





1. Introduction	4
1.1. Overview	4
1.2. Features	4
1.3. Specification	5
1.4. Interface	7
1.5. Indicator	8
1.6. Dimensions	8
2. General Function	
2.1. Web Interface	
2.2. Functional Diagram	12
2.3. Hostname	
2.4. NTP Settings	14
2.5. Username/Password Settings	14
2.6. Backup Parameters	15
2.7. Reset	16
2.8. Firmware Upgrade	16
2.9. Reboot	17
2.10. Reboot Sheduler	
2.11. Log	
3. Interface	20
3.1. 4G Interface	20
3.2. SIM Card	21
3.3. LAN Interface	23
3.4. WAN Interface	25
3.5. WAN/LAN Mode Selection	27
3.6. WiFi Interface	27
3.7. Network Switch	
3.8. Diagnostics	
3.9. Hostname	
3.10. Static Routes	
4. VPN	
4.1. PPTP Client	
4.2. L2TP	
4.3. IPSec	
4.4. OpenVPN	41
4.5. GRE	42
5. Firewall	43
5.1. General Settings	43
5.2. Traffic Rules	44
5.3. NAT	
5.4. Access Restriction	56
5.5. Rate Limiting	57
6. PUSR Cloud	58



Be Honest, Do Best !	USR-G806s User Manual	Technical Support: h.usriot.com
7. Advances Services		
7.1. Email		
7.2. SMS		
7.3. Alert		
7.4. SNMPD		
7.5. DDNS		
7.6. Remote Manager		
8. Serial Port		
8.1. Serial Port Settings		
8.2. Operating Mode		
8.3. General Function		
9. AT Commands		77
9.1. AT Command Mode		
9.2. Serial AT Commands.		
9.3. Network AT Command	ls	
9.4. SMS AT Commands		



1. Introduction

1.1. Overview

USR-G806s is a high-performance industrial 4G wireless router with serial port and powerful DTU function. Using public wireless network, it provides users with an integrated solution of industrial 4G router and DTU. This product adopts high-performance embedded CPU and the operating frequency is up to 580MHz. Based on a variety of hardware interfaces and powerful software functions, users can quickly set up their own application network. It has been widely used in the M2M industry of the Internet of Things, providing reliable data transmission network for smart grid, personal medical care, smart home, self-service terminal, industrial automation, environmental protection agriculture, municipal services and other fields.

1.2. Features

Stable and Reliable

- Industrial design, metal housing, protection class IP30.
- > Wide voltage input, with anti-reverse protection.
- > Din-rail or panel mounting, suitable for various scenarios.
- ESD, surge and EFT protection.
- Hardware watchdog, link detection mechanism make it self-recovery from unexpected failure and guarantee system stability.

Flexible Networking

- Provide 4G network, compatible with 3G/2G network.
- Supports automatic network inspection, 4G/3G/2G network switching, APN/VPDN card.
- Supports wired /4G multi-network online at the same time, multi-network backup function.
- Supports 2.4GHz WIFI, flexibly choose wired or WiFi network.
- Supports VPN (PPTP, L2TP, IPSEC, OpenVPN, GRE) and VPN encryption.

Powerful Functions

- Supports connecting to USR Cloud to achieve remote monitoring, remote upgrading, Email alert and remote access the internal webpage.
- Supports serial to Ethernet communication, compatible with basic router functions and DTU functions, meeting various application scenarios.
- Supports 1 10/100Mbps LAN port and 1 WAN/LAN port.
- Supports WLAN wireless network, supports multiple LED indicator lights.
- Supports wired/wireless multi-network online at the same time, multi-network backup function.
- Supports automatic APN network check, system switching, SIM information display, supports APN/VPDN network card.
- Supports DDNS, PPPoE, DHCP and statis IP.
- Supports firewall, NAT, white/black list, SNAT and DNAT.
- Supports traffic services, set the network speed limit rules via interface, IP addresses, and MAC addresses as required.
- Supports SSH, Telnet and Web configuration.



Technical Support: h.usriot.com

- Support connecting to our remote monitoring platform to achieve remote monitoring, remote upgrading and remote configuration.
- > Supports hardware reset, supports hardware watchdog, ensuring system stability.

1.3. Specification

USR-G806s Ordering Guide						
Product	USR-G806s					
Region	China/Southe	east Asia				
		FDD-LTE	B1/3/5/8			
		TDD-LTE	B38/39/40/41			
	Frequency	WCDMA	B1/8			
	bands	CDMA2000	CDMA1X/ 1xEV-DO rel.0/ 1xEV-DO rev. A: 800 MHz			
		TD-SCDMA	B34/39			
Cellular		GSM/GPRS/EDGE	900/1800MHz			
Network		FDD-LTE	Max. 150Mbps (DL) /50Mbps(UL)			
		TDD-LTE	Max.135Mbps (DL) /35Mbps(UL)			
	Theoretical bandwidth	WCDMA	Max. 42Mbps (DL) /5.76Mbps(UL)			
		CDMA2000	Max. 3.1Mbps (DL) /1.8Mbps(UL)			
		TD-SCDMA	Max. 4.2Mbps (DL) /2.2Mbps(UL)			
		GSM/GPRS/EDGE	Max. 384kbps (DL) /128kbps(UL)			
Region EMEA/Thailand						
		FDD-LTE	B1/3/7/8/20/28A			
	Frequency	TDD-LTE	B38/40/41			
	bands	WCDMA	B1/8			
		GSM/EDGE	B3/8			
Cellular		FDD-LTE	Max. 150Mbps (DL) /50Mbps(UL)			
Network		TDD-LTE	Max. 130Mbps (DL) /35Mbps(UL)			
	Theoretical	DC-HSPA+	Max. 42Mbps (DL) /5.76Mbps(UL)			
	bandwidth	WCDMA	Max. 384Kbps (DL) /384Kbps(UL)			
		EDGE	Max. 296Kbps (DL) /236.8Kbps(UL)			
		GPRS	Max. 107Kbps (DL) /85.6Kbps(UL)			



Be Honest, Do	USF	R-G806s User Manual Technical Support: h.usriot.com				
Product	4G wireless router	USR-G806s				
Ethernet Dort	Wired WAN	1*WAN/LAN				
	Wired LAN	1*LAN				
	WIFI wireless network	IEEE802.11b/g/n, 2.4GHz AP mode				
WIFI	Antenna	1*3dbi antenna				
	Distance	100m in open area				
SIM/	SIM/USIM	Standard 6-pin SIM slot, 3V/1.8V SIM card				
Antenna	Antenna	2.5dbi full frequency stick antenna				
	DTU mode	NET, HTTPD, MODBUS				
	Heartbeat/Identity packet	Support				
	Baud rate	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400				
	Data bit	8				
	Stop bit	1, 2				
DIO	Parity	NONE,ODD,EVEN				
	Serial Type	RS485				
	SOCKET	4 sockets support TCPS(only socket A supports)/TCPC/UDPS/UDPC				
Button	Reload	Hardware reset button				
Indicator	Indicator light	Power, WIFI, 2/3/4G, signal strength, WAN, LAN				
Tomporaturo	Operating temperature	-20℃~ +70℃				
remperature	Storage temperature	-40℃~+125℃				
Humidity	Operating humidity	5%~95%RH(non-condensing)				
пиппицу	Storage humidity	1%~95%RH(non-condensing)				
Power	Power Voltage	DC 9~36V				
Supply	Power consumption	Under DC 12V power supply, the average current is 270mA and the maximum current is 400mA.				

Power consumption:

USR-G806s works at full speed, with 1 WIFI station access, 1 LAN port access, and 4G access to the external network, data transmission speed is 10KByte/s.



Be Honest, Do Best ! USR-G80)6s User Manual	Technical Support: h.usriot.com			
Operating mode	Power supply	Average current (mA)	Maximum current (mA)		
LAN+WAN, full speed (4G +WLAN)	DC12V	151	385		
LAN, full speed (4G+WLAN)	DC12V	270	400		
LAN+WAN, full speed (WLAN)	DC12V	130	236		
WAN, full speed (WLAN)	DC12V	128	295		

When G806s is powered by 12V and working at full speed:

The average power consumption is 3.24W and the maximum is 4.8W. The average current is 270mA and the maximum is 400mA.

1.4. Interface

No.	Item	Description
1	DC interface	DC:9~36V, standard 5.5*2.1mm round socket
2	DC terminal	DC:9~36V, green terminal block, 5.08mm-2
3	WAN/LAN	1*10/100M, MDI/MDIX, 1.5KV electromagnetic isolation protection
4	LAN	1*10/100M, MDI/MDIX, 1.5KV electromagnetic isolation protection
5	TBD	1
6	RS485	1*standard 3.81mm*3 pin (A,B,G) interface
7	Indicator	Power, WIFI, 2/3/4G, signal strength, WAN, LAN
8	SIM slot	3V/1.8V SIM card
9	Reload	Press and hold for more than 5s to reset the device
10	WIFI antenna	2.4G stick antenna
11	4G antenna	Full frequency stick antenna
12	Ground screw	Recommend to connect the ground screw on the side to the ground cable.



Grounding screw installation:



Technical Support: h.usriot.com

- ➤ Unscrew the ground screw --→ insert the ground ring of the ground cable into the ground screw --→ tighten the ground screw --→ connect the ground cable.
- In order to improve the anti-interference ability of the router, the ground cable should be connected to the ground screw of the router according to the specific environment during installation.

1.5. Indicator

Item	Description
PWR	Power indicator, always on after powered on
WAN	WAN indicator will be on after connecting Ethernet cable, blink during data transmission
LAN	LAN indicator will be on after connecting Ethernet cable, blink during data
	transmission
WLAN	WLAN indicator will be on during normal operation
2G Indicator	2G indicator will be on when connects to 2G network
3G Indicator	3G indicator will be on when connects to 3G network
Signal strength (1-3)	The more signal strength indicators are on, the stronger the signal is.

1.6. Dimensions





- > Metal housing, supports panel and DIN-rail mounting.
- Dimensions: 112*84.0*26.0mm (Power terminals, RS485 terminals, antennas, and antenna mounts are excluded)



2. General Function

2.1. Web Interface

Connect PC to the LAN port of USR-G806s via a Ethernet cable, or directly connect the PC to the WiFi of the G806s, then log into the webpage. Default parameters are as below:

Parameters	Default
SSID	USR-G806s-XXXX
LAN IP address	192.168.1.1
Username	root
Password	root
WiFi password	www.pusr.com

Enter 192.168.1.1 in the browser to log into the webpage of USR-G806s, username and password are both "root", then click "Login".

Communication Export of Industrial IOT	Be Honest, Do Best!
	Authorization Required Please enter your username and password.
	Username: root Password: Login Reset
	Inan USR IOT Technology Limited http://www.pusr.com/



SR IOT									
Be Honest, Do Best !	USR-G806s User Manual			Т	echnie	cal Suppo	rt: h.usriot.co n		
Communication Expert of Industrial IOT								Be	Honest, Do Best!
USR-G806s	Status								*
✓ Status	System								
Overview	Hostname		USR-G806s						
> Services	Firmware Version		V1.0.00-EN						
> VPN	SN		01300320111800000752						
> Network	IMEI		860548047538407						
> Firewall	Local Time		Thu Aug 4 04:40:54 2022						
> WAN/LAN Port	Uptime		0h 12m 45s						
> DTU	Load Average		0.57, 0.88, 0.66						
> System									
Logout	Memory								
	Total Available		99948 kB / 126444 kB (7	9%)					
	Free		78092 kB / 126444 kB (6	196)					
	Cached		14948 kB / 126444 kB (1	196)					
	Buffered		6908 kB / 126444 kB (5	%)					
	Network								
	IPv4 WAN Status		Z.						
			? Not connected						
	Routes								
	Destination	Gateway	Genmask	Flags	Metric	Ref	Use	Iface	
	192.168.1.0	0.0.0.0	255.255.255.0	U	0	0	0	br-lan	
		Jinan USR I	IOT Technology Limited htt	p://www.pusr.com/					



2.2. Functional Diagram



Network card	No.	Interface
LAN	br-lan	LAN
WIFI AP	ra0	LAN
Wired WAN	eth0.2	WAN_WIRED
4G	eth1	WAN_4G

Following is the application diagram:





2.3. Hostname

The hostname defaults to USR-G806s.

Communication Expert of Indus	ana kor 	AUTO REFRESH ON
USR-G806s Status Services VPN Network Firewall WAN/LAN Port DTU System System	System Here you can configure the basic aspects of your device like its hostname or the timezone. System Properties Converal Setting: Remote log Local log Local Time 2022-08-04 045:221 Thu Hostname USR-G806s Timezone America/New York:	
Administration Reboot Scheduler Backup/Upgrade Reboot Logout	Time Synchronization Enable NTP circle Provide NTP server IntD-allyrun.com IntD-allyrun.com ime_ustc.edu.cn an.pool.ntp.org 0.pool.ntp.org	
	Jinan USR IOT Technology Limited http://www.pusr.com/	



2.4. NTP Settings

NTP client function is default to be enabled, you can set different NTP server address.

Communication Expert of Indust	nalor Be Honest, Do Best! Auno велезной <mark>⊯≣а</mark>
USR-G806s	System
> Status	Here you can configure the basic aspects of your device like its hostname or the timezone.
> Services	System Properties
> VPN	Central Setting: Remote log Local log
Network Eirowall	Local Time 2022-08-04 04/550 Tim, III. Sync with browser
> WAN/LAN Port	Hodname USR-G806s
> DTU	Timezone America/New York
✓ System	
System	
Administration	Time synchronization
Backup/Upgrade	Enable NTP client
Reboot	Provide NTP server
Logout	NTP server candidates for an and the analysis of the server server and the server server and the server ser
	anneusseutend an
	0. pool.ntp. org
	Samer Agar
	Jinan USR IOT Technology Limited http://www.pusr.com/

2.5. Username/Password Settings

Username and password are default to "root" which used to log into the webpage of the device. Password can be changed but the username cannot be changed.

Communication Expert of Indust	Be H	onest, Do Best!
Communication Lapert of Indust USR-G806s Services VPN Network Firewall WAR/LAN Port DTU System Administration Reboot Scheduler Backup/Upgrade Reboot Logout	Administrator Password Configuration New Password I I I I I I I I I I I I I I I I I I I	
	Jinan USR IOT Technology Limited http://www.pusr.com/	



2.6. Backup Parameters

Download configuration file: Click **Export configuration file**, we can download the current parameters to a zip file, like **backup-USR-G806s-2022-08-04.tar.gz**, then save it in the computer.

Communication Expert of Industrial IOT	Be	Honest, Do Best!
USR-G806s	Backup/Upgrade	
 Status Services VPN Network Firewall WAN/LAN Port DTU System Administration Reboot Logout 	Experiment users system configuration file Description Bestor to Default: Bestor to Default: Bestor to Default: Bestor to Bestor: Metror Backup: Metror Backup: Metror Ba	
	Jinan USR IOT Technology Limited http://www.pusr.com/	

Upload configuration file: Upload the configuration file to the router, then the parameters will be saved and take effect.

Communication Expert of Indu	atria lor Be Hor	nest, Do Best! =====
USR-G806s	Backup/Upgrade	
Status Services VPN Network Firewall WAN/LAN Port DTU System Administration Reboot Scheduler Backup/Upgrade Reboot Logout	Expert/Import Export or import the current system configuration file Demised Configuration file extore to Default extore Backup: extore Backup: </th <th></th>	
	Jinan USR IOT Technology Limited http://www.pusr.com/	



2.7. Reset

2.7.1. Hardware Reset

There is a **Reload** button in the device. After power on G806s device, press and hold the **Reload** button for more than 5s then release it, the device will restore to factory and restart automatically. When the device restarts, all the indicators will flash once and then turn off (the power indicator is still on).

