

USR-G806 User Manual

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USR-G806 User Manual

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1. Overview

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

1.1. Brief introduction

USR-G806 supports WAN, LAN, WLAN and 4G interface. User can access to 3G/4G network by WLAN interface or Ethernet interface.

1.2. Product feature

- One RJ45 for WAN/LAN port. 1 RJ45 for LAN port only. (10/100M)
- Support 1 WLAN(802.11b/g/n)
- Support Web Server
- Support LED to show work status
- Support Reload button to restore default settings by hardware way
- Support VPN client(PPTP/L2TP)
- Support one SIM card socket
- Support DDNS and port forwarding
- Support QoS and firewall

1.3. Band

	G806 Operating Band
	2
FDD-LTE	4
	12
	2
WCDMA	4
	5

Figure 1 Band of G806



2. Product Functions

This chapter introduces the functions of USR-G806, as the following diagram shown, you can get an overall knowledge of it.



Figure 2 Product function

2.1. Install procedure

- (1) Connect the 4G antenna and Wi-Fi antenna to the router. (Longer one is 3G/4G antenna and Shorter one is Wi-Fi antenna.)
- (2) Plug the SIM card in socket.
- (3) Power on the module by power adaptor and check the LED status.
- (4) Connect PC or mobile to the G806 router via LAN interface or Wi-Fi interface. Wi-Fi password is "www.usr.cn".
- (5) Log in Web Server of router. (Default IP address of router is 192.168.1.1, either the username and password is "root".)
- (6) Configure APN parameters according to SIM card. Some SIM card APN can be recognized automatically.(Network->APNSET)
- (7) Configure other parameters according to user applications.

2.2. APN

APN configuration by Web Server as follow:









2.2.1. Create a VPN client



User can set VPN client configuration by Web Server as follow:

2.3. Networking mode

2.3.1. WAN+LAN+4G

In this networking mode, user can access internet through WAN interface and 4G interface. WAN interface has higher priority than 4G interface to ensure communication and save 4G flows. When WAN interface occurs problems, router can change to 4G interface to connect internet. In this mode, user can also connect to router through WIFI.

To achieve this mode, user don't need to change the router's parameters. Just connect the cable to router and insert SIM card, then power the router.

Application diagram as follow:



Figure 5 WAN+LAN+4G networking



2.3.2. LAN+LAN+4G

In this networking mode, two devices can connect to router through LAN and access the Internet by 4G network. User can achieve this by Web Server as follow:

USR IOT	Be Honest, Do Best! ⊕⊄∣Engliah
USR-G806	Phy Mode
> Status	Setting the Work Mode of Ethernet Port 1(WAN/LAN):Restart to take effect!
> Services	Configuration
> Network	
> Firewall	Mode of Ethernet Port 1
✓ PhyMode	WAN/LAN LAN *
Setup_phymode	
> System	
> Logout	Save & Apply

Figure 6 Switch WAN/LAN interface

Application diagram as follow:





2.4. Common functions

2.4.1. 4G interface

G806 supports one 4G interface to access internet. Functional diagram as follow:



Figure 8 4G interface

User can configure 4G interface by Web Server as follow:

USR IOT IOT Experts				Be Hone	st, Do ro refresh on	Best! ^{中文 English}
USR-G806	Interfaces					
	Interface Overvie	ew				
> Status	Network	Status	Actions			
Services Network Interfaces	12 pptp-12	RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.)	Connect Stop Connect Edit			
APNSET IPSECSET Wifi	LAN ලූජ (දූණකාලා) br-lan	Uptime: 0h 24m 58s MAC-Address: 08:80:4C:D1:21:C1 RX: 646.60 KB (7449 Pkts.) TX: 784.10 KB (3575 Pkts.) IPv4: 192.168.1.1/24 IPv6: FD82.408C:B2B6:0:0:0:0.1/60	<pre># Connect Stop # Edit Delete</pre>			
DHCP and DNS Hostnames Static Routes	WAN_4G	Uptime: 0h 0m 0s MAC-Address: 00:A0:C6:00:00:00 RX: 10:45 KB (114 Pkts.) TX: 15:70 KB (144 Pkts.)	Connect Stop			
Diagnostics QoS > Firewall	WAN_WIRED	Uptime: 0h 0m 0s MAC-Address: D8:B0:4C:D1:21:C1 RX: 0.00 B (0 Pkts,) TX: 172.27 KB (546 Pkts,)	 Connect Stop Edit Delete 			

Figure 9 4G interface

2.4.2. LAN interface

G806 supports two LAN interface (one is WAN/LAN interface).

