Back to Overview	

Diagram 3.2.12.6-1 SSTP Client configuration

	Common Configuratio	n		
> Status	General Setup Advanc	ed Settings	Firewall Settings	10
> Services				
✓ Network	Status	ssta-te	<b>RX</b> : 0.0	00 B (0 Pkts.) 10 B (0 Pkts.)
Interfaces		33() (0		0 0 (0 1 113)
APNSET	Protocol	SSTP	Ŧ	
IPSECSET				
Wifi	SSTP Server			
DHCP and DNS	PAP/CHAP username			
Hostnames	PAP/CHAP password			2
Static Routes				
Diagnostics			Save Apply	
QoS		-		
Load Balancing				

#### Diagram 3.2.16-2 General Setup

### Basic parameters introduce

- 1. SSTP server: SSTP server IP or domain name
- 2. PAP/CHAP username: SSTP username
- 3. PAP/CHAP pass word:SSTP password

### Note

![](_page_44_Picture_0.jpeg)

Advanced settings please refer to PPTP

### 3.2.13. Static Routes

Here are some parameters for the static router.

Name	Means	备注
Interface	The port for router rule perform	eth0.2(wired WAN port)
Remote address	The address of the destination you	192.168.1.0
	want to access	
Subnet masks	The subnet masks of the	255.255.255.0
	destination to access	
Gateway	The address to transport	192.168.0.202
Metric	Number of packet jumps	Fill O
MTU	The max transmission	1500

#### Form 3.2.13-1 Static Router Parameters

Static router describe the data package router rule on the Ethernet.

#### ■ Static router using the application

Testing environment, two router A and B, like the diagram:

![](_page_44_Figure_11.jpeg)

#### Diagram 3.2.13-1 Static Router List.

Both the WAN of the A and Bin the net of the 192.168.0.0, the LAN port of the router A is subnet:192.168.2.0, and router B is 192.068.1.0.

The create a route on the router A, so when we access the 192.168.1.X, then transfer to router B. Set the static route on the A

![](_page_45_Picture_0.jpeg)

	Be Honest, Do Best !		U	USR-G808 User Manual		Techr	Technical Support: h.usriot.con		
>	Status	*			070				
>	Services		Static IPv4 R	outes					
Y	Network								
	Interfaces		Interface	Target	IPv4- Netmask	IPv4-Gateway	Metric	MTU	
	APNSET			Host-IP or	if target is a				
	IPSECSET			Network	network				
	Wifi	4	wan_wired <b>T</b>	192.168.2.0	255.255.255	192.168.4.1	0	1500	💼 Delete
	DHCP and DNS		1						
	Hostnames	3	🔂 Add						
2	Static Routes		Static IPv6 R	outes					
	Diagnostics								
	<u>QoS</u>		Interface		Target		IPv6-Gatewa	y Metric	MTU
	Load Balancing			IPv6-Add	ress or <mark>Networ</mark> l	k (CIDR)			
	Firewall				<b>T</b> ( 1				
	System				I NIS SECTI	on contains no va	iues yet		
>	Logout		🔁 Add						

Diagram 3.2.13-1 Static Routes Configuration

On the PC, we ping the 192.168.1.1( the IP of the router B)

C: VU	sers Administrator>ping 192.168.1.1
正来来来	Ping 192.168.1.1 具有 32 字节的数据: 192.168.1.1 的回复: 字节=32 时间=4ms TTL=63 192.168.1.1 的回复: 字节=32 时间=2ms TTL=63 192.168.1.1 的回复: 字节=32 时间=15ms TTL=63

Diagram 3.2.13-2 Router Function Testing

Then the static route is work, otherwise we can nit access the LAN of the B from the PC. Then if we also want to access the PC5 under the router B, we should do as below:

Set the firewall of the router B and open the transfer from WAN to LAN. In this way, the data package from the WAN port can also be transfer into the LAN of the router B.

After the firewall setting, you can access to the PC5. The below picture shows it.

C: Wsers Adminis	trator>ping 192.16	58.1.7	
正在 Ping 192.16 来自 192.168.1.7 来自 192.168.1.7	8.1.7 具有 32 字节 的回复: 字节=32 E 的回复: 字节=32 E	5的数据: 时间=6ms 时间<1ms	TTL=255 TTL=255

Diagram 3.2.13-3 Router Function Testing 2

Note::default no static router, before using the function, please according to the detailed requirement.

![](_page_46_Picture_0.jpeg)

### 3.2.14. Firewall

### 3.2.14.1. Basic Setting

Default two firewall rule.