2.7.2. Software Reset

We can also reset the device via its webpage.

Communication Expert of Industrial IOT		Be Honest, Do Best! ⊒≡
USR-G806s	Backup/Upgrade	
 Status Services VPN Network Firewall WAN/LAN Port DTU System System Reboot Scheduler Backup/Upgrade Reboot Logout 	Export/Import Export or import the current system configuration file Ownload Configuration Bit: Restore to Defauit: Restore to Defauit: Restore to Defauit: Restore Backup: Restore Backup: Ploade stronger image here to replace the running firmware. Check "Keep settings" to retain the current configuration. Keep Setting: Immware Image: Previous Select file Browser: Immware Image:	
	Jinan USR 10T Technology Limited http://www.pusr.com/	

2.8. Firmware Upgrade

USR-G806s supports upgrading via webpage.



Be Honest, Do Best !	USR-G806s User Manual	Technical Support: h.usriot.com
USR IOT Communication Expert of Industrial 107		Be Honest, Do Best!
USR-G806s	Backup/Upgrade	
> Status > Services > VPN	Export/Import Export or import the current system configuration file Download Configuration file:	
Firewall WAN/LAN Port DTU	Restore to Default: Restore	
 ✓ System System Administration 	Restore Backup: Please select file 🛛 🖬 Browser 🖓 Upload	
Reboot Scheduler Backup/Upgrade Reboot	Upload a proper image here to replace the running firmware. Check 'Keep settings' to retain the current configuration. Keep Settings: 1 2 Firmware Image: Please select file Browser Lash	
Logout		
	Jinan USR IOT Technology Limited http://www.pusr.com/	

Note:

- > The firmware upgrading will last 3-4 minutes , please log into the page again after 4 minutes.
- > You can choose whether to enable Keep Settings.
- > During the upgrading, please do not power off the device or disconnect the Ethernet cable.

2.9. Reboot

Click **Reboot** to restart the device, it will last about 1 minute.

USR IOT Communication Expert of Industrial IO	Be Honest	t, Do Best!
USR-G806s	Reboot	
> Status	Restart the operating system of the device.	
> Services	Reboot The Device	
> VPN		
> Network	a Reboot	
WAN/LAN Port		
> DTU		
✓ System		
System		
Reboot Scheduler		
Backup/Upgrade		
Reboot		
Logout		
	Jinan USR IOT Technology Limited http://www.pusr.com/	



2.10. Reboot Sheduler

Users can restart the router at any time every day, every week and every month, and clear the running cache regularly to improve the running stability.

Communication Expert of Industrial IOT		Be Honest, Do Best!
USR-G806s	Reboot Scheduler	
Status	Reboots the operating system	
> Services	Parameter Configuration	
> VPN	Enable 🗹	
> Network	Periodic Reboot Daily	
> WAN/LAN Port	Random Time Enable 🗸	
> DTU	Randomly generate the restart time (hours and minutes) to avoid the device on	line at the same time.If disabled, custom time is required.
✓ System	Random Range(Start) 4:00 V	
System	Random Range(End) 5:00 V	
Reboot Scheduler	Reboot Time 4:27	
Backup/Upgrade		
Reboot	Save & Appl	ly
Logout		
	Jinan USR IOT Technology Limited http://www.pu	sr.com/

2.11. Log

2.11.1. Remote Log

- Remote IP address: Remote UDP server IP/domain name, this function is disabled when the IP is 0.0.0.0.
- > Remote port: Remote UDP server port.



Technical Support: h.usriot.com

USR IOT Communication Expert of Indu	Be Ho	nest, Do Best
USR-G806s Status Services VPN Network Firewall WAN/LAN Port DTU	System Fromeriles Ceneral Settings Remote log Local log Remote log Local log Remote log Local log Remote log Local log Remote Remote Port 00.0.0 to diable Remote Port 00.1 to diable	
V system System Administration Reboot Scheduler Backup/Upgrade Reboot Logout	Time Synchronization Enable NTP dient Provide NTP server NTP server candidates Intel.allyun.com Intel.allyun.co	
	Save & Apply Jinan USR IOT Technology Limited http://www.pusr.com/	

2.11.2. Local Log

We can view and download the router logs from below interface.

Communication Expert of Industrial IOT	Be Honest, Do Best! ЖЛЛО ИЗИНЕННОЙ
USR-G806s	System
> Status	Here you can configure the basic aspects of your device like its hostname or the timezone.
> Services	System Properties
> VPN	General Settings Remote log
> Firewall	kernel Log Level Info
> WAN/LAN Port	Application Log Level Info 🗸
> DTU	Log Kernel View Empty
System System Administration Reboot Scheduler Backup/Upgrade Reboot Logout	<pre>N# 24 04 46.39 MT/728 damon.notice metif: Interface Ini's sended # 24 04 46.49 MT/728 damon.notice metif: Interface Ini's sended # 24 04 46.49 MT/728 damon.notice metif: Interface Ini's sended # 24 04 46.49 MT/728 damon.notice metif: Interface Ini's sended # 24 04 46.49 MT/728 damon.notice metif: Interface Ini's sended # 24 04 46.49 MT/728 damon.notice metif: Interface Ini's sended # 24 04 46.49 MT/728 damon.notice metif: Interface Ini'</pre>
	Jinan USR 10T Technology Limited http://www.pusr.com/



3. Interface

3.1. 4G Interface

USR-G806s supports one 4G/3G/2G interface to access the external network.

USR IOT					Be Honest, D AUTO REFRESH
USR-G806s	late for a				
> Status					
Services	Network	status		Actions	
2 VPIN	LAN 32 (*****)	MAC-Address: 9C:A5:25:C8:4B:C0		Seconnect Connect	
V Network	br-lan	TX: 0.00 B (0 Pkts.)			
Interfaces	WAN IS	IPv4: 192.168.1.1/24			
SIM Card	2	MAC-Address: CE:0C:21:B3:6B:E6 RX: 0.00 B (0 Pkts.)		Connect dit	
Network Switch	eth1	TX: 0.00 B (0 Pkts.)			
Wifi	WAN_WIRED	Uptime: 0h 17m 20s MAC-Address: 9C:A5:25:C8:48:BE		🖉 Connect 📝 Edit	
DHCP	eth0.2	RX: 837.29 KB (6866 Pkts.)			
Hostnames		IPv4: 172.16.14.62/24			
Static Routes					
Diagnostics					
> Firewall					
> WAN/LAN Port					
> DTU					
> System					
Logout					
		Jinan USR IOT Technology Limited	http://www.pusr.com/		

For the interface status, if the uptime is 0, means the network card is not running normally.

No.	Item	Description
1	Uptime	Time of this interface connected to the network.
2	MAC	MAC address of this interface.
3	RX/TX	Data received and sent of the this interface after connecting to the network.
4	IPv4	Indicates this interface use the IPV4 protocol.

Note: Network priority: Wired WAN>4G.



3.2. SIM Card

3.2.1. APN Settings

Please set the APN parameters here if the device cannot connect to the network automatically. After setting all parameters, restart the device to take effect.

Communication Expert of Industrial IOT		Be Honest, Do Best!
USR-G806s Status Services VPN VPN VPN Vetwork Interfaces SMC Card Network Switch Wrif DH:CP Hostnames Static Routes Dignostics Firewall WMAV/LAN Port DTU System Logout	Caliular Network Configuration Configure the APN parameters, network priority. SIM card PIN code, network detection and other functions of the mobile network. Centigure WMM_46 Setting Prog Detection Settings Mobile Information Automatic Or provide a set of priority to reduce network search time. Username User name for apn, 0-62 characters Username User name for apn, 0-62 characters Parameter User name for apn, 0-62 characters Password User password for apn, 0-62 characters Authentication type for apn Network Type Network Type AUTO Priority of Network Search AUTO PIN Enable if SM card enable PM, enable the function to enter the PIN code. EHRPD Enable Dir SM card enable PM, enable the function to enter the PIN code.	
	Save & Apply Save	
ltem	Description	Default
APN	Please set the correct APN address.	Autocheck
Username	APN username	None
Password	APN password	None
Auth Method	APN authentication type: None/PAP/CHAP	None
Network Type	AUTO/2G/3G/4G	AUTO
Priority of network search	Can set the priority of the network, AUTO/2G/3G/4G	AUTO
PIN Enable	Enable: Fill in the pin code of the SIM card.	Disable
EHRPD Enable	Enable/Disable, enable when there is 3.5G network	Disable
LTE BANDLOCK	LTE FULL-BAND or LTE-TDD	LTE FULL-BAND



3.2.2. Ping Detection Settings

Ping detection is used to check the network status of the device, defaults to be disabled. After enable this function, the device will try to ping the set address, dial again after reaching consecutive failures times.

Communication Expert of Indus	utrial for	nest, Do Best!
USR-G806s	Cellular Network Configuration	
> Status	Configure the APN parameters, network priority, SIM card PIN code, network detection and other functions of the mobile network. Configure network search priority to reduce network search time.	
> VPN	Config	
✓ Network	WAN, 4G Settings Pring Detection Settings Mobile Information	
Interfaces	Enable 2 🗿 Once selected, check the network with ping	
Network Switch	Interval 10 ing interval unit: sec.5-86400	
Wifi DHCP	Primary Server 114.114.114.114	
Hostnames Static Routes	Secondary Server	
Diagnostics	Max Ping Tries 4 Dial asain after reaching Consecutive failures times. 1-100	
Hirewall WAN/LAN Port		
> DTU		
> System	Sane a Appay Sane	
	Jinan USR IOT Technology Limited http://www.pusr.com/	

Item	Description	Default
Enable	1	1
Interval	Ping time interval, 5-86400s	10
Primary Server	Ping detection address: IP/domain name	114.114.114.114
Secondary Server	Ping detection address: IP/domain name	8.8.8.8
Max Ping Tries	Dial again after reaching consecutive failures times,	4
	1-100	

3.2.3. Mobile Information

Users can check the detailed configuration information of the SIM card.



Technical Support: h.usriot.com

Communication Expert of Industrial IOT			Be Honest, Do Best!
USR-G806s	Cellular Network Configuration Configure the APN parameters, network priority, SIM card PIN code, network detection and other Configure network search priority to reduce network search time.	functions of the mobile network.	
Services VPN Network Interface	Config WWN_4G Settings Fing Detection Settings Mobile Information		
SIM Card Network Switch	IMEI: SIM Status:	860548047538407 READY	
Wifi DHCP	Modem Version: ICCID:	EC25EFAR06A08M4G 89860319745312986836	
Hostnames Static Routes	Phone Number: CIMI:	+8618100395660 460110320291198 ctata chaol@wurdena.co.unat.co.bi 1	
Firewall WAN/LAN Port	Attachment Status: Signal Strength:	Attached 31(-51d8m)	
> DTU > System	Network Type: Network Operator:	FDD-LTE(4G) CHIN-CT	
Logout	Location Area Code: Cell ID:	530C 6244083	
	Save & A	pply Save	

Description:

- ▶ Unit of the signal strength is dBm and asu. dBm=-113+2*asu.
- USR-G806s supports display via asu, asu ranges from 1 to 31, and the higher the value, the better the signal strength.
- ▶ In general, dBm \geq -90dBm, ASU \geq 12, the signal is normal.

3.3. LAN Interface



Be Honest, D	o Best !	USR-G806s User Manual Technical Supp		upport: h.usriot.com	
USR IOT Communication Expert of Industrial IOT			Be Honest, Do адложиваном	Best!	
USR-G806s Status Services VPN	Interfaces - LAN On this page you can configu- netation INTERFLET. TLANS (g. Common Configuration General Salar	ve the network interfaces. You can bridge several interfaces by toking the "bridge interfaces" field and enter the names o g ₂ entities 10.	several network interfaces separated by spaces. You can also use \underline{MAN}	Â	
Network Interfaces SIM Card Network Switch	Status	Image: Second			
Wifi DHCP Hostnames	Protocol IPv4 address	Static address v 192.166.1.1			
Static Routes Diagnostics > Firewall	IPv4 netmask Use custom DNS servers	255.255.05.0 V 8.8.8.8 N 114.114.114.114			
> DTU > System Logout	DHCP Server				
	General Setup Ignore Interface Start	Disable DHCP for this interface.			
	Limit	Lowest leased address as offset from the network address. Maximum number of leased addresses. T			
	Leasetime	12π φ Epipy time of leased addresses minimum is 2 minutes (2m).			
		Jinan USR IOT Technology Limited http://www.pusr.com/			

Descriptions:

- ➢ LAN interface defaults to the static IP address 192.168.1.1 and netmask 255.255.255.0. These parameters can be modified.
- > WiFi interface (WLAN) and wired LAN are in the same lan network.

3.3.1.DHCP

DHCP server function is default to be enabled, all the devices connect to the LAN port will get IP address automatically.

Communication Expert of Industrial IOT	Be Honest, Do Best! ∧лложиненон <mark>———————————————————————————————————</mark>
USR-G806s Status	8 [#] Uptime: 0h:11m:17.s brian MAC-Address 90:A525:C8:48:C0 RX: 0:00 8 (0 Pirts.) TX: 0:00 8 (0 Pirts.)
> Status	IPv4: 192.163.1.1/24
> Services	Entire address M
> VPN	Juliu duuress •
 Network IPv4 address 	192.168.1.1
Interfaces IPv4 netmask	255.255.255.0 🗸
SIM Card	8.8.8
Network Switch	114.114.114
Wifi	
DHCP	
Hostnames DHCP Server	
Static Routes	
Diagnostics General Setup	
> Firewall Ignore Interface	Oisable <u>DMCP</u> for this interface.
> WAN/LAN Port Start	100
> DTU	Lowest leased address as offset from the network address.
> System	150
Logout	Maximum number of leased addresses.
Leasetime	12h
	Expiry time of leased addresses, minimum is 2 minutes (2m).
Back to Overview	Save & Apply Save
	Jinan USR IOT Technology Limited http://www.pusr.com/



Descriptions:

- > We can change the start address and leased time of the DHCP Client.
- > DHCP addresses are default to be assigned from 192.168.1.100.
- Default lease time is 12 hours.

3.3.2. Static IP

In **Network--DHCP**, we can assign a fixed IP address and hostname to a DHCP Client device. Only the specific client can be connected and the LAN interface mode cannot be DHCP.