Default settings: One LAN interface (WAN/LAN used as WAN interface; IP address: 192.168.1.1; Subnet mask: 255.255.255.0; Open DHCP function).

User can configure LAN interface by Web Server as follow:



USR IOT JOT Experts			Be I	Honest, Do Best! AUTO REFRESH ON #\$ English
USR-G806	• Interface Interface	s Overview		
> Services	Network	Status	Actions	
Network Interfaces APNSET	PF	12 RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.)		
IPSECSET Wifi DHCP and DNS	BS ⁵ b	Uptime: 0h 30m 18s MAC-Address: D8:80 <cd1:21:c1 KX: 799.38 K8 (9006 Pkts.) TX: 1.13 MB (4725 Pkts.) TX: 1.13 MB (4725 Pkts.) IPv4: FD82:4086:E288:00:00:01/60</cd1:21:c1 	🖉 Connect 🚳 Stop	
Hostnames Static Routes Diagnostics	WA	Uptime: 0h 0m 0s MAC-Address: 00:A0:C6:00:00:00 RX: 0.00 B (0 Pkts.) TX: 530.00 B (3 Pkts.)	<pre> Connect Stop Connect C</pre>	
QoS > Firewall	WAN	Uptime: 0h 0m 0s MAC-Address: D8:80:4C:D1:21:C1 RX: 0.00 B (0 Pkts.) th0.2 TX: 208.78 KB (658 Pkts.)	2 Connect Stop	

2.4.2.1. DHCP Function

Figure 10 LAN interface

DHCP default range of distribution is from 192.168.1.100 to 192.168.1.250 and default address lease time is 12 hours. Address range and lease time can be changed.

After you enter Web Server LAN interface, you can find 'DHCP Server' on Web Server as follow:

ntus	DHCP Server	
rvices	General Setup	
twork		
ewall	Ignore interface	Olisable DHCP for this interface.
Mode	Start	100
tem		2 Lowest leased address as offset from the network address.
	Limit	150
gout		Ø Maximum number of leased addresses.
	Leasetime	12h
		8 Expiry time of leased addresses, minimum is 2 minutes (2m).
		Save & Apply

Figure 11 DHCP function

2.4.3. WAN interface

G806 supports one WAN interface and WAN interface can switch between WAN/LAN interface. WAN interface supports DHCP and Static IP, and default setting is DHCP.

User can configure WAN interface by Web Server as follow:



	Network	Status	Actions
	12		🖉 Connect 🛛 🙆 Stop
	pptp-12	TX : 0.00 B (0 Pkts.)	🗹 Edit 🥫 Delete
	_	Uptime: 0h 34m 42s	
1	LAN @ [®] (∰ ★) br-lan	MAC - Address: Db:004C(1)1211C1 RX: 874.99 KB (9758 Pkts.) TX: 1.38 MB (5445 Pkts.) IPv4: 192.168.1.1/24 IPv6: FD82:408C:828B:0:0:0:0:1/60	<pre> Connect</pre>
	WAN_4G	Uptime: 0h 0m 0s MAC-Address: 00:A0:C6:00:00:00 RX: 0.00 B (0 Pkts.) TX: 530.00 B (3 Pkts.)	 Connect Stop Edit Delete
	WAN_WIRED	Uptime: 0h 0m 0s	🛱 Connect 🔯 Stop
	ath0.2	MAC-Address: D8:B0:4C:D1:21:C1 RX: 0.00 B (0 Pkts.)	C Edit

2.4.4. WLAN interface

G806 supports at most 24 STA device connection.