USR-G808	Enable Shivinood protection							
> Status	Input	accept •						
> Services	Output	accept •						
> Network	Forward	reject 🔻						
✓ Firewall								
General Settings								
Port Forwards	Zones							
Traffic Rules				O Hand	Fernand	Manualian	and downline	
Custom Rules	201	he ⇒ Forwardings	Input	Output	Forward	wasquerading	MSS clamping	
Restricting access								
rate-limiting	lan: l	an: 🕎 🙊 🔿 🗰 wan	accept 🔹	accept *	accept 🔹			Edit
> System								Delete
> Logout								🗹 Edit
	wan: wan_wired: 🕎 wa	an_4g1: 🖉 wan_4g2: 🛃 ⇒ REJECT	accept *	accept •	reject 🔹	2	V	a Delete
	🔂 Add							
		S	ave Apply	Y				

Diagram 3.2.14.1-1 Firewall Setting Webpage

Noun introduce:

- Input: the data package of the router's IP
- Output: the package router will send
- Masquerading: IP masquerading automatically, which is meaningful for the WAN port and 4G port, the masquerading for IP when access the external net.
- MSS clamping: limit the large of the MSS, generally it is 1460.

1. Rule1

The input and forward from LAN to WAN, default is accept.

If the data package will access the WAN from the LAN, so the rule allow data package from the LAN to WAN: this is forward.

Open the webpage of the router when you under the LAN: this is input

The router access the external net, like NTP: this is output

2. Rule2

WAN, 4G1 and 4G2 interface, default receive the input and output, reject the forward

If there is input data package and it will be allowed. Such as someone will login the webpage of the router from the WAN.

Same as the input, the output will be allow if access the external net from he WAN or 4G of the router.

As to the forward data package, forward the data package from the WAN to 4G is not allowed.

For example:

If add a new net interface, just like create a VPN interface, then you should add a rule to access the external.

![](_page_47_Picture_0.jpeg)

### 3.2.14.2. Port Forwards

#### 1. Function

This function can allow PC from internet access PC or service in private LAN. User can configure this function by Web Server as follow:

Firewall - Po	ort Forwards						
Port forwardin within the priv	g allows remote cor ate LAN.	nputers on	the Intern	et to conn	ect to a specific co	m <mark>puter o</mark> r	service
Port Forward	İs						
Name	Match		Forward 1	to	Enable	Sc	ort
	7	his section	contains n	o values ye	et		
		Ne	w port fo	rward:			
Name	Protocol	External zone	External port	Internal zone	Internal IP address	Internal port	
test	TCP+UDP •	wan 🔻	100	lan 🔻	192.168.1.1 •	100	🕻 Add
	Port forwardin within the priv Port Forward Name	Firewall - Port Forwards         Port forwarding allows remote conwithin the private LAN.         Port Forwards         Name       Match         Name       Port forwards         Trees       7	Firewall - Port Forwards         Port forwarding allows remote computers on within the private LAN.         Port Forwards         Name       Match         This section of the protocol         Name       Protocol         External zone         test       TCP+UDP *         wan *	Name       Match       Forward mail for the section contains of the section c	Name       Match       Forward to         This section contains no values yet       New port forward:         Name       Protocol       External       External       Internal         test       TCP+UDP       wan < 100	Firewall - Port Forwards         Port forwarding allows remote computers on the Internet to connect to a specific convition the private LAN.         Port Forwards         Name       Match       Forward to       Enable         This section contains no values yet         Name       Protocol       External       Internal       Internal IP address         test       TCP+UDP       wan * 100       Ian * 192.168.1.1*	Name       Match       Forward to       Enable       Solution         Name       Match       Forward to       Enable       Solution         This section contains no values yet         Name       Protocol       External       Internal       Internal IP       Internal port         test       TCP+UDP +       wan +       100       Ian +       192.168.1.1 +       100

### Diagram 3.2.14.2-1 Port Forwards Configuration 1

After setting the rule, then click the add on the right, then it will displayed in the rule.

ISR-G808	Firewall - P	ort Forwards						
Status	Port forwardi	ng allows remote computers on th	e Internet to conne	ct to a specific co	mputer or servi	e within the priva	ite LAN.	
Services	Port Forwar	ds						
Network Firewall	Name	Match		Forward	to	Enable	Sort	
General Settings Port Forwards Traffic Rules	test	IPv4-TCP, UDP From <i>any host</i> in <i>wan</i> Via <i>any router IP</i> at port <i>100</i>	IP	9 <i>192.168.1.172</i> , p	ort <i>100</i> in <i>lan</i>	×	•	💼 Delet
istom Rules				New port forv	vard:			
estricting access te-limiting		Name	Protocol	External Externation	nal Internal t zone	Internal IP address	Internal port	
ystem		New port forwa	TCP+UDP *	wan 🔹	lan 🔹	٠		🗘 Add
gout				Save Ap	pły			

Diagram 3.2.14.2-2 Port Forwards Configuration 2

Then save and apply to make it work.