Communication Expert of Industrial IOT					Be Honest, Do Be
USR-G806s	DHCP/Static Lease				
> Status	DHCP list information and	Static Lease			
> Services	Active DHCP Leases				
> VPN	Hostname	IPv4-Address	MAC-Address	Leasetime remaining	
Vetwork	There are no active leases.				
SIM Card	Static ID Table				
Network Switch	Hostname	MAC Address		IP Address	
Wifi DHCP	This section section as a	kon ont			
Hostnames	This section contains no va	ues yei			
Static Routes	New Rule:				
Diagnostics	Hostname	MAC Address		IP Address	
> WAN/LAN Port	New rule		~	~	Mdd 🗈
> DTU					
> System			Save & Apply Save		
Logout					
		Jinan USR IOT Technology Lim	ited http://www.pusr.com/		

3.4. WAN Interface



Be Honest, Do	Best ! US	USR-G806s User Manual		Technica	Support: h.usriot.com
Communication Expert of Industrial IOT					Be Honest, Do Best!
USR-G806s	Interfaces				
	Interface Ourseine				
> Status	Interface Overview	Chatura		t ellere	
> Services	Network	Status Uptime: 0h 21m 36r		Actions	
 Vetwork 	5 ² (2 ²² *)	MAC-Address: 9C:A RX: 0.00 B (0 Pkts.)	5:25:C8:48:C0	Sconnect dit	
Interfaces	br-lan	TX: 0.00 B (0 Pkts.) IPv4: 192.168.1.1/24			
SIM Card	WAN_4G	MAC-Address: 96:A	9:98:7A:83:CE	Se Connect Se Edit	
Network Switch	eth1	RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.)			
Wifi	WAN_WIRED	Uptime: 0h 21m 30	s	Connect dit	
DHCP	eth0.2	RX: 1.32 MB (9684 P	51251C8(48:8F [kts.)		
Hostnames		IPv4: 172.16.14.62/2	књ.) 14		
Diagnostics					
> Firewall					
> WAN/LAN Port					
> DTU					
> System					
Logout					
		Jinan USR IOT Techn	ology Limited http://www.pusr.com	n/	
Communication Expert of Industrial IOT					
USR-G806s					
	WAN - WAN_WIRED				
> Status	On this page you can config You can also use <u>VLAN</u> nota	ire the network interfaces. You can be on INTERFACE. VLANNR (e.g.: eth0. 1).	idge several interfaces by ticking the "bridge in	iterfaces" field and enter the names of several network interfaces se	varated by spaces.
> Services					
> VPN	Common Configuration				
✓ Network	General Setup				
Interfaces	Status		Uptime: 0h 22m 2s		
SIM Card	510103	eth0.2	MAC-Address: 9C:A5:25:C8:48:BF RX: 1.34 MB (9956 Piece)		
Network Switch			TX: 1.20 MB (2157 Pkts.)		
Wifi					
DHCP	Protocol	DHCP client 🗸			
Hostnames Static Dautes	Hostname to send when	USR-G806s			
Diagnostics	requesting DHCP				
> Firewall					
> WAN/LAN Port	Back to Overview		Save & App	Save	
> DTU					
> System					
Logout					

Descriptions:

- > 1 wired WAN interface, WAN is a wide area network interface.
- > Supports DHCP Client, static address and PPPoE, defaults to DHCP Client.
- > This WAN interface can be configured to LAN.



3.5. WAN/LAN Mode Selection

In **WAN/LAN Port--Select Mode**, you can change the WAN port to LAN. After changing it, click **Save&Apply**, then restart the device to take the parameters effect.

Communication Expert of Indus	Be H	onest, Do Best!
Status Services VPN Network Firewall WNN/LN Port Select Mode DTU System Logout	WAI/LAN Port setting Setting the Work Mode of Ethermet Port 1(WAIV/LAN)/Retart to take effect! Configuration WAIV/LAN WAIV/LAN <th></th>	
	Jinan USR IOT Technology Limited http://www.pusr.com/	

3.6. WiFi Interface

USR-G806s supports WiFi-AP function, 2.4GHz WiFi network. Users can modify the WiFi parameters in below interface.

USR IOT		Be Honest, D Notokeness
USR-G806s	Wireless Overview	
Status Services VPN Network	802.11 b/g/n Wireless Controller Channel: 11 (2.422 GHz) Bitrate: 150 Mbit/s SSID: USR-G806-488F Mode: Master BSSID: 9CA525C8488E Brcryston: -	Image: Constant Settings Image: Constant Settings Image: Constant Settings
Interfaces SIM Card Network Switch	Associated Stations	av bes (7) aus
Wifi	אוני אוגל-אממיפג אוסג Signal / Noise No information available	KA KUSĒ IĀ KĀLĒ
Hostnames Static Routes		
Firewall WAN/LAN Port		
DTU System		
Logout		
	Jinan USR IOT Technology Limited http://www.pusr.com/	



Descriptions:

- ▶ USR-G806s is an access point, other station devices can connect to its WiFi.
- It supports up to 24 WiFi stations.
- > The maximum WiFi range is 100m in open area, and within 50m in the office with obstacles.

Item	Description	Default
ESSID	Network name of the WiFi, can be modified.	USR-G806s-8899 (8899=the last 4 bits of the MAC)
Mode	Access Point	AP
Hide ESSID	Enable: None of client could scan the SSID. If you want to connect to the router AP, must enter the ESSID at WiFi client side manually. Disable: Enable the SSID broadcasting. So that the client can scan the SSID.	Disable
Encryption	WPA2-PSK/WPA-PSK/No Encryption	WPA2-PSK
Cipher	CCMP/TKIP/CCMP&TKIP	ССМР
Кеу	WiFi password, can be modified.	www.pusr.com
Radio Enable/Disable	Enable: open WiFi radio, AP can be used. Disable: close WiFi radio, AP cannot be used, "WLAN" indicator light will be off.	Enable
Network Mode	802.11b/g/n	802.11b/g/n
Channel	Auto, can be selected.	Auto
Bandwidth	40MHz/20MHz	40MHz
Regions	Optional	none
Channel	Optional	CH1~11

In **WiFi--General Settings**, we can change the WiFi SSID and password.



Technical Support: h.usriot.com

Communication Expert of Industrial	Be Hone	st, Do Best!
USR-G806s Status Services VPN Vetwork Interfaces SIM Card Network Switch WH DHCP Hostnames Static Routes Diagnostics Firewall WMAV/LAN Port System Logout	Wireless Network: Master "USR-6806s-4886" (rdo) The backer Configuration section covers physical settings of the radio hardware. Interact Configuration State Configuration Image: Configuration <td></td>	
	Jinan USR IOT Technology Limited http://www.pusr.com/	
USR IOT Communication Expert of Industrial	aitor Be Hone	st, Do Best!
USR-G806s Status Services VPN Network Interfaces SIM Card Network Switch Wm DHCP Hostnames Static Routes Diagnostics FRewall WWAV/LAN Port DTU System Logout	<form><section-header><section-header><form><form><form><form><form><form><form><form></form></form></form></form></form></form></form></form></section-header></section-header></form>	

In WiFi--Advanced Settings, we can enable/disable WiFi radio.



Technical Support: h.usriot.com

Communication Expert of Industrial IOT		Be Honest, Do Best! AutoRefression
USR-G8066 Status Services VPN Network SIM Card Network Switch Wrii DHCP Hostnames Static Routes Diagnostics Firewall WAN/LAN Port DTU System Logout	Wireless Network: Master "USR-G806s-488F" (rs0) The Droice Configuration section covers physical settings of the radio hardware. Physical Configuration Mode: Matter [SID: USR-G806s-488F Status Mode: Matter [SID: USR-G806s-488F BSID: USR-G806s-488F BSID: USR-G806s-488F BSID: USR-G806s-488F Mode: Matter [SID: USR-G806s-488F BSID: USR-G806s-488F Bandwidth 00:912 Bandwidth 00:912	
	Jinan USR IOT Technology Limited http://www.pusr.com/	Be Honest, Do Best!
USR-G806s Status Services VPN Network Interfaces SIM Card Network Switch UI DHCP Hostnames Static Routes Diagnostics Firewall WAN/LAN Port System Logout	Wreless Network: Master "USR-G806s-4885" (ral) The Drain Configuration section covers physical settings of the radio hardware. Physical Configuration Coveral Section Network: Nature <	

We can check the WiFi client information in below interface:



Be Honest, Do E	Best !	USF	R-G806s Us	ser Manua	al		Technical Support	h.usriot.com
Communication Expert of Industrial IO7							Be H	onest, Do Best!
USR-G806s		Wireless Overview						
> Status > Services		802.11 b/g/n Wi Channel: 11 (2.462 C	i reless Controller GHz) Bitrate: 150 Mbit/s					
> VPN ~ Network		SSID: USR-G806s- BSSID: 9C:A5:25:0	488F Mode: Master 8:48:8E Encryption: -				Image: Contract of the second section of the second	
Interfaces SIM Card		Associated Stations						
Network Switch Wifi	-	SSID USR-G806s-48BF	MAC-Address 50:34:45:58:16:91	Host 192.168.1.167	Signal / Noise 0 dBm -95 dBm	RX Rate / TX Rate 12.0 Mbit/s, MCS 2, 40MHz	36.0 Mbit/s, MCS 5, 40MHz	
DHCP Hostnames								
Static Routes Diagnostics								
> Firewall								
> WAN/LAN Port								
> System								
Logout								
			Jinan USR IOT T	echnology Limited	http://www.pusr.com/			

3.7. Network Switch

USR IOT Communication Expert of Indu	itria IOT	Be Honest, Do Best!
USR-G806s	Network Switch	
> Status	Configure the network switc	hing function.
> Services	Configuration	
> VPN	Priority	ETH First
✓ Network	Reference Mode	Custom
SIM Card	Primary Server	114.114.114.1
Network Switch		IP or Domain, such as*114.114.114/10r/baidu.com*
Wifi	Secondary Server	119-29-29 V
DHCP	Thirdly Course	9888 W
Hostnames	Thirdly Server	B or Domain, such as "114.114.114" or "baidu.com"
Static Routes	Ping Interval	10
> Firewall		
> WAN/LAN Port	Package size	100 232-10248/tes
> DTU	Timeout	2000
> System		100-20000milliseconds
Logout		
		Save & Appy Save
		Jinan USR IOT Technology Limited http://www.pusr.com/



Item	Description	Default
Priority	ETH First: Select to make WAN Ethernet port as the primary link.4G First: Select to make SIM card as the primary wireless link.Disable: disable network switch function, access the network with current link.	ETH First
Reference Mode	Custom: Router will ping the custom reference address/domain name to check that if the current connectivity is active. Gateway: Router will ping the gateway to check if the current connectivity is active.	Custom
Primary Server	IP address/domain name	114.114.114.114
Secondary Server	IP address/domain name	119.29.29.29
Thirdly Server	IP address/domain name	8.8.8
Ping interval (s)	Set the ping interval, 1-600s.	10
Package size(byte)	Set the ping package size, 32-1024 bytes.	100
Timeout (ms)	Ping timeout, 100-20000ms	2000

Descriptions: If all of these three IP addresses/domain name cannot be pinged, then the device will change the network connection and continue to perform the next circle of ping detection.

3.8. Diagnostics



Be Honest, Do Best !	USR-G8	806s User Manual	Technic	al Support: h.usriot.com
USR IOT Communication Expert of Industrial IOT				Be Honest, Do Best!
USR-G806s	Diagnostics			
> Status	Network Utilities			
> Services	8.8.8.8	8.8.8.8	www.google.com	
> VPN	as Fing	a nateroute	a Hstokup	
Interfaces				
SIM Card				
Network Switch				
Wifi				
DHCP				
Hostnames				
Diagnostics				
> Firewall				
> WAN/LAN Port				
> DTU				
> System				
Logout				
		Jinan USR IOT Technology Limited http://www.pus	sr.com/	

This interface provides users three tools: Ping, Traceroute and Nslookup.

- > Ping: Ping a destination address to check the network status.
- > Traceroute: Send traceroute request to a destination address.
- > Nslookup: Resolve the domain name to an IP address.

3.9. Hostname

SUSR IOT Communication Expert of Industrial IOT				Be H
USR-G806s	Hostnames			
Status	Set the host name for the Intranet host,restart the device	to take effect		
Services	Host Entries			
VPN	Hostname	IP Address		
✓ Network				
Interfaces	This section contains no values yet			
Network Switch	New rule:			
Wifi	Hostname	IP Address		
DHCP	New rule		~	add 1
Hostnames	Hew Fulle			
Static Routes				
Diagnostics		Save & Apply Save		
> Firewall				
System				
Logout				
	Jinan USR IOT	Technology Limited http://www.pusr.com/		

USR-G806s supports custom domain name resolution. Set the hostname and IP address in below interface, to achieve the mapping between hostname and IP address.



Technical Support: h.usriot.com

The outside IP address can also be mapped(must be a unique public IP address). The hostname of DHCP and static IP cannot be a number. After setting all parameters, restart the device to take the parameters effect.

3.10. Static Routes

USR-G806s supports up to 20 static route rules.

Item	Description	Default
Interface	Lan, wan_4G, wan_wired, vpn	lan
Target	Destination IP address or IP range	Null
Netmask	Netmask of the destination network	Null
Gateway	The IP address to forward to	Null
Metric	Used to make routing decisions	Null

Test example:



The WAN port of router A and router B are connected to the network 192.168.0.0, LAN network of router A is 192.168.2.0, LAN network of router B is 192.168.1.0.

Now we can do a static route in router A, when we access the 192.168.1.X, will automatically forward to router B.



Technical Support: h.usriot.com

USR IOT	trial IOT					Be H
USR-G806s	Static Routing To find informatio	n on static routing configuration, refer t	to the figure and table below			
Services VPN	Static Routing Static IPv4 Rou	Routing Table				
Network Interfaces SIM Card Network Switch	Interface This section contain	Target ns no values yet	<u>JPy4</u> -Netmask	I <u>Pv4</u> -Gateway	Metric	
Wifi DHCP Hostnames	New Rule:	Target	<u>JPy4</u> -Netmask	IP:/4-Gateway	Metric	
Static Routes Diagnostics Firewall	wan_wired 👻	Host-IP or Network 192,168,1.0	If target is a network 255,255,255.0	192.168.0.202	0	Add
WAN/LAN Port DTU System			Save & App	ly Save		
Logout						
		Jinan USR IOT	Technology Limited http://ww	/w.pusr.com/		

In router B:

nunication Expert of Industrial IOT						AUTO REFRI
G806s	Static Routing					
	To find information o	n static routing configuration, refer t	to the figure and table below			
·s	Static Routing	outing Table				
rk	Static IPv4 Routes	Target	IPv4-Netmask	IPv4-Gateway	Metric	
ces			disdul.	statut.		
rd	This section contains	no values yet				
rk Switch						
	New Rule:					
	Interface	Target	IPv4-Netmask	JPy4-Gateway	Metric	
imes		Host-IP or Network	If target is a network			
Routes	wan wired 💙	192.168.2.0	255,255,255,0	192,168.0.200		Add
isues						
AN Port						
			Save & Appl	y Save		

After setting all parameters, restart the device. Ping from T1 to T5:

B	USR IOT
	Be Honest, Do Best !

Technical Support: h.usriot.com

以太网适配器 以太网:	
连接特定的 DNS 后缀 : 1an 本地链接 IPv6 地址 : fe80::50c0:be1a:24a0:cb78% IPv4 地址 : 192.168.2.200 子网掩码 : 255.255.255.0 默认网关 : 192.168.2.1	25
无线局域网适配器 WLAN:	
媒体状态 媒体已断开连接 连接特定的 DNS 后缀 1an	
C:\Users\Administrator>ping 192.168.1.7 🛛 🛶 🛶 🛶 🛶 🛶 🛶 🛶 🛶 🛶 🛶 🛶 🛶 🛶	
正在 Ping 192.168.1.7 具有 32 字节的数据: 来自 192.168.1.7 的回复: 字节=32 时间=2ms TTL=253 来自 192.168.1.7 的回复: 字节=32 时间=1ms TTL=253 来自 192.168.1.7 的回复: 字节=32 时间=1ms TTL=253 来自 192.168.1.7 的回复: 字节=32 时间=1ms TTL=253	
192.168.1.7 的 Ping 统计信息: 数据包: 已发送 = 4, 已接收 = 4, 丢失 = 0 (0% 丢失), 往返行程的估计时间(以毫秒为单位): 最短 = 1ms, 最长 = 2ms, 平均 = 1ms	

4. VPN

USR-G806s supports PPTP, L2TP, IPSEC, openVPN and GRE.

No.	Protocol	Version
1	PPTP	V1.10.0
2	L2TP	V1.3.15
3	IPSec	V5.3.3
4	OpenVPN	V2.3.18

4.1. PPTP Client

This interface allows users to set the PPTP server parameters.