Default parameters as follows:

SSID	USR-G806-XXXX(XXXX is MAC)
Password	www.usr.cn
Channel	Auto
Bandwidth	40MHz
Encryption Mode	WPA2-PSK

Figure 12 WAN interface

Figure 13 WALN default parameters

WLAN interface on Web Server as follow:

USR-G806	Wireless Overview	
> Status	802.11 b/g/n Wireless Controller	🔂 Add
> Services	Channel: 10 Bitrate: 150 Mbit/s	
V Network	SSID: USR-G806-21C1 Mode: Master BSSID: D8:B0:4C:D1:21:C0 Encryption: -	🗹 Edit 💼 Remove
Interfaces		
APNSET		
IPSECSET		
Wifi		
DHCP and DNS		
Hostnames		
Static Routes		
Diagnostics		
QoS		
> Firewall		

Figure 14 WLAN interface

After clicking "Edit" and entering WLAN interface configuration web, user can change follow parameters.

User can configure SSID on Web Server as follow:



SR-G806	
	Interface Configuration
atus	General Setup Wireless Security
rvices	ESSID USR-G806-21C1
rk	
all	Mode Access Point *
Node	Network 🕜 Tan: 💯 🙊
m	wan_4g: 🚂
ut	wan_wired:
	Ohoose the network(s) you want to attach to this wireless interface or fill out the create field to define a new network.
	Hide ESSID
	Save & Apply

Figure 15 Configure SSID

User can configure password on Web Server as follow:

	Radio on/off on 🔻
USR-G806	Network Mode 802.11b/g/n •
> Status	Channel auto
> Services	Band Width 40MHz •
> Network	
> Firewall	Interface Configuration
> PhyMode	General Seturn Wireless Security
> System	
> Logout	Encryption WPA2-PSK •
	Cipher Force CCMP (AES)
	Key 🔐
	Save & Apply

Figure 16 Configure password

Other settings on Web Server as follow:

038-0000	Wireless Network: Master "USR-G806-21C1" (ra0)				
> Status	The <i>Device Configuration</i> sec are shared among all defined	The Device Configuration section covers physical settings of the radio hardware such as channel, transmit power or antenna selection which are shared among all defined wireless networks (if the radio hardware is multi-SSID capable). Per network settings like encryption or operation			
> Services	mode are grouped in the Inte	mode are grouped in the Interface Configuration.			
> Network	Device Configuration				
> Firewall					
> PhyMode	General Setup Advance	d Settings			
> System	Status	Mode: Master SSID: USR-G806-21C1			
> Logout		Channel: 10 Bitrate: 150.0 Mbit/s			
	Radio on/off	on 🔹			
	Network Mode	802.11b/g/n 🔻			
	Channel	auto 🔻			
	Band Width	40MHz 🔻			

Figure 17 Other settings

User can close WLAN interface by changing 'Radio on/off' into off.



2.4.5. Network Diagnosis

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

USR-G806	Diagnostics			
Status	Network Utilities	Network Utilities		
> Services				
✓ Network	IPv4 V DPing	Traceroute	Nslookup	
Interfaces				
APNSET				
IPSECSET				
Wifi				
DHCP and DNS				
Hostnames				
Static Routes				
Diagnostics				
QoS				
> Firewall				

Figure 18 Network diagnosis

- > Ping: User can do PING test to a specific address in G806.
- > Traceroute: Can acquire routing path to visit a specific address.
- > Nslookup: Can analyse DNS into IP address

2.4.6. Module Name and Time Zone

G806 default module name is USR-G806 and default Time Zone is Beijing time zone.

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

USR-G806			
	System		
Chature .	Here you can configure the basic aspects of your device like its hostname or the timezone.		
Status			
> Services	System Properties		
> Network			
> Firewall	General Settings Logging Language and Style		
> PhyMode	Local Time Fri Aug 4 17:20:23 2017 D Sync with browser		
∼ System			
System	Hostname USR-G806		
Administration	Timezone Asia/Beijing		
Scheduled Tasks			
Backup / Flash Firmware			
Pabaat	Time Synchronization		
Rebout			
> Logout	Enable NTP client 🕑		
	Provide NTP server		

Figure 19 Module name and Time Zone



2.5. Basic Functions

2.5.1. Web Server Password

Default password is root, this password is used to enter Web Server.

User can change password by Web Server as follow:

USR-G806	Router P	Password		
Status	Changes th	Changes the administrator password for accessing the device		
vices				
work		Password	<i>2</i>	
vall		Confirmation	A1	
Лоde				
ystem				
System			Save & Apply	
ministration				
Flash Firmware				
t				
_ogout				

Figure 20 Change Web Server password

2.5.2. Restore

Hardware restore: Press Reload button over 5 seconds and release, G806 will restore default settings and reset.