192.168.1.172 is the PC under the LAN port of the router. After it works, the 100 port of the address that is under

![](_page_48_Picture_0.jpeg)

Technical Support: h.usriot.com

the same segment of the WAN port can build connection withe the 200 port under 192.168.1.172 of the WAN port. **Note:** default no port forward.

### 2. Forward on the 4G interface

Environment	Content	Instr
Router	G808* 1	External net access the device under the 4G router
	SIM card *1	APN (fixed IP: 10.201.20.47)
PC	IP of the PC in LAN	192.168.1.247
	Listening port	12129

### Form 3.2.14.2-1 Related Parameters

Firstly, fill the APN address on the router:

USR-G808	APN Settings		
> Status	Settings for APN address, u form correctly	sername and password, if you go	ning to use an APN card, please fill in the
> Services			
<ul> <li>Network</li> </ul>	SIM1 Configuration		
Interfaces			
APNSET	APN LTE Config	SIM Info	
IPSECSET	APNAddress	AutoCheck 🔹	
Wifi	Username		
DHCP and DNS			
Hostnames	Password		
Static Routes	AuthType	PAP •	
Diagnostics	Check Registered	30	
QoS	(Seconds)		
Load Balancing	WAN Priority	wanfirst 🔻	
> Firewall	Reference Mode	Custom 🔻	
> System	Reference Address(Can	8888	
> Logout	only enter the IP)		

Diagram 3.2.14.2-3 4G net Port Forward

Then, add the related port forward

![](_page_49_Picture_0.jpeg)

USR-G808	Firewall - Po	rt Forwards			
> Status	Port forwarding within the priva	j allows remote con ite LAN.	nputers on the Internet to co	onnect to a specific co	mputer or service
Services	L				
> Network	Port Forward	S			
<ul> <li>Firewall</li> </ul>	Name	Match	Forward to	Enable	Sort
General Settings					
Port Forwards		7/	his section contains no value	es vet	
Traffic Rules				1	
Custom Rules			New port forward:		
Restricting access rate-limiting	Name	Protocol	External External Intern zone port zon	nal Internal IP e address	Internal port
> System	test	TCP+UDP *	wan 🔹 100 lan	• 192.168.1. <mark>1</mark> •	100 🔂 Add
> Logout		올린		112	
			Save Apply	Ĺ	
	Dia	gram 3.2.14.2-4	4G net Port Forward		

At last, restart the router .

Then, check the router.

### 3.2.14.3. Traffic rules

Traffic rules can filter the special internet data format selectively and prevent the internet from access. Strengthen the safety via this rules. The firewall is wide application range. Here introduced some common application.

1. IP address black list

Enter the name in the new forward rule then add and edit

> Status						
Services	New forward rule:					
> Network	News	Destina				
~ Firewall	Name Sc	Jurce zone Desuna	uon zone			
General Settings	New forward rule lan	* wan	<ul> <li>Add a</li> </ul>	nd edit		
Port Forwards						
Traffic Rules	Source NAT					
Custom Rules	Source NAT is a specific	form of masquerading	which allows fine gra	ined control over the source	IP used for outgoing traffic, for	example to map multiple
Restricting access	WAIN addresses to intern	iai subilets.		* - t <sup>1</sup>	multi-	
rate-limiting	Name	Match	n	Action	Enable	Sort
> System						
> Logout			This section	i contains no values yet		
	New source NAT:					
	Name	Source zone	Destination zone	To source IP	To source port	
	New SNAT rule	lan 🔹	wan 🕶	Please choose 🔹	Do not rewrite	S Add and edit

![](_page_50_Picture_0.jpeg)

### Diagram 3.2.14.3-1 Firewall Black List 1

In the webpage turn out, source zone:LAN, source MAC address and source address:any( if you only limited the pointed IP access the point IP, please fill the IP address and MAC address.