Technical Support: h.usriot.com

Communication Expert of Indu	IOT	Be Honest, Do Best!
USR-G806s	PPTP Configuration	
 Status Services 	PPTP Parameters PPTP Client	Enable Disable
V VPN	Server Address	192.168.0.2
PPTP L2TP	Interface	Auto Auto refers used default route interface to connect
IPSec	Username	
OpenVPN	Password	8
GRE	Remote Subnet	192.168.55.0
VPN Status		🥥 eg: 192.168.10.0
> Network	Remote Subnet Mask	255.255.0
> Firewall		Ø eg. 255.255.0
> WAN/LAN Port	NAT	
> DTU	Enable MPPE Encryption	8
> System	MTU	1450
Logout		
	Extra Options	
		Append pppd options,Non - professional,careful modification
	Enable Static Tunnel IP Address	
	Default Gateway	All traffic goes through VPN, except the WAN protocol is PPPOE
	Enable Ping	🛛 🔮 Reconnect When Fails to Ping
		linan IISD IOT Technology Limited http://www.nuer.com/

Item	Description	Default
Server address	VPN server address or domain name	192.168.0.2
Interface	wan_4G, wan_wired or auto	auto
Username/Password	Get from the VPN server	Null
Encryption	MPPE or no encryption	MPPE
MTU	Consistent with the VPN server	1450
NAT	The source IP address of host behind G806s will be	Enable
	disguised before accessing the remote address.	
Remote Subnet/Mask	When NAT is enabled, can achieve the subnet	192.168.55.0/255.255.2
	communication under VPN.	55.0
Enable Static Tunnel IP	When it is disabled, VPN server will assign an IP	Disable
Address	address dynamically.	
Extra Options	Append pppd parameters, magic number.	Null
Enable ping	Real-time VPN online detection and reconnection	Disable
	mechanism.	



Be Honest	IOT , Do Best ! US	R-G806s User Manua	I Technical Support: h.usriot.com
USR IOT Communication Expert of Indust	rial lot		Be Honest, Do Best!
USR-G806s Status Services VPN PPTP L2TP IPSec OpenVPN GRE VPN Status Network NEtwork NEtwork SFirewall WAN/LAN Port DIU System Logout	Password Remote Subnet Remote Subnet Hask NAT Enable MPPE Encryption MTU Extra Options Enable Static Turnel ID Address Default Gateway Enable Ping Ping Address Interval Hax Ping Tries	(192,168,55,0 (9, 192,168,150 (9, 192,168,150 (192,158,255,0) (9, 255,255,0) (9, 255,255,0) (9, 255,255,0) (194,10)	is PPOE
		Jinan USR IOT Technology Limited	Sive & Apply Sive

After connecting to PPTP server, we can check the connection status in "VPN Status".

USR IOT Communication Expert of Industrial	Be Hone	st, Do Best!
USR-G806s		
Status Services	VPN VPN Status	
VPN PPTP L2TP IPSec OpenVPN GRE VPN Status > Network > Firewall > WAN/LAN Port > DTU > System Logout	Type: PPTP IP Address: 192.168.111.37 Atemask: 252.552.552 Gateway: 192.168.111.30 Connected Time: 1s	
	Jinan USR IOT Technology Limited http://www.puss.com/	



4.2. L2TP

L2TP is the layer 2 tunneling protocol which similar to PPTP. G806s supports tunnel password authentication, supports MPPE and L2TP over IPSEC encryption.

In VPN---L2TP, enable L2TP Client, set the related parameters.

Communication Expert of Indus	INT	Be Honest, Do Best!
LISP-G806c	L2TP Client	Enable Disable
038-00005	Server Address	192.168.0.2
Status	Interface	Auto 🗸
Services		Auto refers used default route interface to connect
V VPN	Username	
PPTP	Password	8
L2TP	Tunnel Name	usr_router
IPSec	Tunnel Descuord	
OpenVPN	iunita rassilia	Character(0-50)
GRE	Enable IPsec	
VPN Status	Remote Subnet	192.168.55.0
> Network		eg: 192.168.10.0
> Firewall	Remote Subnet Mask	255,255,255,0
> WAN/LAN Port		
> DTU	NAT	
> System	Enable MPPE Encryption	9
Logout	мти	1450
		60-1450
	Extra Options	
		Append pppd options, Non - professional careful modification
	Enable Static Tunnel IP	
	Address	
	Default Gateway	O All traffic goes through VPN, except the WAN protocol is PPPOE
	Enable Ping	GReconnect When Fails to Ping
		· · · · · · · · · · · · · · · · · · ·

Item	Description	Default
Server address	VPN server address or domain name	192.168.0.2
Interface	wan_4G, wan_wired or auto	auto
Username/Password	Get from the VPN server	Null
Encryption/Authenticati	Tunnel password, MPPE, IPSEC, consistent with the	MPPE
on	VPN server.	
Enable Static Tunnel IP	When it is disabled, VPN server will assign an IP	Disable
Address	address dynamically.	
Extra Options	Append pppd parameters, magic number.	Null
NAT	The source IP address of host behind G806s will be	Enable
	disguised before accessing the remote address.	
Remote Subnet/Mask	When NAT is enabled, can achieve the subnet	192.168.55.0/255.255.2
	communication under VPN.	55.0
Enable ping Real-time VPN online detection and reconnection		Disable
	mechanism.	

4.3. IPSec



	US	R-G806s User Manual	Technical Support: h.usriot.
USR IOT			Be Honest, Do Bo
	IPSec Connection Con	figuration	-
SR-G806s	IDSoc Darametere		
	IPSec	Enable Disable	
rvices	Interface	Auto	
'n	Demete VON Federate	Auto refers used default route interface to connect	
TP	Keniole VPN Erupoini	 IP address or domain or %any,eg:10.10.1.88, eg:%any 	
TP	Mode	Main	
benVPN	Tunnel Type	Site To Site 🗸	
Æ	Local Subnet	192.168.1.0/24	
'N Status	Remote Subnet	192.168.55.0/24	
etwork		eg: 192.168.20.0/24	
AN/LAN Port	IKE Encryption Algorithm	3DES Y	
U	IKE Authentication	MD5 V	
stem	Diffie-Hellman Group	Group2(1024bits)	
gout	IKE Lifetime	28800 400-86400 seconds	
	Authentication Method	PSK 🗸	
	PSK		
		Character(0-50)	
	Local Identifier	Grenn IP address or @domain,Character(0-29).eg:10.10.1.88, eg:@root	
	Peer Identifier	Gserver ● IP address or @domain.Character(0-23).eg10.10.1.88, eg @root Jinan USR IOT Technology Limited http://www.pusr.com/	
USR IOT	Peer Identifier	Beerver ● IP address or @domain.Character(0-29).eg10.10.188, eg @root Jinan USR IOT Technology Limited http://www.pusr.com/	Be Honest, Do Ba
USR IOT Communication Expert of Industrial IOT	Peer Identifier	Gserver ● IP address or @domain.Character(0-20).eg10.10.188, eg @root Jinan USR 10T Technology Limited http://www.pusr.com/	Be Honest, Do Be =
USR IOT Communication Expert of Industrial IOT SR-G806s	Peer Identifier	@server P P address or @domain.Character(0-20).egr10.10.1.88, eg @root Jinan USR IOT Technology Limited http://www.pusr.com/ PD3 •	Be Honest, Do Be =
USR IOT Communication Expert of Industrial IOT SR-G806s	Peer Identifier IAE AUXIMULGOVI Diffie-Heliman Group	@server IP address or @domain.Character(0-29).eg10.10.1.88, eg @root Jinan USR IOT Technology Limited http://www.pusr.com/ MU2	Be Honest, Do Be
USR IOT Communication Expert of Industrial IOT SR-G806s	Peer Identifier IKE AUDIENGCOOT Diffie-Hellman Group IKE Lifetime	@server It address or @domain.Character(0-29).eg10.10.1.88, eg @root Jinan USR IOT Technology Limited http://www.pusr.com/ MU3	Be Honest, Do Be =
USR IOT Communication Equat of Industrial IOT SR-G806s Itus	Peer Identifier IKE Authentication Diffie-Heliman Group IKE Lifetime Authentication Method	@server In a dores or @domain.Character(0-29).eg 10.10.188, eg @root Jinan USR 10T Technology Limited http://www.pusr.com/ MD3 Group2(1024bits) 28800 9 KA0-86400 seconds	Be Honest, Do Be =
USR IOT Communication Expert of Industrial IOT SR-G806s itus N N P	Peer Identifier IAE AUDIENIC2001 Diffie-Hellman Group IAE Lifetime Authentication Method PSK	@server Image: Solution of Character(0-59),eg10.10.188, eg @noot Jinan USR IOT Technology Limited http://www.pusr.com/ MUS Group2(1024bits) @ 400-85400 seconds PSK PSK S @ Character(0-50) S	Be Honest, Do Be =
USR IOT Communication Expert of Industrial IOT SR-G806s Itus N N TP TP	Peer Identifier IAE AODRINGSOUT Diffie-Hellman Group IAE Lifetime Authentication Method PSK Local Identifier	@server ip address or @domain.Character(0-29).eg 10.10.18.8; eg @noot Jinan USR IOT Technology Limited http://www.pusr.com/ reus reus Group2(1024bits) 28800 95K Character(0-50) @ Character(0-50) @	Be Honest, Do Be -
USR IOT communication Expert of Industrial IOT SR-G806s situs N N TP Eec	Peer Identifier IKE ADDIBIOCADUM Diffie-Halman Group IKE Lifetime Authentication Method PSK Local Identifier	@server @ IP address or @domain.Character(0-29).eg10.10.188, eg@noot Jinan USR IOT Technology Limited http://www.pusr.com/ @roup2(1024bits) @roup2(1024bits) @800 @400-56400 seconds PSK @ Character(0-50) @dient @ IP address or @domain.Character(0-29).eg10.10.188, eg@noot	Be Honest, Do Bo
USR IOT Communication Expert of Industrial IOT SR-G806s attus trus verves N TP TP TP TP TP TP TP TP	Peer Identifier IKE AUTRIDUCIOUN Diffie-Hellman Group IKE Lifetime Authentication Method PSK Local Identifier Peer Identifier	@server @ IP address or @domain.Character(0-20).eg 10.10.188, eg @noot Jinan USR IOT Technology Limited http://www.pusr.com/ Image: Status of Coup2(1024bits) @ roup2(1024bits)	Be Honest, Do Ba
USR IOT Communication Expert of Industrial IOT SR-G806s itus SR-G806s itus Industrial IOT P P Bec DenVPN IE E Status	Peer Identifier INE ADJIFITULATION Diffie-Hellman Group INE Lifetime Authentication Method PSK Local Identifier Peer Identifier ESP Encryption Algorithm	Bearver IP address or @domain.Character(0-20).eg10.10.188, eg @not Inan USR IOT Technology Limited http://www.pusr.com/ IP 3 Group2(1024bits) Group2(1024bits) Avo.e4400 seconds PSK Character(0-50) Collent IP 3derss or @domain.Character(0-59).eg10.10.188, eg @not. Gestver IP address or @domain.Character(0-59).eg10.10.188, eg @not. Ac5-128	Be Honest, Do Be
USR IOT Communication Equat of Industrial IOT SR-G806s stus SR-G806s stus SR-G806s stus SR-G806s stus SR-G806s stus SR-G806s stus stus stus stus stus stus stus st	Peer Identifier DEF X000400C4000 Diffie-Hellman Group IXE Ufetime Authentication Method PSK Local Identifier Peer Identifier ESP Encryption Algorithm ESP Authentication	Berrer I Praddess or @domain.Character(0-20).eg10.10.188, eg @mot III.an USR IOT Technology Limited http://www.pusr.com/ III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR III.an URL IIII.an URL IIII.an URL IIII.an URL IIII.an URL IIII.an URL IIIIIII.an URL IIII	Be Honest, Do Be =
USR IOT Commination Exert of Industrial IOT SR-G806s stus SR-G806s TP Pr Sec DemVPN E: N Status Status Status Sec DemVPN Status Status Status Status	Peer Identifier INE AUDIFINICATION INE AUDIFINICATION INE Identifier INE Understanding INE Understanding INE Understanding INE Understanding PSK Local Identifier Peer Identifier ESP Encryption Algorithm ESP Authentication PFS Group PS Group	Berrer I Praddess or @domain(Character(0-20),eg10.10.188, eg @noot III.an USR IOT Technology Limited http://www.pusr.com/ III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an USR IOT Technology Limited III.an U	Be Honest, Do Be
USR IOT Communication Expert of Industrial IOT SR-G806s stus SR-G806s TP P P E E E N Status Stury K Work N Status U	Peer Identifier IKE ADDIRINGATION IKE ADDIRINGATION IKE Lifetime Authentication Method PSK Local Identifier Peer Identifier ESP Encryption Algorithm ESP Authentication PFS Group ESP Lifetime	Berrer In an USR IOT Technology Limited http://www.pusr.com/ Intan USR IOT Technology Limited intan USR IOT Technology Limited Intan USR IOT Technology Limited intan USR IOT Technology Limited Intan USR IOT Technology Limited intan USR IOT Technology Limited Intan USR IOT Technology Limited intan USR IOT Technology Limited Intan USR IOT Technology Limited intan USR IOT Technology Limited Intan USR IOT Technology Limited intan USR IOT Technology Limited Intan USR IOT Technology Limited intan USR IOT Technology Limited Intan USR IOT Technology Limited intan USR IOT Technology Limited Intan USR IOT Technology Limited intan USR IOT Technology Limited Intan USR IOT Technology Limited intan USR IOT Technology Limited Intan USR IOT Technology Limited intan USR IOT Technology Limited <tr< td=""><td>Be Honest, Do Be</td></tr<>	Be Honest, Do Be
USR IOT Communication Expert of Industrial IOT SR-G806s N TSR-G806s N TP TP TP TP TP TP TP TP TP TP TP TP TP	Peer Identifier IKE AUDIENTICATION Diffie-Hellman Group IKE Lifetime Authentication Method PSK Local Identifier ESP Encryption Algorithm ESP Authentication PFS Group ESP Lifetime	Bearver Prove the address or @domain,Character(0-23),eg10.10.188, eg@noot Inan USR IOT Technology Limited http://www.pusr.com/ Inan USR IOT Technology Limited http://www.pusr.com/ Inan USR IOT Technology Limited Inan	Be Honest, Do Be
USR IOT Communication Expert of Industrial IOT SR-G806s Attus SR-G806s TP TP TP TP TP TP TP TP TP TP TP TP TP	Peer Identifier INE ADJENTUGION INE ADJENTUGION INE Licel Identifier Composition Method PSK Local Identifier Peer Identifier ESP Encryption Algorithm ESP Encryption Algorithm ESP Licel Identifier DPD Timeout	Bearver @ readiess or @domain,Character(0-23),eg10.10.188, eg @noot Intan USR IOT Technology Limited http://www.pusc.com/ Intan USR IOT Technology Limited http://www.pusc.com/ @ roup2(1024bits)	Be Honest, Do Be
USR IOT Communication Expert of Industrial IOT SR-G806s Intus rvices N TP TP TP TP TP TP TP TP TP TP TP TP TP	Peer Identifier INE ADDIRITICATION INE ADDIRITICATION Diffie-Hellman Group DKE Lifetime Authentication Method PSK Local Identifier Peer Identifier ESP Encryption Algorithm ESP Encryption Algorithm ESP Encryption Algorithm ESP Lifetime DFO Timeout DFO Timeout DFO Timeout		Be Honest, Do Be =
USR IOT Communication Export of Industrial IOT SR-G6806s Intus revices N N TP TP TP TP TP TP TP TP TP TP TP TP TP	Peer Identifier INE ADDIRITICATION INE ADDIRITICATION Diffie-Hellman Group UKE Lifetime Authentication Method PSK Local Identifier Peer Identifier ESP Encryption Algorithm ESP Authentication PFS Group ESP Lifetime DPD Timeout DPD Timeout DPD Timeout DPD Interval		Be Honest, Do Be
USR IOT Communication Expert of Industrial IOT SR-G6066 Attus rvices N TP TP ter ener/PVN te N Status twork ewall MV/LAN Port t u stern gout	Peer Identifier INE AUDIPINGUOUN Diffie-Hellman Group UKE Lifetime Authentication Method PSK Local Identifier Peer Identifier ESP Encryption Algorithm ESP Authentication PFS Group ESP Lifetime DPD Timeout DPD Timeout DPD Interval DPD Inter		Be Honest, Do Be