User can restore default settings by Web Server as follow:

1158-6806				
	Flash operations			
> Status	Actions			
> Services	Dealure / Dealers			
> Network	Backup / Restore			
> 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".			
> PhyMode	Download backup: 🔲 Generate archive			
✓ System	Reset to defaults: 🚳 Perform			
System				
Administration	To restore configuration files, you can upload a previously generated backup archive here.			
Scheduled Tasks	Restore backup: 這择文件 未选择任何文件 📵 Upload archive			
Backup / Flash Firmware				
Reboot				
> Logout	Flash new firmware image			
Upload a proper image here to replace the running firmware. Check "Keep settings" to retain the current configuration.				
	Keep settings:			

Figure 21 Restore default settings

2.5.3. Upgrade Firmware Version

Upgrade by Web Server as follow:



USR-G806	Backup / Restore		
	Click "Generate archive" to download a tar archive of the current configuration files. To reset the firmware to its initial state, click "Perform reset".		
> Status	Download backup: 🔲 Generate archive		
> Services	Reset to defaults: 🥝 Perform		
> Network			
> Firewall	To restore configuration files, you can upload a previously generated backup archive here.		
> PhyMode	Restore backup: 选择文件 未选择任何文件 🔲 Upload archive		
✓ System	Choose firmware file Upgrde		
System			
Administration	Flash new firmware image		
Scheduled Tasks	Upload a proper image here to replace the running firmware. Check "Keep settings" to retain the current configuration.		
Backup / Elash Firmware	Keep settings:		
	Image: 读择文件 未选择任何文件 I Flash image		
KEDOOT			
> Logout			

Figure 22 Upgrade firmware version

Note:

- > The whole upgrade process will last about 1 minute, user can enter Web Server after about 1 minute.
- User can choose saving settings.
- > User should keep powering up and LAN/WIFI connection during the whole upgrade process.

2.5.4. Reset

Reset time is about 40~60 seconds.

Reset by Web Server as follow:

	USR-G806
	Status
>	Services
	Network
	Firewall
	> PhyMode
<u>`</u>	✓ System
	System
	Administration
	Scheduled Tasks
	Backup / Flash Firmware
	Reboot
	Logout

Figure 23 Reset module







3. Web Server

When user need to configure the G806, user can connect PC to USR-G806 through LAN interface or WLAN, then open Web Server.

Default parameters of G806 as follows:

SSID	USR-G806-XXXX
IP Address	192.168.1.1
User name	root
Password	root
WLAN Password	www.usr.cn

Figure 24 Default parameters

Take default parameters as example: User can connect PC to SSID USR-G806-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.

USR IOT WT Experts		Be Honest, Do Best!
	Authorization Required Plesse enter your usemame and password.	
	Username: root Password:	
	Login Reset	
	iNan Usr IOT Technology Limited http://www.usr.cn/	

Figure 25 Web Server login web

User can change the language between Chinese/English in the top right corner.



4. Contact us

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5. Disclaimer

This document provides the information of USR-G806 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

2018-01-18 V1.0.4.1 established based on Chinese version V1.0.4.



Appendix: G806 certification

ISEDC WARNING

This device complies with Innovation, Science, and Economic Development Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d' Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil nedoit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Radio apparatus containing digital circuitry which can function separately from the operation of a transmitter or an associated transmitter, shall comply with ICES-003. In such cases, the labeling requirements of the applicable RSS apply, rather than the labelling requirements in ICES-003.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

ISEDC RF exposure statement :

This equipment complies with ISEDC radiation exposure limits set forth for an uncontrolled environment .This equipment should be installed and operated with minimum distance 20cm between the radiator& your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux ISEDC RF limites d'exposition aux radiations dans un environnement non contrôlé. Cet émetteur ne doit pas être situé ou opérant en conjonction avec une autre antenne ou émetteur. USR-G806 User Manual



FCC WARNING

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- -Reorient or relocate the receiving antenna.
- -Increase the separation between the equipment and receiver.
- -Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- -Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator& your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.