		and destination hosts.	
	USR-G808	Rule is enabled	Ø Disable
>:	Status	Name	ip-reject
>	Services	Restrict to address family	IPv4 and IPv6 •
>	Network	Protocol	TCP+UDP •
~	Firewall	Match ICMP type	any A
	General Settings	haten tehr type	
	Port Forwards	Source zone	O Any zone
	Traffic Rules		🖲 lan: lan: 📰 🛞
	Custom Rules		
	Restricting access		wan: wan_wired: 👷 wan_4g1: 🔬 wan_4g2: 🔬
	rate-limiting	Source MAC address	any 🔹
>	System	Source address	any
	Logout	Source port	any
		Source porc	
		Destination zone	O Device (input)
			Any zone (forward)
			🔍 lan: 📰 🙊

#### Diagram 3.2.14.3-2 Firewall Black List 2

Select the WAN in the zone, remote address fill the IP forbidden to access. Select the reject, save and application, then save and apply

![](_page_51_Picture_0.jpeg)

Be Honest, Do Best !	USR-G808	3 User Manual	Technical Support: h.usriot.com		
USR-G808	Source MAC address	any	•		
	Source address	any	*		
> Status	Source port	any			
> Services	Source por				
> Network	Destination zone	Device (input)			
<ul> <li>Firewall</li> </ul>		Any zone (forwar	d)		
General Settings		O lan: lan: 🗺 🛞			
Port Forwards			The second state of the second state of the		
Traffic Rules		wan: wan_wired	: 2 wan_4g1: 2 wan_4g2: 2		
Custom Rules	Destination address	192.168.1.172 (00:25:4	AB ¥		
Restricting access	Destination port	any			
rate-limiting	Action	reject .			
> System	Action	Teject			
> Logout	Extra arguments	Passes additional around	nents to intables. Use with carel		
		Tasses additional argun	inents to iptables, ose with care.		
	S Back to Overview	1	Save Apply		
	Diagram 3.2.14.3-3	Firewall Black List 3			

<ul> <li>Status</li> <li>Services</li> <li>Network</li> </ul>	IPv6-IC Allow- destina ICMPv6- exceed Forward	MP with types <i>echo-ra ation-unreachable, pac</i> <i>ded, bad-header, unkn</i> From <i>any host</i> ir To <i>any host</i> in <i>an</i>	equest, echo-reply, iket-too-big, time- own-header-type o wan y zone	Accept forward and limit to 1000 pkts. per second	<b>X</b>	Edit     Delete
Firewall General Settings Port Forwards Traffic Rules	ip-reject	Any traffic From <i>any host</i> i To IP <i>192.168.1.17.</i>	n <i>lan</i> 2 in <i>wan</i>	Refuse forward	S	Edit 💼 Delete
Custom Rules	Name	Protocol	External port			
Restricting access	New input rule	TCP+UDP •	External port	🔂 Add		
> System						
> Logout	New forward rule	e:				

![](_page_51_Figure_3.jpeg)

![](_page_52_Picture_0.jpeg)

Technical Support: h.usriot.com

### 2. IP address white list

Firstly, add the IP or the MAC address traffic rule of the white list, enter the name of the rule, the click add and edit.

USR-G808	Allow- destination-unreachable, packet-too-big, time- forward ICMPv6- exceeded, bad-header, unknown-header-type and limit to Forward From any host in wan 1000 pkts. To any host in any zone per second
> Status	Open ports on router
<ul> <li>Services</li> <li>Network</li> </ul>	Name Protocol External port
Firewall     General Settings	New input rule TCP+UDP <b>*</b>
Port Forwards Traffic Rules	New forward rule:
Custom Rules Restricting access rate-limiting	ip-allow Ian v wan v S Add and edit
> System > Logout	Source NAT Source NAT is a specific form of masquerading which allows fine grained control over the source IP used for outgoing traffic, for example to map multiple WAN addresses to internal subnets.
	Name Match Action Enable Sort

![](_page_52_Figure_6.jpeg)

Select" lan" in the source zone and source address and source MAC address select"any" (if you want to allow point IP access the pointed external net, please fill the IP or the MAC address) as below:

![](_page_53_Picture_0.jpeg)

Technical Support: h.usriot.com

USR-G808	Firewall - Traffic Rules - ip-allow
> Status	This page allows you to change advanced properties of the traffic rule entry, such as matched source and destination hosts.
<ul> <li>Services</li> <li>Network</li> </ul>	Rule is enabled 🛛 🖉 Disable
✓ Firewall	Name ip-allow
General Settings Port Forwards Traffic Rules Custom Rules Restricting access rate-limiting	Restrict to address family IPv4 and IPv6 • Protocol TCP+UDP • Match ICMP type any • •
> System	
> Logout	wan: wan_wired: 👷 wan_4g1: 🔬 wan_4g2: 🔬
	Source Address any  Source address any  Source port any

Diagram 3.2.14.3-5 Firewall White List 2

Destination zone please choose "wan" and fill the IP which is allowed to access, action access accept, then save and apply.