Item	Description	Default
Interface	wan_4G, wan_wired or auto	auto



Be Honest, Do Best !	USR-G806s User Manual Te	chnical Support: h.usriot.com
Remote VPN Endpoint	VPN Client/Server, remote endpoint IP/domain	192.168.0.2
Mode	Main, aggressive	main
Tunnel type	Site to site, site to host, host to host, host to site	Site to site
Local subnet	IPSec local subnet and mask	192.168.1.0/24
Remote subnet	IPSec remote subnet and mask	192.168.55.0/24
Local Identifier	IP address or FQDN preceded by @, e.g. @domain	@client
Peer Identifier	IP address or FQDN preceded by @, e.g. @domain	@server
IKE Encryption	Phase 1 IKE encryption algorithm, authentication	3DES/MD5/Group2
	and DH group settings.	
IKE Lifetime	Set the lifetime in IKE negotiation, 400~86400s	28800
Authentication Method	Pre-shared key	PSK
ESP Encryption	3DES/AES-128/AES-192/AES-256	AES-128
ESP Authentication	SHA-1/SHA2-256/MD5	SHA-1
ESP Lifetime	Set the ESP lifetime/s	3600
PFS Group	None/DH1/DH2/DH5	DH2
DPD Interval	Set the interval after which DPD is triggered if no	60
	IPsec protected packets is received from the peer/s	
DPD Timeout	Set the timeout of DPD packets/s	60
DPD Action	Sets the action for connection detection, None/Clear/Hold/Restart	Restart

4.4. OpenVPN

USR IOT Communication Expert of Indus	strial IOT			Be Honest, Do Best!
USR-G806s	OpenVPN Topology	Enable Disable Subnet		
> Status	Role	Client ~		
Services VPN	Protocol Peer Port	UDP ~		
PPTP L2TP	TUN/TAP	TUN 👻		
IPSec	Peer Address	192.168.0.2		
GRE	Interface	Auto		
VPN Status	Authentication Method	Certificate ¥		
Network Eirewall	Root CA	选择文件 未选择任何文件		
> WAN/LAN Port	Certificate File Private Key	(法律文件)未选择任何文件 法操文件)未选择任何文件		
> DTU > System	TLS-Auth Key	透攝文件】未违择任何文件		
Logout	NAT Enable Keepalive	0		
	Enable LZO	Adaptive 🗸		
	Encrypt Algorithm	Blowfish(128)		
	Hash Algorithm	None 🗸		
	TLS Method	tls-auth 🗸		
	MTU	1500 () 600~1500		
		Jinan USR IOT Technology Limited	http://www.pusr.com/	



Be Honest, Do Best !	USR-G806s User Manual T	echnical Support: h.usriot.com
Item	Description	Default
TUN/TAP	TUN/TAP	TUN
Protocol	TCP/UDP	UDP
Peer Port	Listening port of the OpenVPN server	1194
Peer Address	IP/domain name of the OpenVPN server	192.168.0.2
Interface	Auto/wan_wired/wan_4g	Auto
Root CA	Import the ca root file to the router	Null
Certificate File	Import the client certificate file to the router	Null
Private Key	Import the client private key to the router	Null
TLS-Auth Key	Import the TLS authentication key to the router	Null
Encrypt Algorithm	None/Blowfish-128/DES-128/3DES-192/AES-128/A ES-192/AES-256	Blowfish-128
Hash Algorithm	None/SHA1/SHA256/SHA512/MD5	None
Enable LZO	Yes/No/Adaptive	Adaptive
Enable Keepalive	Defaults to 10,120, consistent with VPN server	On
MTU	Consistent with VPN server	1500
Enable Ping	Reconnect when fails to ping	Off

After connected successfully, we can check the connection status in "VPN - VPN Status".

Attached is the OpenVPN server configuration under Linux system:

```
port 1194
proto udp
dev tun
user nobody
group nogroup
persist-key
persist-tun
keepalive 10 120
topology subnet
server 10.8.0.0 255.255.255.0
ifconfig-pool-persist ipp.txt
push "dhcp-option DNS 8.8.8.8"
push "dhcp-option DNS 8.8.4.4"
push "redirect-gateway defl bypass-dhcp"
crl-verify crl.pem
ca ca.crt
cert server_Jz40qi4AWJnZuN8X.crt
key server_Jz40qi4AWJnZuN8X.crt
key server_Jz40qi4AWJnZuN8X.key
tls-auth tls-auth.key 0
dh dh.pem
auth SHA256
cipher AES-256-CBC
#tls-server
#tls-version-min 1.2
#tls-cipher TLS-DHE-RSA-WITH-AES-128-GCM-SHA256
status openvpn.log
verb 3
```

4.5. GRE



Be Honest, I	Do Best ! US	R-G806s User Manual	Technical Support: h.usriot.com
USR IOT Communication Expert of Industrial I	or		Be Honest, Do Best!
USR-G806s	GRE Configuration		
Status Services	GRE Parameters GRE	Enable Disable	
VPN	Interface Name	gre1 g unused.eg: gre1	
L2TP	Local Public IP Address	192.168.0.151	
IPSec OpenVPN	Peer GRE Interface IP Address	10.10.10.1	
GRE VPN Status	Peer Subnet	192.168.55.0/24	
Network Firewall	Local GRE Interface IP Address	10.10.10.2	
> WAN/LAN Port > DTU	πι	255 1~255	
> System	мти	1450 600-1450	
Logout	Enable Ping	Reconnect When Fails to Ping	
		Save & A	upply Save
		Jinan USR IOT Technology Limited http://w	www.pust.com/
		This control connergy chines http://w	v v

Item	Description	Default
Local public IP address	Local wan_wired or wan_4g address	192.168.0.151
Peer public IP address	Remote GRE WAN IP address	192.168.0.10
Peer GRE Interface IP	Remote GRE tunnel IP address	10.10.10.1
Address		
Peer Subnet	IP/Mask:	192.168.55.0/24
	255.255.255.0: IP/24	
	255.255.255.255: IP/32	
Local GRE Interface IP	Local GRE tunnel IP address	10.10.10.2
Address		
TTL	Set the TTL parameters(1~255) 255	
MTU	Set the MTU(600~1450) 1450	

5. Firewall

5.1. General Settings



USR-G806s User Manual Technical Support: h.usriot.com Be Honest, Do Best! USR-G806s all creates zones over your network interfaces to control network traffic flow VPN Enable SYN-flood Firewall Drop invalid packets Input accep Output accept ~ Traffic Rules Access Restrict Forward accept Rate Limiting WAN/LAN Port nes =>Forward DTU Input Output MSS clamping Forward Masquerading System Logout lan: lan: ഈ ⊛ ⇒ wan accept accept 🗸 Modify wan: wan_wired: ﷺ wan_4g: ﷺ ⇒ ACCEPT **~** Modify accept 2 ply

Descriptions:

- 1. Input: Data packets access to the router's IP.
- 2. Output: Data packets sent by the router's IP.
- 3. Forward: Data forwarding between the interfaces, not go through the router.
- 4. Masquerading: WAN and 4G interface. The source IP address will be disguised before accessing the external network.
- 5. MSS clamping: Limit the MSS packets, generally is 1460.

5.2. Traffic Rules

Traffic rules can filter specific internet data types and block internet access requests to enhance the security of the network.



USR-G806s	User	Manual
-----------	------	--------

Technical Support: h.usriot.com

Communication Expert of Indus	teral IOF	Be Honest, Do Best!
	Enable	Disable
USR-G806s	Name	Allow-Ping
> Status	Restrict to address family	IP(4 only V
> Services	Protocol	ICMP v
> VPN	Match ICMP type	echo-request
> Network	Source zone	O Any zone
General Settings		O lan: lan: 22 .
Port Forwards		🖲 wan: wan_wired: 🕎 wan_40: 🔬
Traffic Rules Access Restrictions	Source MAC address	any v Orly match incoming traffic from these MACs.
Rate Limiting	Source IP address	any 🗸
> WAN/LAN Port		Only match incoming traffic from this IP or range.
> DTU > System	Source port	any Only match incoming traffic originating from the given source port or port range on the client host
Logout	Destination zone	Device (input)
		O Any zone (forward)
		O Ian: Ian: 25 *
		O wan: wan_wired: 👷 wan_4g: 😹
	Destination address	any Redirect matched incoming traffic to the specified internal host
	Destination port	any G Redirect matched incoming traffic to the given port on the internal host
	Action	accept 🗸
		Jinan USR IOT Technology Limited http://www.pusr.com/

Item	Description	Default
Enable	1	Enable
Name	Name of this rule	-
Restrict to address family	IPv4 only	IPv4 only
Protocol	TCP+UDP/TCP/UDP/ICMP	TCP+UDP
Match ICMP type	Matched ICMP rule, choose Any	Any
Source zone	Any zone/LAN/WAN	LAN
Source IP address	Source MAC address to match this rule, can be multiple MAC addresses. Each MAC address is separated by spaces. Any: match all the MAC addresses. Note: When matching the source MAC address, leave the source IP address blank.	Any
	range, like 192.168.1.100-192.168.1.200. Any: match all the IP addresses. Note: When matching the source IP address, leave the source MAC address blank.	
Source port	Source IP port to match this rule, can be a port range, like 8000-9000. Null: match all the ports.	Null
Destination zone	Device/Any zone/LAN/WAN	WAN
Destination address The destination IP address to be accessed. Any		Any



Be Honest, Do Best !	USR-G806s User Manual	Technical Support: h.usriot.com
	Any: match all the addresses.	
Destination port	The destination port to be accessed.	Null
	Null: match all the ports.	
Action	After receiving such data packets, you can select	t: Accept
	drop, accept, reject, or don't track.	

5.2.1.IP Address Blacklist

In Traffic Rules--New forward rule, enter the name and then click Add and edit.

Communication Expert of Industrial IOT	Be Honest, Do Bes
	Firewali - Traffic Rules
058-68068	Traffic rules define policies for packets traveling between different zones, for example to reject traffic between certain hosts or to open WAN ports on the router.
> Status	Traffic Rules
> Services	Name Protocol Action Enable Sort
> VPN	
> Network	Allow Pre-Convention parts consequent Accept input 2 • • Modify X Delete
✓ Firewall	to any fourter in on this device
General Settings	Open ports on router:
Port Forwards	Name Protocol External port
Traffic Rules	New input rule TCP+UDP V
Access Restrictions	
Rate Limiting	New forward rule:
> WAN/LAN POR	Name Source zone Destination zone
System	test Ian 💙 wan 💙 🖻 Add and edit
Logout	
	Source NAT
	Source Ford
	This section contains no values yet
	New source NAT:
	Name Source zone Destination zone To source IP To source port
	New SNAT rule Ian 🗸 wan 🗸 Please cho 🗸 Do not rewrite 📾 Add and edit
	Jinan USR IOT Technology Limited http://www.pusr.com/

In below interface, set the **Source zone** to **Ian**, set the source IP address to a specific IP address, like 192.168.1.111.



Be Honest, Do Best !	US	R-G806s User Manual	Technical Support: h.usriot.cor
Communication Expert of Industrial IOT			Be Honest, Do Best!
USR-G806s	Enable	O Disable	•
	Name	test	
> Status	Restrict to address family	IPv4 only	
> Services	Protocol	TCP+UDP	
> VPN	Match ICMD hune		
> Network	насон темр суре	any	
~ Firewall	Source zone	O Any zone	
General Settings		🔹 lan: 📰 👷	
Port Forwards		O wan: wan_wired: 📰 wan_4g: 🔬	
Access Restrictions	Source MAC address	any	
Rate Limiting		Only match incoming traffic from these MACs.	
> WAN/LAN Port	Source IP address	192.168.1.111	
> DTU		Only match incoming traffic from this IP or range.	
> System	Source port	any Only match incoming traffic originating from the given source port or port range on the client host	
Logout	Destination zone	O Projection (See 1)	
		Any zone (forward)	
		O lan: lan: # *	
		• wan: wan_wired: 📰 wan_4g: 🚁	
	Destination address	any 🗸	
		Redirect matched incoming traffic to the specified internal host	
	Destination port	any Redirect matched incoming traffic to the given port on the internal host	

Configure the **Destination zone** to **wan**, change the destination address to **any**, change the **Action** to **reject**. Click Save&Apply.

USR IOT Communication Expert of Industrial IO	л	Be Honest, Do Best!
USR-G806s	Match ICMP type	any
Status	Source zone	O Any zone
Services		🔹 lan: 💷 🚓
VPN		veen: vean_wired: 22 van_49: 2
> Network		
✓ Firewall	Source MAC address	any v o o o o o o o o o o o o o o o o o o
General Settings	Source IP address	192.168.1.111
Port Forwards		Only match incoming traffic from this IP or range
Traffic Rules	Source port	any
Access Restrictions		Only match incoming traffic originating from the given source port or port range on the client float
Rate Limiting	Destination zone	O Device (input)
> WAN/LAN Port		O Any zone (forward)
> DTU		
> System		🖲 wan: wan_wired: 👷 wan_4g; 🐊
Logout	Destination address	any v V A second
	Destination port	any Redirect matched incoming traffic to the given port on the internal host
	Action	reject v
	Back to Overview	Save & Apply Save
		Jinan USR IOT Technology Limited http://www.pusr.com/



Be Honest, Do Best !	USR-G806s User Manual Technical Suppor			ort: h.usriot.c
Communication Expert of Industrial IOT			Ве	Honest, Do Bes
USR-G806s	Firewall - Traffic Rules			
Status	Traffic rules define policies for packets traveling between different zones, for example to reject traffic betwe	en certain hosts or to open WAP	N ports on the router.	
Status	Troffe Dulae			
> VPN	Name Protocol	Action	Enable Sort	
> Network				
Firewall General Settings	Allow- IP-44-CMP with type echo-request Ping From any host in wan To any router IP on this device	Accept input	Modify Delete	
Port Forwards Traffic Rules	test IPv4-TCPUDP From IP 192.788.1.777 in Jan To any Ansetti wan	Refuse forward		
Access Restrictions				
Rate Limiting	Open ports on router:			
> WAN/LAN Port	Name Protocol External port			
> DTU	New Input rule TCP+UDP V			
> System				
Logout	New forward rule:			
	Name Source zone Destination zone			
	New forward rule lan 🗸 wan 🗸 🖻 Add and edit			
	Source NAT			
	Name Protocol		Action Enable Sort	
	This section contains no values yet			
	Manual MAT			
	Jinan USR IOT Technology Limited http://www.pus	r.com/		

In this way, the device with IP 192.168.2.133 is forbidden to access all extranets.

5.2.2. IP Address Whitelist

In Traffic rules--New forward rule, enter the rule's name, click Add and edit to create a whitelist rule.

Communication Expert of Industrial IOT	Be Hone	st, Do Best
USR-G806s	Traffic Rules	
	Name Protocol Action Enable Sort	
> Status > Services	Allow - Pive-IOMP with type echo-request Accept input S • • 22 Modify 20 Delete Fing any host in war To any rotater if on the device	
> VPN > Network > Firewall	test PM-150300 Refuse forward	
General Settings	Open ports on router:	
Port Forwards	Name Protocol External port	
Traffic Rules	New input rule TCP+UDP V	
Access Restrictions		
Rate Limiting	New forward rule:	
> WAN/LAN Port	Name Source zone Destination zone	
> DTU > System	Test2 Ian v wan v 🖻 Add and edit	
Logout	· · · · · · · · · · · · · · · · · · ·	
	Source NAT	
	Name Protocol Action Enable Sort	
	This section contains no values yet	
	New source NAT:	
	Name Source zone Destination zone To source IP To source port	
	New SKAT rule Ian V wan V Please cho V Do not rewrite Add and edit	
	Jinan USR IOT Technology Limited http://www.pusr.com/	

In below interface, set the **source zone** to **lan**, set the **source IP address** to a specific one, like 192.168.1.222.