![](_page_54_Picture_0.jpeg)

Be Honest, Do Best !	USR-G80	08 User Manual	Technical Support: h.usriot.com
USR-G808	Source MAC address	any	*
	Source address	any	×
> Status	Source port	any	
> Services	Destination zone		
> Network	Descination 2016	O Device (input)	
✓ Firewall		O Any zone (forw	ard)
General Settings		0 lan: lan: 🕎 👷	
Port Forwards		wan: wan_wire	ed: 🕎 wan_4g1: 🧕 wan_4g2: 🛃
Traffic Rules Custom Rules	Destination address	192.168.1.172 (00:25	:AB <b>*</b>
Restricting access	Destination port	any	
rate-limiting			
> System	Action	accept *	
> Logout	Extra arguments	Passes additional arguing	iments to intables. Use with carel
	Back to Overview		Save Apply
	Diagram 3.2.14.3-6	Firewall White List 3 e, packet-too-pig, time-	Torward
USR-G808	ICMPv6- exceeded, bad-header, Forward From any To any host	unknown-header-type ar host in wan 1 in any zone p	nd limit to 🕑 🔹 🔹 🧰 💼 Delete 1000 pkts. er second
Status	Anyt	traffic	Accept
Services	ip-allow From <i>any</i> To IP <i>192.160</i>	<i>host</i> in <i>lan</i> 8.1.172 in wan	forward
Network			<u></u>
<ul> <li>Firewall</li> </ul>	Open ports on router:		
General Settings	Name Protoco	External port	
Traffic Rules	New input rule TCP+UDP		Add
Custom Rules			
Restricting access			

> Logout

> System

rate-limiting

wan

Destination zone

•

📓 Add and edit...

Source zone

Name

New forward rule

![](_page_55_Picture_0.jpeg)

![](_page_55_Picture_1.jpeg)

#### Diagram 3.2.14.3-7 Firewall White List 4

### 3.2.14.4. Custom Rules

Custom rules can realize the above function. Enter the command to operating. Currently supports Iptables command. If you need, please refer to llinux Iptable related command.

Currently, there is no defined rule

### 3.2.14.5. Restricting access

This function can set specified domain name into black list or white list.

When the black list was select, the devices connected to the router can not access the domain name in the black list, but they can access others.

When the white list was select, the device connected to the router can only access to the domain name in the white list.

Both black list and white list can set more than one.

**Note**: the default is disable, configuring according to the detailed requirement.

1. Domain name black list

At first, choose the black list in the ways to restrain, add the name and correct domain name then click to save, the rule will work immediately and the devices under the router will not access it. If you add black list but fill no name in it, it is meaning the device can access all the domain name

2. Domain name white list

At first, choose the white list in the ways to restrain, add the name and correct domain name then click to save, the rule will work immediately, and the device can only access the domain name in the list. If adding black list but fill no name in it, it is meaning the device can not access any.

	Restricting access		
USR-G808	Input domain keyword, for exan	ple:baidu.com	
	<u>.</u>		
> Status			
> Services	ways to restrain	lose 🔻	
Network		lose	
Network	w	hite list	
<ul> <li>Firewall</li> </ul>			
General Settings	name	domain name	Enable
Port Forwards			
Traffic Pulac			
frame Rules		This section contains no values yet	
Custom Rules			
Restricting access		New Greenell unles	
rate-limiting		New inewait fulle.	
). Combon	nam	e domain name	
System	New rule		
> Logout	New Tor		

Diagram 3.2.14.5-1 Restricting access configuration

![](_page_56_Picture_0.jpeg)

### 3.2.14.6. Rate-limiting

This function can do network speed control for specified IP and MAC. User can configure this function by Web Server as follow:

Note: default no control

08	Restrict access to t	the Internet speed of ip	)	
	start ip	end ip	downstream (KB/S)	
tus				
s			This section contains no	o values yet
ork				
all			New firewall re	ule:
eral Settings	start ip	end ip	downstream (KB/S)	upstream (KB/S)
Forwards				
Forwards				
les				
Rules n Rules				
Rules ing access	Restrict access to 1	the Internet speed of p	19C	_
Rules ing access	Restrict access to 1 MAC	the Internet speed of a downstrear	n (KB/S)	
ules Rules ng access ting	Restrict access to 1 MAC	the Internet speed of p downstrear	n (KB/S)	
Rules n Rules niting	Restrict access to 1 MAC	the Internet speed of a downstrear	n (KB/S) This section contains no	o values yet
les g access ng	Restrict access to 1 MAC	the Internet speed of a downstream	n (KB/S) This section contains no	o values yet
ation 1 Tasks	Restrict access to 1 MAC	the Internet crood of a downstrear	n (KB/S) This section contains no New firewall re	o values yet ule:
ess s e	Restrict access to 1 MAC mac	downstream (KB	n (KB/S) This section contains no New firewall re	o values yet ule: n (KB/S)

#### Diagram 3.2.14.6-1 Rate-limiting configuration

Function	Parameters setting (if used)	Note
Start IP	Segment limited start IP	IPV4
Stop IP	Segment limited stop IP	IPV4
Up speed rate	Limited the max up speed rate	Unit: byte/s
Down speed rate	Limited the max down speed rate	Unit:byte/s
MAC	MAC limited	Mac address of the device
		_

Form 3.2.14.6-1 Net Control Parameters

## 3.3. Basic Function

### 3.3.1. Network Diagnosis

User can use network diagnosis function by Web Server as follow:

![](_page_57_Picture_0.jpeg)

Be Honest, Do Best !	USR-G808	User Manual	Technical Support: h.usriot.com
USR-G808	Diagnostics		
> Status	Network Utilities		
> Services			
✓ Network	IPv4 V II Ping	Traceroute	Nslookup
Interfaces			
APNSET			
IPSECSET			
Wifi			
DHCP and DNS			
Hostnames			
Static Routes			
Diagnostics			
QoS			
Load Balancing			

### Diagram 3.3.1-1 Network diagnosis configuration

- ✓ Ping: User can do PING test to a specific address in G808.
- $\checkmark$  Traceroute: Can acquire routing path to visit a specific address.
- ✓ Nslookup: Can analyse DNS into IP address

### 3.3.2. Host Name and Time Zone

G808 default host name is USR-G808 and default Time Zone is Beijing time zone.

User can configure host name and Time Zone by Web Server as follow:

USR-G808	System
	Here you can configure the basic aspects of your device like its hostname or the timezo
atus	
Services	System Properties
twork	
irewall	General Settings Logging Language and Style
System	Local Time Fri Oct 27 18:29:42 2017 📵 Sync with browser
ystem	
dministration	Hostname USR-G808
Scheduled Tasks	Timezone Asia/Beijing v
Backup / Flash Firmware	
eboot	
out	Time Synchronization
	Enable NTP client 🕑
	Provide NTP server

Diagram 3.3.2-1 Host Name and Time Zone Configuration

### Note:

- 1. Host name :default USR-G808
- 2. Time Zone:default is east eight area

![](_page_58_Picture_0.jpeg)

### 3.3.3. Web Server Password

Default password is root, this password is used to enter Web Server. User can change password by Web Server as follow:

R-G808		
	Router Password	
	Changes the administrator password for acce	ssing the device
Status		
Services		
Network	Password	a B
ewall	Confirmation	A
System	Commadon	IP.
item		
Administration		
Administration		Save & Apply
heduled Tasks		
ckup / Flash Firmware		
boot		
Logout		

![](_page_58_Figure_6.jpeg)

### 3.3.4. Scheduled Tasks

USR-G808	Scheduled Tasks
	This is the system crontab in which scheduled tasks can be defined.
Status	
Services	*/20 * * * / etc/itedial */20 * * * / etc/init.d/Net_4G_Check.sh
Network	44 4 * * * reboot -f
Firewall	<pre>0 */4 * * * /etc/init.d/sysntpd start; sleep 40; /etc/init.d/sysntpd stop;</pre>
✓ System	
System	
Administration	
Scheduled Tasks	
Backup/Upgrade	Submit Reset
Debeet	
Keboot	
Logout	
	Diagram 3.3.4-1 Scheduled Tasks
Shell command to study	-
Parameters divide into min, ho	bur, day, week, year, as below

\*/1 \* \* \* \* echo crontest:`date` > /tmp/cron.log

Every two minutes, fill the current date in the cron.log under the /tmp

![](_page_59_Picture_0.jpeg)

Reboot to restart this function; or send data to some serial port, such as: echo 123 > /dev/ttyS1 Note:

In this function, please do not delete the original tasks for the router normal running.