Be Honest,	Do Best ! US	R-G806s User Manua	al	Technical Suppo	rt: <mark>h.usriot.com</mark>
USR IOT Communication Expert of Industria	нот			Ве	Honest, Do Best!
USR-G806s	Firewall - Traffic Rules	- Test2			*
0511 00003	This page allows you to cha	nge advanced properties of the traffic rule entry, such as m	natched source and destination hosts.		
> Status	Enable	Ø Disable			
> Services	Name	Test2			
> VPN	Restrict to address family	IPv4 only			
> Network	Protocol				
Firewall	Producti	i critor			
Port Forwards	Match ICMP type	any 🗸			
Traffic Rules	Source zone	O Any zone			
Access Restrictions		🖲 lan: lan: 👷 👷			
Rate Limiting		O wan: wan_wired: 👷 wan_4g: 🐊			
> WAN/LAN Port	Source MAC address	any 🗸			
> DTU		Only match incoming traffic from these MACs.			
> System	Source IP address	192.168.1.222			
Logout		Only match incoming traffic from this IP or range.			
	Source port	Only match incoming traffic originating from the given so	urce port or port range on the client host		
	Destination zone	O Device (input)			
		O Any zone (forward)			
		O lan: lan: 🙂 🖷			
		wan: wan_wired: wan_4g: 2			
	Destination address	any Redirect matched incoming traffic to the specified internal	l host		•
		Jinan USR IOT Technology Limited	http://www.pusr.com/		
					×

Change the destination zone to WAN, the destination address to any, the Action is accept. Click Save&apply.

USR IOT Communication Expert of Industri	sa ior	Be Honest, Do Best!
USR-G806s	Match ICMP type	any v
Status Services VPN	Source zone	○ Any zone ● Inn: ::::::::::::::::::::::::::::::::::
Network Firewall General Settings Port Forwards	Source MAC address Source IP address	any
Traffic Rules Access Restrictions Rate Limiting	Source port Destination zone	O Device (input)
> WAN/LAN Port > DTU > System Logout		Any zone (forward) ▶ Incc. Inst. 127 m] ♥ xone, wired: 127 m]
	Destination address Destination port	any Redirect matched incoming traffic to the specified internal host any
	Action	Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Constrained incoming traffic to the given port on the internal host Const
	Back to Overview	Save & Apply Save
		Jinan USR IOT Technology Limited http://www.pusr.com/

Then we need to set another rule to reject all the communication, the source IP address and destination IP address are "any", set the action to "reject". Please note the order of the two rules, the accepted rule must come before the rejected rule.



Be Honest, Do Best !	USR-G806s User Manual		Technical Support: h.usriot.con
USR IOT Communication Expert of Industrial IOT			Be Honest, Do Best!
USR-G806s Status Services	Firewall - Traffic Rules Traffic rules define policies for packets traveling between different zones, for example to reject traffic betw Traffic Rules	veen certain hosts or to open WAN ports on the I	outer.
> VPN	Name Protocol	Action Enable	Sort
Network Firewall General Settings	Allow- IPW-ICMP with type echo-request Ping From any host in wan To any router IP on this device	Accept input 🥑	• • Modify E Delete
Port Forwards Traffic Rules	Test2 IP-4-7CP/UDP From IP-192-7681.2222 in Jan To any host in wan	Accept forward	Modify Delete
Access Restrictions Rate Limiting	Test1 IPv4-TCP/UDP From any host in Jan To any host in sean	Refuse forward 🛛 🗹	• • Modify E Delete
> WAN/LAN Port	Open ports on router:		
Sustam	Name Protocol External port		
Logout	New Input rule TCP+UDP V SAdd		
	New forward rule:		
	Name Source zone Destination zone		
	New forward rule Ian V wan V Add and edit		
	Source NAT		
	Name Protocol	Action	Enable Sort
	Jinan USR IOT Technology Limited http://www.pu	usr.com/	

5.3. NAT

5.3.1. Masquerading

Masquerading will disguise the source IP address of the data packets to the WAN IP address of the router. The masquerading and MSS clamping of the WAN interface must be enabled, which must be disabled in the LAN interface.

Communication Expert of Indus	nal lot							Be H	onest, Do	Best!
USR-G806s	Firewall - Zone Settin	ngs								
> Status	The firewall creates zones	over your network interfaces to control netwo	irk traffic flow.							
> Services	General Settings									
> VPN > Network	Enable SYN-flood protection									
✓ Firewall	Drop invalid packets	0								
General Settings	Input	accept 🗸								
Port Forwards	Qutput	accept								
Traffic Rules										
Access Restrictions	Forward	accept								
WAN/LAN Port										
> DTU	Zones =>Forward									
> System	Source Zone => Destination	on zones	Input	Output	Forward	Masquerading	MSS clamping			
Logout	lan: lan: ﷺ ⇒ wa	n	accept 🗸	accept 🗸	accept 🗸			Modify		
	wan: wan_wired: 📰 w	an_4g: \geq \Rightarrow ACCEPT	accept 🛩	accept 🗸	accept 🗸			Modify		
			Sat	ve & Apply 5a	we					
		Jinan USR IOT Technology	y Limited ht	p://www.pusr.c	om/					



5.3.2.SNAT

Item	Description	Default
Enable	1	Enable
Name	Name of this rule	1
Protocol	TCP+UDP/TCP/UDP/ICMP	TCP+UDP
Source IP address	Source IP address or IP range to match this rule, like: 192.168.1.100 or 192.168.1.100-192.168.1.200 Any means match all the source IP addresses.	Any
Source port	Source port or port range to match this rule, like 9999 or 8888-9999. Null means match all the source ports.	Null
Destination IP address	Destination IP address or IP range to match this rule, like 192.168.2.100 or 192.168.2.100-192.168.2.200 Null means match all the destination addresses.	Null
Destination port	Destination port to or port range to match this rule, like 9999 or 8888-9999. Null means match all the destination ports.	Null
SNAT IP address	Change the source IP of the matched traffic to this address	Custom
SNAT port	Change the source port of the matched traffic to this port, null means use the original source port	Null

Source NAT is a special form of packet masking that changes the source address of a packet leaving the router. When using it, we need to disable the masquerading of the WAN port.



Technical Support: h.usriot.com

USR IOT Communication Expert of Industrial IOT						Be Ho	onest, Do
USR-G806s Status Services VPN VPN Firewall General Settings Port Forwards Traffic Rules Access Restrictions	Firewall - Zone Settings The firewall creates zones over you General Settings Enable 5%H-flood Protection Drop invalid packets Input acc Output acc Forward acc	ar network interfaces to control network traffic flow.					
Alle cinicity > WAN/LAN Port > DTU > System Logout	Zones => Forward Source Zone => Destination zone Tan: tan: tan: tan: tan: tan: tan: tan: t	is Input accept v ≥ = Accept v	Output Forw accept > accept > accept > accept >	vard Masquerading	MSS clamping	Modify	
			Save & Apply Save				

Then create a source NAT rule.

Communication Expert of Industrial IOT	Be Honest, Do
USR-G806s	Instal Frenchischer Aussehn und Bergen sin ander Bergen sin Bergen sin ander Bergen sin and
> Status	Test1 IP-4-TCR/DD B Form any Notifin Man To any Notifin Man
> Services > VPN	Open ports on router:
> Network	Name Protocol External port
√ Firewall	New input rule TCP+UDP V
General Settings	
Port Forwards	New forward rule:
Arran Dataiting	Name Source zone Destination zone
Access restrictions	New forward rule Ian V wan V 🗃 Add and edit
MANU AN Dort	
	Source NAT
Sustem	Name Protocol Action Enable Sort
Logout	This section contains no values yet
	New source NAT:
	Name Source zone Destination zone To source IP To source port
	test lan V wan V 192.168.9.1 V Do not rewrite 🖻 Add and edit
	Save & Apply Save
	Jinan USR IOT Technology Limited http://www.pusr.com/

Click Add and edit.



Be Hones	t, Do Best !	USI	R-G806s User Manual	Technical Support: h.usriot.com
USR IOT Communication Expert of Indus	strial IOT			Be Honest, Do Best!
USR-G806s Status Services VVN Network CFrewall General Settings Port Forwards Traffic Rules Access Restrictions Rate Limiting WMAVLAN Port DTU System Logout		Firewall - Traffic Rules This page allows you to chan Enable Mame Protocol Source IP address Source port Destination IP address Destination IP address SNAT IP address SNAT IP address SNAT port	Strate the transformation of the properties of the traffic rule entry, such as matched source and destination hosts	
			Jinan USR IOT Technology Limited http://www.pusr.com/	

Default to enable all the source IP address and destination IP address. Click Save&Apply.

USR-G806s User Manual

Communication Expert of Industrial IOT	Be Honest, Do Be
USR-G806s	From IP 192 1/68 1222 in lan To any host in wan
> Status	Test1 IP-4-TCRUDP Refuse forward 2 • • 2 Modify 2 Delete Forma synchronian To any host in war
> Services	Open ports on router:
> VPN	Name Protocol External port
 Firewall 	New input rule TCP+UDP 👻 🔊 Add
General Settings	
Port Forwards	New forward rule:
Traffic Rules	Name Source zone Destination zone
Access Restrictions	New forward rule Ian v wan v 🖻 Add and edit
Rate Limiting	
> WAN/LAN Port	Source NAT
> DTU	Name Protocol Action Enable Sort
Logout	test Any ICMP Rewrite to source IP 2 • I Modify Delete From any host in Ian To any host in wan
	New source NAT:
	Name Source zone Destination zone To source IP To source port
	New SNAT rule Ian V wan V Please cho V Do not rewrite Add and edit
	Save & Apply Save
	Jinan USR IOT Technology Limited http://www.pusr.com/

We have changed the source IP address that left the router to 192.168.9.1. When we use the device connected to the router (IP:192.168.1.114) to ping the PC connected to the same switch as the router (IP:192.168.13.4), the source IP address of the ICMP packet to 192.168.13.4 is 192.168.9.1, not 192.168.1.114.



еH	ones	st, Do Bes	t!	USR-G80	6s Us	ser Manual		-	Technical Support:	h.usriot.com
			🕒 🖬 🗶 😂 占 🗆	् 🐐 🔿 春 👱] 0, 0, 0, 🖭 🌌 🗵	- 🍢 🕺			
	过滤:	ip.addr == 19	92.168.13.4	•	表达式	清除 应用				
N	o.	Time	Source	Destination	Protocol	l Info				
	1	0.000000	192. 168. 13. 4	220. 195. 22. 209	TCP	50379 > http [FIN, AC	[K] Seq=1 Acl	k=1 Win=64708 Len=	=0	
	2	2 0. 689352	192. 168. 9. 1	192. 168. 13. 4	ICMP	Echo (ping) request	(id=0x1d3c,	seq(be/le)=57/145	592, ttl=64)	
	3	0.689426	192. 168. 13. 4	192. 168. 9. 1	ICMP	Echo (ping) reply	(id=0x1d3c,	seq(be/le)=57/145	592, ttl=128)	
	6	6 1.689615	192. 168. 9. 1	192. 168. 13. 4	ICMP	Echo (ping) request	(id=0x1d3c,	seq(be/le)=58/148	348, ttl=64)	
	7	1.689687	192. 168. 13. 4	192. 168. 9. 1	ICMP	Echo (ping) reply	(id=0x1d3c,	seq(be/le)=58/148	348, ttl=128)	
	8	3 1.823459	192. 160. 19. 4	192. 160. 4. 69	SMD2	Create Request File.				
	9	1.825746	192. 168. 4. 63	192.168.13.4	SMB2	Create Response File:				
					01000					

5.3.3. Port Forwards

Port forwarding rules can map a specific port of the WAN interface to a intranet host.