### 3.3.5. Restore to Default Factory Settings

- Hardware restore:
- $\checkmark$  Press Reload button over 5 seconds and release, G808 will restore default settings and reset.
- ✓ Work after restart, SIM 2 LED and mandatory LED,4LAN ,WAN port light for 1s, then off.
   User can also restore default settings by Web Server as follow:

USR-G808	Flash operations
> Status	Actions
> Services	Backup / Restore
> Network > Firewall	Click "Generate archive" to download a tar archive of the current configuration files. To reset the firmware to its initial state, click "Perform reset" .
✓ System	Download backup: 📵 Generate archive
System Administration	Reset to defaults: OPerform
Scheduled Tasks	To restore configuration files, you can upload a previously generated backup archive here.
Backup/Upgrade	Restore backup: 选择文件 未选择任何文件 🕡 Upload archive
Reboot > Logout	

Diagram 3.3.5-1 Restore default settings

Click the bottom to restore

#### Note:

- $\checkmark$  This function is same as the hardware reload
- ✓ Download backup: download current parameters files of the router to backup
- ✓ Upload backup: put the files backuped into the router and work.

### 3.3.6. Introduce LED

20 indicators like below:

Name	Instr
Power	Supply the power and light for long time
Work	After the router work ,blink every 2s
WAN	WAN port wired and the led light, blink when communication
LAN1-4	LAN port wired and the led light, blink when communication
WLAN	When WIFI network work and keep light, blink if station access or the data transport.
2G instr	LTE modem 1 work in 2G
(SIM1)	
3G instr	LTE modem 1 work in 3G
(SIM1)	
Signal	The more SIM card 1signal instr light, the more strength the signal is.

![](_page_60_Picture_0.jpeg)

Technical Support: h.usriot.com

strength	
1-4(SIM1)	
2G instr	LTE modem 2 work in 2G
(SIM2)	
3G instr	LTE modem 2work in 3G
(SIM2)	
Signal	The more SIM card 1signal instr light, the more strength the signal is.
strength	
1-4(SIM2)	

### Form 3.3.6-1 Indicator Default Parameters

Instr:

- $\checkmark$  WAN and LAN indicator show the WAN and LAN running status
- $\checkmark$  Insert the net cable and the remote net device also work, the WAN/LAN indicator will blink.
- ✓ Power light on all the time
- ✓ When working in the 4G, 2Gand 3G will also light.

### 3.3.7. Upgrade Firmware Version

Upgrade by Web Server as follow:

	Perform reset .
USR-G808	Download backup: Generate archive
	Reset to defaults: 🛛 @ Perform
> Status	
> Services	To restore configuration files, you can upload a previously generated backup archive here.
> Network	Restore backup: 选择文件 未选择任何文件 🕼 Upload archive
> Firewall	
∽ System	
System	Flash new firmware image
Administration	Upload a proper image here to replace the running firmware. Check "Keep settings" to retain the current configuration.
	Keep settings:
Scheduled Tasks	Check firmware: 🕑
Backup/Upgrade	
Reboot	Image: ZEF+XI+ #ZEF+ITPXI+
> Logout	

Diagram 3.3.7-1 Upgrade Firmware Version

Note:

- The whole upgrading process will last about 2 minutes, user can enter Web Server after about 2 minutes.
- User can choose saving settings.
- User should keep powering up and LAN/WIFI connection during the whole upgrading process.

### 3.3.8. Reset

Reset time is about 40~60 seconds. Reset by Web Server as follow:

![](_page_61_Picture_0.jpeg)

USR-G808 User Manual Technical Support: h.usriot.com USR-G808 System Reboot Status Perform reboot Services Network Firewall System Please wait: Device rebooting... System Administration Scheduled Tasks Backup/Upgrade Reboot Logout

![](_page_61_Figure_2.jpeg)

3.3.9. NTP

	Local Time	Fri Apr 12 05:39:21 2019	Sync with browser
> Status	Hostname	USR-G808	
<ul> <li>Services</li> <li>Network</li> <li>Firewall</li> </ul>	Timezone	America/New York	*
~ System	Time Synchronization		
Administration Scheduled Tasks Backup/Upgrade Reboot	Enable NTP client Provide NTP server NTP server candidates	O.openwrt.pool.ntp.org     1.openwrt.pool.ntp.org	<u>a</u>
> Logout		2.openwrt.pool.ntp.org 3.openwrt.pool.ntp.org	
	Diagram 3 3 9 1 NTI	Enable	

The router supports NTP(default enable it), and you can set the NTP server address.