<complex-block></complex-block>	<complex-block></complex-block>	rial IOT		Be H
<complex-block></complex-block>	<complex-block></complex-block>	Firausti - Part Forwards		
Image:	</td <td>Port forwarding allows remote comput</td> <td>outers on the Internet to connect to a specific computer or service within the private LAN.</td> <td></td>	Port forwarding allows remote comput	outers on the Internet to connect to a specific computer or service within the private LAN.	
In the latter in the second of the second	The second seco	Port Forwards		
<complex-block></complex-block>	<complex-block></complex-block>	Name Match Rules	Forwarding To	Enable Sort
<complex-block></complex-block>	<complex-block></complex-block>			
<complex-block></complex-block>	<complex-block></complex-block>	This section contains no values yet		
<image/>	<complex-block></complex-block>	New Port Forwarding Rules:		
		Name	Protocol External External port Internal Internal IP Internal port	
(u)	(in the set of the	Lost.	zone zone address	
<text><text><text><text><text></text></text></text></text></text>	<text><text><text><text></text></text></text></text>	test	TCP+UDP v wan v 81 Ian v 192.168.1.1(v 80	Add
Constrained Marging Marg			Save & Apply Save	
	Be He Freeding - Port forwards The forwards - Port forwards The forwards The forwards - Port forwards The forwards - Port			
	De son 200 200 200 200 200 200 200 200 200 20			
	De La USE DI Technology Lineal			
Exercit Decreasing allows must computer on under a within the privat way. Exercit Decreasing Private line on the letternet to concect to a specific computer or under a within the private LAN. Private line on the letternet to concect to a specific computer or under a within the private LAN. Private line on the letternet to concect to a specific computer or under a within the private LAN. Private line on the letternet to concect to a specific computer or under a within the private LAN. Private line on the letternet to concect to a specific computer or under a within the private LAN. Private line on the letternet to concect to a specific computer or under a within the private LAN. Private line on the letternet to concect to a specific computer or under a within the private LAN. Private line on the letternet to concect to a specific computer or under a within the private LAN. Private line on the letternet to concect to a specific computer or under a within the private LAN. Private line on the letternet to co	Items I forwards Be Hold Internal - Port Scienced Internal for the Internet to connect to a specific computer or tenders within the private LAN. Internal - Port Scienced Internal for the Internet to connect to a specific computer or tenders within the private LAN. Internal - Port Scienced Internal for the Internet to connect to a specific computer or tenders within the private LAN. Internal - Port Scienced Internal for the Internet to connect to a specific computer or tenders within the private LAN. Internal - Port Scienced Internal for the Internet to connect to a specific computer or tenders within the private LAN. Internal - Port Scienced Internal for the In			
	Image: Status and Status			
But But Die Derendenge Umter the phytome spacescol	<page-header></page-header>			
Be used to the descent of the descen	Be Be Firewal: Pert Forwalds The forwarding allows remote computers on the internet to a specific computer or service within the private Lak.			
Brance Research Strand Brance Freinigen Strand Str				
<text></text>	<text></text>		Jinan USR IOT Technology Limited http://www.pusr.com/	
Frewall - Oct Forwarding The transmitter is a specific computer or service within the private Lat. Image: Constraining Statistics Forwarding Forwarding Fueler Image: Constraining Statistics Protocol External port internal internal port intern	Fiewall - Ext Extension Protocols Protocol Defermantion Protocol Defermantion Defermantion Protocol Defermantion Defermantion		Jinan USR IOT Technology Limited http://www.pusr.com/	Ro H
Act dowarding allows remote computers on the Internet to connect to a specific computer or service within the private LAM. Prior work data Rules	Pot forwarding allows remote computers on the Internet to connect to a specific computer or service within the private LANL. New For Forwarding Rules: New Port Forwarding Rules: Protocol External New Port Forwarding Rules: New Rule Complex Rule Or Both Rule Complex Rule 	alor	Jinan USR IOT Technology Limited http://www.pusr.com/	Be H
Port Ecrowarding Name Match Rules If I	Port Evreads Name Protocol Esternal TCP+UDP van v Internal	Firewall - Port Forwards	Jinan USR IOT Technology Limited http://www.pusr.com/	Be H
Name Match Rules Forwarding To Enable Sort Stein and yr Oddrift in sam Via any oddrift iff at port 80 IP 192.768.1000 port 80 in lan IP 192.768.1000 port 80 in lan IP IP 192.768.1000 port 80 in lan New Port Forwarding Rules: New port forwarding TCP+UDP wan v Internal Internal P Internal port New port forwarding Rules: Internal Internal P Internal port Internal port New port forwarding Rules: Internal Internal P Internal P New port forwarding Rules: Internal Internal P Internal P New port forwarding Rules: Internal P Internal P Save & Agerly Save	Name Ket Nulsi Forwarding To Enable For Ster Port Forwarding Rules: Image: Constraining Constrainin	Firewall - Port Forwards Port forwarding allows remote compu	Jinan USR IOT Technology Limited http://www.pusr.com/	Be H
Internal USE I/OT Technology Limited Internal Internal Internal Internal Port	test tit/tstrep 1P 192 t68 1.000 port 60 in lan Image: Contracting Rules: Name Protocol External port internal IP Internal port Internal port Name Protocol External External port internal IP Internal port Image: Contracting Rules: New port forward TCP+UDP v van v Image: Contracting Rules: Image: Contracting Rules: Image: Contracting Rules: New port forward TCP+UDP v van v Image: Contracting Rules: Image: Contracting Rules: Image: Contracting Rules: New port forward TCP+UDP v van v Image: Contracting Rules: Image: Contracting Rules: Image: Contracting Rules: New port forward TCP+UDP v van v Image: Contracting Rules: Image: Contracting Rules: Image: Contracting Rules: New port forward TCP+UDP v van v Image: Contracting Rules: Image: Contracting Rules: Image: Contracting Rules: New Rules: Swer Rules: Swer Rules: Swer Rules: Image: Contracting Rules:	Firewall - Port Forwards Port Forwards Port Forwards	Jinan USR IOT Technology Limited http://www.pusr.com/	Be H
Tom any host in with Via with void of if it Name Protocol External port Internal internal port Internal TCP+UDP • van • Internal Internal port Internal TCP+UDP • van • Internal Internal port Internal <t< td=""><td>From any host in will Now bort Forwarding Rules: Name Protocol External port Internal internal port Internal ort Internal ort Int</td><td>Firewall - Port Forwards Port forwarding allows remote compu Port Forwards Name Match Rules</td><td>Jinan USR IOT Technology Limited http://www.pusr.com/</td><td>Be H nable Sort</td></t<>	From any host in will Now bort Forwarding Rules: Name Protocol External port Internal internal port Internal ort Internal ort Int	Firewall - Port Forwards Port forwarding allows remote compu Port Forwards Name Match Rules	Jinan USR IOT Technology Limited http://www.pusr.com/	Be H nable Sort
New Port Forwarding Rules: Internal port Internal port Name Protocol External External port Rew port forward TCP+UDP v wan v an v Save & Agely Save	New Port Forwarding Rules: Internal port Internal port New port forward TCP+UDP v wan v an v v address Swe R Apply Swe	Firewall - Pert Forwards Port Forwards Port Forwards Name Match Rules test IPv4-TCP.UDP	Jinan USR IOT Technology Limited http://www.pusr.com/ puters on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192 168.11/00 port 80 in Ian	Be H nable Sort
New Port Forwarding Rules: Name Protocol External fort Internal port internal port New port forward TCP+UDP wan * Ian * Internal port Size & Apply Even	New Port Forwarding Rules: Internal port Internal Internal Port Internal Port New port forward TCP+UDP war Iar Iar Idde Swe & Appdy Swe	Firewall - Port Forwards Port Forwards Name Match Rules test IPv4-TCP, UDP From any Andre I wan Valar ary router (#1 at ort 61	Jinan USR IOT Technology Limited http://www.pusr.com/ outers on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192 168.1.100 port 80 in Ian	Be H nable Sort
Name Protocol External port Internal IP Internal port Mem port forward TCP+UDP val Internal P Internal Port Swee & Apply Swee	Name Protocol External port Internal IP Internal port Image: TCP+UDP van image: TCP+UDP van image: TCP+UDP Swore R.Apply Swo	Firewall - Port Forwards Port forwards Port Forwards Name Match Rules Test IPv4-TCP UDP From any host in water of a	Jinan USR IOT Technology Limited http://www.pusr.com/ outers on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192.168.1.100 port 80 in lan	Be H nable Sort
New port forward TCP+UDP v wan v an v Add Save & Apply Save	New port forward TCP+UDP wan Ian Image: Comparison of the second s	Firewall - Port Forwards Port forwards Port Forwards Name Match Rules test IPN4-TCP UDP From any house IP at port 87 Via any router IP at port 87 New Port Forwarding Rules:	Jinan USR IOT Technology Limited http://www.pusr.com/ outers on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192 168 7.100, port &0 in fan	Be H nable Sort
Save & Agety Save	Save & Agefy Save	Firewall - Port Forwards Port forwarding allows remote comput Port Forwards Name Match Rules test iPv4-TCP UDP From any host in wan Via any router iP at port 87 New Port Forwarding Rules: Name	Jinan USR IOT Technology Limited http://www.pusr.com/ outers on the Internet to connect to a specific computer or service within the private LAN. Ferwarding To IP 192 168.1.000 port &0 in fan IP 192 168.1.000 port &0 in fan Protocol External External port Internal IP Internal port	Be H nable Sort
Save & Apply Save	Save & Apply Save Jinan USR IOT Technology Limited http://www.pusr.com/	Firewall - Port Forwards Port forwards Port Forwards Name Math Rules Ist IPv-ECP UOP From any Aord in wan Via any nuder (P at port 87) New Port Forwarding Rules: Name Name Item port forward	Jinan USR IOT Technology Limited http://www.pusr.com/ suters on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192.168.1.000 port &0 in Ian Protocol External port Internal IP Internal IP TCP+UDP v van v	Be H
Save & Apply Save	Save & Aggy Save	Firewall - Port Forwards Port forwarding allows remote computed for the second secon	Jinan USR IOT Technology Limited http://www.pusr.com/ outers on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192 168 1.100; port 80 in lan IP 192 168 1.100; port 80 in lan	Be H
Jinan USR IOT Technology Limited _ http://www.nusr.com/	Jinan USR IOT Technology Limited http://www.pusr.com/	Firewall - Port Forwards Port forwards Port Forwards Name Match Rules Lest IPort FOrwards New Port Forwarding Rules: Name New Port Forwarding Rules: Name New Port Forwarding Rules: Name Name	Jinan USR IOT Technology Limited http://www.pusr.com/ nuters on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192 168.1100 port 80 in lan Protocol External port Internal IP Internal port Internal IP Internal port Internal IP	Be H
Jinan USR IOT Technology Limitedbttp://www.nusr.com/	Jinan USR IOT Technology Limited http://www.pusr.com/	Firewall - Pert Forwards Port Forwarding allows remote comput Port Forwards Name Match Rules test IPu4-TCP UDP From any Institution man Visition and Visition man Visition of Pitter Pitter and Visition man New Port Forward Pitter and Visition Pitter and Visi	Jinan USR IOT Technology Limited http://www.pusr.com/ Duters on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192 168.1.000 port 80 in lan IP 192 168.1.000 port 80 in lan Protocol External External port ICP+UDP v van v Save & Apgely	Be H
Jiean USR IOT Technology Limited <u>http://www.eusr.com/</u>	Jinan USR IOT Technology Limited http://www.pusr.com/	Firewall - Port Forwards Port Forwards Port Forwards Name Match Rules Lest IN-TCP UDP From any Actin was Via any moder iP at port 81 New Port Forwarding Rules: Name Name Interpret forward	Jinan USR IOT Technology Limited http://www.pusr.com/ Duters on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192 168.1.100 port 80 in Ian Protocol External port IP retocol External port IP TEP+UDP v van v	Be H
Jinan USR IOT Technology Limitedbttp://www.nusr.com/	Jinan USR IOT Technology Limited http://www.pusr.com/	Firewall - Port Forwards Port Forwards Name Match Rules test IPv4-TCP, UDP From any Nost in wan Via any noster iP at port 87 Name Itele port forward Name Itele port forward	Jinan USR IOT Technology Limited http://www.pusr.com/ Duters on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192 168.1.000 port.80 in Ian Protocol External port Internal IP TEP+UDP v wan v Save & Apply	Be H
Jinan USR IOT Technology Limitedbttp://www.nuse.com/	Jinan USR IOT Technology Limited http://www.pusr.com/	Firewall - Port Forwards Port forwarding allows remote comput Port Forwards Name Match Rules Usst iPv-TcQ UDP From any Abdin wan Via any router iPst port 87 New Port Forwarding Rules: Name Peer port forward	Jinan USR IOT Technology Limited http://www.pusr.com/ outers on the Internet to connect to a specific computer or service within the private LAN. Ferwarding To IP 192 168.1.000 port &0 in fan IP 192 168.1.000 port &0 in fan TCP+UDP v van v Save & Agely	Be H
Jinan USR IOT Technology Limitedbttp://www.nuse.com/	Jinan USR 10T Technology Limited http://www.pusr.com/	Frewall - Port Forwards Port Forwards Port Forwards Name Match Rules Lest IPv4-TCP UDP From any hotrin wan Via any noterin galesc: Name Port Forwarding Rules: Name Feer port Forward	Jinan USR IOT Technology Limited http://www.pusr.com/ auters on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192.168.1.000 port 80 in Ian Protocol External port TCP+UDP v van v Seve & Apply Save	Be H
Jinan USR IOT Technology Limitedbttp://www.nuse.com/	Jinan USR IOT Technology Limited http://www.pusr.com/	Firewall - Port Forwards Port forwards Port Forwards Name Match Rules Lest IPw-TCP UDP From any Actin wan Via any notif wan Via any notif Rules: New Port Forwarding Rules: Name New port forward	Inan USR IOT Technology Limited http://www.pusr.com/	Be H
Jiaan USR IOT Technology Limitedhttp://www.nusr.com/	Jinan USR IOT Technology Limited http://www.pusr.com/	Firewall - Port Forwards Port Forwards Port Forwards Name Match Rules Eest (Port FOr Words) Form any Joint wan Vas any Porter (Part Bord Words) New Port Forwarding Rules: Name Hear port Forward	Inan USR IOT Technology Limited http://www.pusr.com/ Duters on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192 168.1.000 port 80 in lan IP 192 168.1.000 port 80 in lan Protocod External port ICP+UDP v van v Save & Aggly	Be H
Jinan USR IOT Technology Limitedbttp://www.nuse.com/	Jinan USR IOT Technology Limited http://www.pusr.com/	Firewall - Port Forwards Port Forwards Name Match Rules Lett IPve-TCP_UDP Form any foot in man Was any roader Part port 87 Name Name Hew port Forward	Inan USR IOT Technology Limited http://www.pusr.com/	Be H
Jinan USR IOT Technology Limited http://www.pusr.com/	Jinan USR IOT Technology Limited http://www.pusr.com/	Firewall - Port Forwards Port Forwards Name Match Rules Est IPv4-TCR UOP From any Action man Via any router life at port of 21 New Port Forwarding Rules: Name Name Interpretation New port Forward Interpretation	Jnan USR IOT Technology Limited http://www.pusr.com/ Duters on the Internet to connect to a specific computer or service within the private LAN. Forwarding To IP 192 168.1.000 port 80 in lan Protocol External port IVP 192 168.1.000 port 80 in lan TCP+UDP v van v Save & Apply Save	Be H
	and the second	Firewall - Port Forwards Port Forwards Name Match Rules test IPv4-TCP, UDP From any Andre IP at port 81 New Port Forwarding Rules: Name Here port forward	Janan USR 10T Technology Limited http://www.pusr.com/ Duters on the Internet to connect to a specific computer or service within the private LAN. Protocol IP 192 168.1.100 port.80 in fan Protocol External port Internal Internal IP Internal port Internal Port Internal IP Internal Internal	Be H



Technical Support: h.usriot.com

Item	Description	Default
Name	Name of this rule	Null
Protocol	TCP+UDP/TCP/UDP	TCP+UDP
External zone	Including wired wan、4G、VPN	wan
External port	Can be a port or port range, like: 8000-9000 When the external port and internal port are empty, it is DMZ function.	Null
Internal zone	LAN network	lan
Internal IP address	LAN IP address of the router	Null
Internal port	Can be a port or port range, like: 8000-9000 When the external port and internal port are empty, it is DMZ function.	Null

5.3.4.NAT DMZ

Port forwarding rules map a specified WAN port to a intranet host, DMZ rules will map all ports of the WAN interface to a intranet host.

DMZ rules are set in the port forwarding interface, in DMZ mode, do not need to set the external port and internal port.

 LVR cBook A state A state	USR IOT	ai lot					Be H	onest
 Services VPN Network Frevall General Settings Fati Cowards Access Restrictions Rate Limiting WAN/LAN Port DTU System Logout 	USR-G806s	Firewall - Port Forwards Port forwarding allows remote computers on the inte	ternet to connect to a specific co	mputer or service within the pri	vate LAN.			
 ✓ Fitewall General Settings Port Forwards Traffic Rules Access Restrictions Rate Lining > WAN/LAN Port > DTU > System Logout 	> Services > VPN > Network	Port Forwards Name Match Rules		Forwardin	g To		Enable Sort	
Traffic Rules Name Potocol Earonal pot Internal Ipternal Ipt	 Firewall General Settings Port Forwards 	This section contains no values yet New Port Forwarding Rules:						
VIAN/LAN Port DTU Save & Apply Save Save Logout	Traffic Rules Access Restrictions Rate Limiting	Name P	Protocol External zone TCP+UDP V wan V	External port	Internal IP address Ian × 182.168.1.1	Internal port	Add	
	WAN/LAN Port DTU System			Save & Apply Save				
	Logour							



De Honest, Do Dest :	USR-G806	s User Manual		Technical Suppor	t: h.usriot.con
USR IOT Communication Expert of Industrial IOT				Be I	Honest, Do Best!
USR-G806s > Status	Firewall - Port Forwards Port forwarding allows remote computers on the I	Internet to connect to a specific computer or service within	the private LAN.		
Services VPN	Port Forwards Name Match Rules	Forwarding To	D	Enable Sort	
Network Firewall General Settings	test IPv4-TCP, UDP From any host in wan Via any router IP	IP 182.168.1.10	00 in Ian	Delete	
Port Forwards Traffic Rules	New Port Forwarding Rules:	Perturbative Standard	lateral lateral D	lateral and	-
Access Restrictions Rate Limiting	New port forward	TCP+UDP v wan v	internal internal iP zone address	Internal port	
> DTU > System Logout		Save & Apply 5	Save		
	Jinan U	SR IOT Technology Limited http://www.pusr.	.com/		

All the ports of the WAN address will be forwarded to the intranet host 192.168.1.100.

> Note: Port forwarding and DMZ cannot be used at the same time.

5.4. Access Restriction

5.4.1.Black List

When we choose "Black list", the devices connected to the router cannot access the domain name in blacklist, but can access all other domain names. Here, the device can access the domain name except **baidu.com**.