![](_page_62_Picture_1.jpeg)

# 4. Configuring

## 4.1. Webpage Setting

For the first time using the G808, please configuring it. Connect the LAN of the G808 via PC or connect the WLAN ,then open Web Server and configure in the management webpage

Parameters	Defaults settings
SSID	USR-G808-XXXX
LAN interface IP Address	192.168.1.1
User name	root
Password	root
WLAN Password	www.usr.cn

Diagram 4.1-1 G808 Default Parameters

Take default parameters as example:

User can connect PC to SSID USR-G808-XXXX.

Then open browser and enter 192.168.1.1, log in with User name and Password(both are root), user can enter Web Server.

Please change language in the up right for the default language is Chinese.

USR IOT		Be Honest, Do Best!
	Authorization Required Please enter your username and password.	
	Username: root Password: Login Reset	
	JiNan Usr IOT Technology Limited http://www.usr.cn/	

Diagram 4.1-2 Web Server Login Webpage

## 4.2. Web Function

The left is a label, can set some parameters

Status

The International

![](_page_63_Picture_0.jpeg)

Be Honest, Do Best !	USR-G808 User Manual	Technical Support: h.usriot.com
	Status	
058-0000	System	
✓ Status	Hostname	USR-G808
Overview	Firmware Version	V1.0.13(EN)
> Services	Local Time	Fri Apr 12 02:42:50 2019
> Network	Uptime	0h 4m 18s
> Firewall	Load Average	1.50, 1.19, 0.54
> System		
> Logout	Memory	
	Total Available	99840 kB / 126000 kB (79%)
	Free	78380 kB / 126000 kB (62%)
	Cached	14844 kB / 126000 kB (11%)
	Buffered	6616 kB / 126000 kB (5%)
	Network	
	IPv4 WAN Status	Not connected
	IPv6 WAN Status	Not connected

### Diagram 4.2-1 Status

In this page shows the name of the device, version of firmware, current running status.

Network interface page:

vices	Interfaces		
twork	Interface Overview		
erfaces	Network	Status	Actions
NSET	LAN	Uptime: 0h 4m 26s MAC-Address: D8:B0:4C:D9:4F:30	🧟 Connect 👩 Stop
ECSET	<i>≱</i> " ( <u>***</u> ⊛) br-lan	RX: 228.91 KB (2529 Pkts.) TX: 258.10 KB (1492 Pkts.) IPv4: 192.168.1.1/24	C Edit Delete
CP and DNS		IPv6: FDD1:B494:14C5:0:0:0:0:1/60	
stnames	WAN_4G1	MAC-Address: 00:00:00:00:00:00	g Connect 🕘 Stop
tic Routes	eth1	RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.)	🛃 Edit 🧰 Delete
gnostics	WAN_4G2	Uptime: Oh Om Os	🖉 Connect 🛛 🔞 Stop
S d Balancing	eth2	MAC-Address: 00:A0:C6:00:00:00 RX: 0.00 B (0 Pkts.) TX: 32.25 KB (107 Pkts.)	🗹 Edit 🧯 Delete
wall	WAN_WIRED	Uptime: 0h 0m 0s	🖉 Connect 👩 Stop
tem	eth0.2	MAC-Address: D8:80:40:D9:4F:30 RX: 0.00 B (0 Pkts.)	🛃 Edit 📋 Delete

### Diagram 4.2-2 Interface

Webpage, main is interface device including(LAN port and WAN port setting,WIFI wireless parameters DHCP/DNS and so on. Mainly is the device operating parameters setting.

System page

![](_page_64_Picture_0.jpeg)

USR-G808		
System		
Here you can configure the b		asic aspects of your devi
> Status		
> Services System Properties		
> Network		
> Firewall General Settings Loggin	ng	Language and St
- System Local Time	Fri A	pr 12 02 <mark>:</mark> 44:47 2019
System	110	0 000
Administration	USK	-0000
Scheduled Tasks Timezone	Ameri	ca/New York
Backup/Upgrade		
Reboot		
Time Synchronization		
Logout		
Enable NTP client		
Drouide NTD corver	ä	
NTP server candidates	0.open	wrt.pool.ntp.org
	1.openw	rt.pool.ntp.org
	2.openwr	t.pool.ntp.org

#### Diagram 4.2-3 System

System page, including login password, time setting, firmware upgrade, reset and so on.

## 5. Contact Us

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![](_page_65_Picture_0.jpeg)

# 6. Disclaimer

This document provides the information of USR-G808 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.

# 7. Update History

Time	Version	Content modified
2017-7-3	V1.0.1	Built
2017-7-25	V1.0.2	Default parameters instr
2017-7-31	V1.0.3	Add the outlook diagram
2017-9-19	V1.0.4	Modify the error
2017-11-07	V1.0.5	Modify the humidity range