USR IOT Communication Expert of Industrial IOT				Be H
SR-G806s	Access Res	strictions		
Status Services	Enter the dor revisit.	nain name keyword, such as www.baidu.com.Note: When setting the w	hitelist, the PC may fail to visit the whitelist site for t	the first time due to browser reasons. If the access fails, please
/PN Network Firewall	Configurati	Method Black List		
General Settings Port Forwards	Name	Domain Name	Enable	
affic Rules ccess Restrictions	test	baidu.com	2	X Delete
ate Limiting /AN/LAN Port	New Firewall F	Rule:		
i'U rstem		Name New rule	Domain Name	D Add
gout			Save & Apply Save	
		Jinan USR IOT Technology Limited	http://www.pusr.com/	



5.4.2. White List

After enable "White List", the devices connected to the router can only access the domain name within whitelist. If just enable white list but do not add the rules, the device cannot access any domain name. Here, the device can only access **baidu.com**.

Communication Expert of Industrial IOT				Be I	Honest, Do B
USR-G806s	Access Restriction	s			•
> Status	Enter the domain name revisit.	keyword, such as www.baidu.com.Note: When setting the v	vhitelist, the PC may fail to visit the whitelist site fo	or the first time due to browser reasons. If the access fails, please	
> VPN	Configurations				
Network Firewall	Meth	nod White List 🗸			
General Settings Port Forwards	Name	Domain Name	Enable		7
Traffic Rules	Test1	baidu.com		P Delete	
Access Restrictions Rate Limiting			u	A Detete	_
WAN/LAN Port DTU	New Firewall Rule:	Name	Domain Name		
> System		New rule		Add 😭	
Logout			Save & Apply Save		
		Jinan USR IOT Technology Limited	http://www.pusr.com/		

5.5. Rate Limiting

This function can limit the upload and download rate the the devices that connected to routers. You can add the rules related to the IP address and MAC address. Multiple rules can be created at the same time.

The minimum upstream and downstream rate is 10KB/S. The downstream rate is usually greater than the upstream rate.



Be Honest, Do Best !	USR-G806s User Manual	Technical Support: h.usriot.com
Communication Expert of Industrial IOT		Be Honest, Do Best!
USR-G806s Status Services VPN Network Frewall General Settings Port Forwards Traffic Rules Access Restrictions Rate limiting WMAV/LAN Port DTU System Logout	Rate-Ilmiting Descending rate is greater than the downward rate Restrict access to the Internet speed of Ip start ip end ip downstream (KB/S) This section contains no values yet New Firewall Rule: start ip end ip downstream (KB/S) upstream (KB/S) 192_168_1.100 100 100 100 Restrict access to the Internet speed of mac MAC downstream (KB/S) This section contains no values yet	upstream (K8/5)
	Save & Apply Save	· · · · · ·

6. PUSR Cloud

For the details of connecting USR-G806s to our PUSR Cloud, please refer to our another manual: <u>Remote</u> <u>Management of USR Router</u>

7. Advances Services

7.1. Email

After connecting to the network, this mailbox will be used as the sender to send a specific alarm email to the set email address.



Technical Support: h.usriot.com

USR IOT Communication Expert of Indust	rial IOT	Be Hor	nest, Do Best!
USR-G806s	Email		
Status	Configurations		
Services			
Phtunnel Email	From	Email Outbox Address, for example xxx@xxx.com	
SMS Alert	Password	Email Outbox Parsword	
Dynamic DNS SNMPD	SMTP Server	E-mail Sending Server Address, for example:smtp.xxx.com	
RemoteManager USR Cloud	Server Port	E-mail Sending Server Port	
Base Station	Timeout	E-mail Sending Timeout 1-60seconds	
> Network	Enable SSL	Disable Wether to enable SSL encryption.	
> WAN/LAN Port	Enable STARTTLS	Disable Whether to enable STARTILS	
> DTU > System	Authentication Mode	LOGIN	
Logout	Subject	1-512characters, Note: the length of topics supported by different email boxes is different.	
	Send Test Email	Disable Send Test Email When Apply	

http://v

Item	Description	Default
From	Sender mail of the alarm	Null
Password	Sender mail password or the set third party mailbox authorization code	Null
SMTP server	Outgoing mail server. Can check in "SetClient Settings" of the mail.	Null
Server port	Outgoing mail server port. Can check in "SetClient Settings" of the mail.	Null
Timeout(Units: s)	Email sending timeout: 1~60s	Null
Enable SSL	Whether to enable SSL encryption. Can check in "SetClient Settings" of the mail.	Disable
Enable STARTTLS	Whether to enable STARTTLS.	Disable
Authentication Mode	LOGIN/PLAIN/Custom	LOGIN
Subject	Subject when sending the email.	Null
Send test email	Whether to enable sending test email	Disable

Note:

- If fails to send the email with the correct configuration, please check if the authorization code is needed. The authorization code is a special password used by the third party to log in the mail client.
- 2. Outlook and Tencent Exmail have been validated for this function.



-

7.2. SMS

This function is just for SMS test. Please waiting 2~15s after clicking Test SMS.

Communication Expert of Industrial IOT		Be Honest, Do Best!
USR-G806s	SMS	
> Status	The phone number supports pure numbers within 20 digits, and the test content supports characters within 100 bytes A-Za-z0-9,	
✓ Services	SMS Test	
Phtunnel		
SMS	Phone Number:	
Alert	Message:	
Dynamic DNS	Result:	
SNMPD		
RemoteManager		
Base Station		
> VPN		
> Network		
> Firewall		
> WAN/LAN Port		
> DTU		
> System		
Logout		
	Jinan USR IOT Technology Limited http://www.pusc.com/	
Item	Description	Default
liem	Description	Delault
Phone number	Send SMS to this phone number	Null
Message	SMS content	Null

7.3. Alert

Result

G806s supports alerting via SMS, Email and triggering DO, supports carrying device information. It supports up to 20 alert messages with many different device status.

Success or Fail

Item	Description	Default
Description	Alarm content	alarmx
Send SMS	Disable/Enable	Disable
Phone number	Phone number to receive the alarm message	Null
Send email	Disable/Enable	Disable
Email address	Email address to receive the alarm message, please set the	Null
	correct email information in Email interface before using it.	
Device information	Disable/IMEI/SN/MAC/ICCID	Disable
Event	6 event status	Uncheck





Description:

- SMS supports up to 140 bytes, including the description, event, time and the message. Do not make the description too long to avoid receiving incomplete messages.
- Please ensure the device has connected to the 4G network and the SIM card supports SMS function before sending SMS.
- > Please ensure the device has connected to the network before sending email.
- > WAN-4G online: Alarm after successful 4G networking.
- > WAN-4G offline: Alarm after connecting to the 4G network again.
- > Network type change: Alarm when changing the network type.
- > WAN up: Alarm when connecting to wired network.
- > WAN down: Alarm when the wired network disconnect.
- > System reboot: Alarm if the device restart without power off.

Add an alert rule.

Communication Expert of Indu	strial IOT					Be Honest, Do Be L
USR-G806s	Alert					
> Status	Alert					
✓ Services	Alert Con	fig				
Phtunnel	Index	Description S	SMS Enable	Email Enable	Facility Information	
Email						
SMS	This section	contains no values yet				
Alert	2 Add					
Dynamic DNS	Add					
SNMPD				Save & Apply Save		
RemoteManager			_			
USR Cloud						
Base Station						
> VPN						
> Network						
> Firewall						
> WAN/LAN Port						
> DTU						
> System						
Logout						
		Jinan USR IOT T	echnology Limited	http://www.pusr.com/		



USR-G806s User Manual Technical Support: h.usriot.com Be Honest, Do Best! of Industrial IOT USR-G806s Note: SMS can be up to 140 bytes long. The content of the SMS is composed of alarm event content + alarm description + alarm time + device information. If the description information filled in is too long, the received SMS may be incomplete. ✓ Services Event Selection Email alarm1 Note: SMS supports up to 140 bytes. SMS Alert Dynamic DNS ~ Send SMS Enable SNMPD RemoteManage Send Email Enable USR Cloud Email Address Base Station Device Information VPN Network SN MAC ICCID Firewall Back to Overview ave & Apply Save WAN/LAN Port DTU System Be Honest, Do Best! Note: SMS can be up to 140 bytes long. The content of the SMS is composed of alarm event content + alarm description + alarm time + device information. If the description information filled in is too long, the received SMS may be incomplete. Services Phtunnel neral Settings Email WAN_4G Online

SMS Alert WAN_4G Offline Dynamic DNS Network Type Change SNMPD WAN Up RemoteManager WAN Down USR Cloud System Reboot Base Station VPN Network Back to Overview ve & Apply Save Firewall WAN/LAN Port System

7.4. SNMPD

USR-G806s supports simple SNMP protocol. This function is default to be disabled.



Be Holles	st, Do Best !	USR-G806s User Manua	al	Technical Support: h.usriot.com
Communication Expert of Indu	strial IOT			Be Honest, Do Best!
USR-G806s Status Services Phtunnel Email SMS Alert Dynamic DNS SNMPD RemoteManager USR Cloud Base Station VPN Network Firewall KMA AN End	SNMPD Songd set Enable S	tings you san tum this feature off or an. NMP Enable SNMP	Save & Apply Save	
> DTU > DTU > System Logout		Jinan USR IOT Technology Limited	http://www.pusc.com/	

7.5. DDNS

DDNS function allows remote access to the router directly through the domain Item instead of your dynamic IP address, which changes from time to time.

7.5.1. Supported Services

If you are using the DNS service provider can be found in **Services Provider** drop-down box, please configure like below:

Communication Expert of Industrial IOF		Be Honest, Do Best!
USR-G806s Status Services Phtunnel Email SMS Alert Dynamic DNS SMMPD	Dynamic DNS Dynamic DNS Dynamic DNS allows that your router can be reached with a fixed hostname while having a dynamically changing IP address. Configuration Enable I enable	ion of the service provider.
RemoteManager USR Cloud Base Station > VPN > Network > Erement	Hotsmanne eyndhas core v - custom - custom myusername Password IP Source IP Source er Le addes through this interface	
WAN/LAN Port DTU System Loopurt	Interface eth0.2 Check For Changed IP 10 Every There lief print v	
Lughoit	Force Update Every 72	
	Jinan USR IOT Technology Limited http://www.pusr.com/	



Be Honest, Do Best !	USR-G806s User Manual	Technical Support: h.usriot.com
Item	Description	Default
Enable	On/Off	Off
Effective interface	lan/wan_wired/wan_4g	wan_wired
Service Provider	DDNS server address	ddns.oray.com
Hostname	Enter the hostname provided by the DDNS server.	mypersonaldomain.dyndns.org
Username	Enter the username provided by the DDNS server	myusername
Password	Enter the password provided by the DDNS server	mypassword
IP Source	Network/Interface/URL	Interface
Interface	eth0.2/eth1	Eth0.2
Check for changed IP every/unit	The interval at which IP address changes are detected. The IP binding of the domain name may change frequently, and the lower the value, the more frequent the detection.	10 min
Force update every/unit The time interval for forced updates.		72 h

7.5.2. Custom Services

If you are using the DNS service provider can not be found in **Service Provider** drop-down box, please select "Custom", then configure like below:

Communication Expert of Indu	uateral IOT	Be Honest, Do Best!
USR-G806s	Dynamic DNS	Î
> Status	Dynamic DNS allows that your router can be reached with a fixed hostname while having a dynamically changing IP address.	
✓ Services	Configuration	
Phtunnel	Enable 🖉 👩 If enabled to disabled, DDNS will continue to take effect for a period of time. The specific length deper	ds on the configuration of the service provider.
SMS	Current DDNS IP Addr	
Alert	Effective interface wan_wired	
Dynamic DNS SNMPD	Veterland criterina ca in which the base-upparter scripts will come into effect Service Provider custom V	
RemoteManager	Dynamic DNS Provider Custom update-URL	
Base Station	Hostname mypersonaldomain.ddns.ora)	
> VPN	Username myusername	
> Network	Password ####################################	
Firewall WAN/LAN Port	IP Source Interface Get IP address through this interface	
> DTU	Interface eth0.2	
> System	Check For Changed IP 10	
Logout	Every Time Init	
	Evere Indate Every 72	
	Jinan USR IOT Technology Limited http://www.pusr.com/	



Technical Support: h.usriot.com

Here we use "ddns.oray.com" as an example, the hostname is "1a516r1619.iask.in", username is "ouclihuibin123", password "ouclihuibin123".

Item	Description	Default	
Enable	On/Off	Off	
Effective interface	lan/wan_wired/wan_4g	wan_wired	
Service Provider	Custom		
Custom update-URL	DDNS server address, here we take "ddns.oray.com" as an example. Please enter with the format of "http://username:password@ddns.oray.com/ph/updat e?hostname=hostname provided by the DDNS server"	Example: http://ouclihuibin123:o uclihuibin1231@ddns. oray.com/ph/update?h ostname=1a516r1619. iask.in	
Hostname	Enter the hostname provided by the DDNS server	Example: 1a516r1619.iask.in	
Username	Enter the username provided by the DDNS server	Example: ouclihuibin123	
Password	Enter the password provided by the DDNS server	Example: ouclihuibin123	
IP Source	Network/Interface/URL	Interface	
Interface	eth0.2/eth1	eth0.2	
Check for changed IP every/unit	The interval at which IP address changes are detected. The IP binding of the domain name may change frequently, and the lower the value, the more frequent the detection.	10 min	
Force update every/unit	The time interval for forced updates.	72 h	

Note:

- > After setting all parameters, please restart the device to take the parameters effect.
- > Dynamic domain names work even if the router is in subnet.
- > DDNS + port forwarding can realize remote access to the router subnet.
- > This function requires to assign a separate public IP to the router's network.
- > Multiple DDNS domain names can be added to this router.



7.6. Remote Manager

After enable **Remote Firmware Upgrade** and **Remote Monitor** function in G806s device, you can add it in our remote management platform http://ycsj1.usriot.com/Public/login. Please register and submit your account to technical engineers for authorization before using it.

Communication Expert of Industrial IOT	Be H	lonest, Do Best!
USR-G806s Status Status Status Services Phtunnel Email SMS Art Dynamic DNS SMMPD RemoteManager USR Cloud Base Station VPN Network Base Station Firewall WAN/LAN Port DTU System Logout	Remote firmware upgrade and status monitor. Configuration TemworeUpgrade StatuAMonitor Cable Remote firmware Port J0001 Interval(seconds) 1800	
USR-G806s	Jinan USR IOT Technology Limited http://www.pusr.com/ Be F RemoteManager	ionest, Do Best!
Status Status Phunnel Email SMS Alert Dynamic DNS SNMPD RemoteManager USR Cloud Base Station	Remote firmware upgrade and status monitor. Configuration FirmwareUpgrade StatusMonitor Remote Monitor Remote Address Port 30001 Heartpkt Interval(seconds) 600	
 VPN Network Firewall WAN/LAN Port DTU DTU System Logrout 	Save & Apply Save	



8. Serial Port

USR-G806s supports DTU function, which can achieve RS485 serial data transmission.

8.1. Serial Port Settings

8.1.1. Basic Settings

Serial parameters of USR-G806s must be consistent with the RS485 serial device. Otherwise, they cannot communicate with each other.

USR IOT Communication Expert of Indu	яка ют	onest, Do Best!
Communication Expert of Inde USR-G806s > Status > Services > VPN > Network > Firewall > WAN/LAN Port DTU General Settings Servial Port Settings SOCKET HTTPD > System Logout	be no set of the set of set al part	
	Jinan USR IOT Technology Limited http://www.pusr.com/	

Item	Description	Default
Baud rate	Supports	115200
	1200/2400/4800/9600/19200/38400/57600/115200/230400	
Data bits	8	8
Stop bits	1 /2	1
Parity	NONE/ODD/EVEN	NONE
Packaging interval (ms)	10-60000	10
Packaging length(byte)	5-1500	1000



8.1.2. Framing Mechanism

8.1.2.1. Time Trigger

When G806s receives data from the UART, it continuously checks the interval of two adjacent bytes. If the interval time is greater or equal to a certain "time threshold", then a frame is considered finished, otherwise the data is received until greater or equal to the packet length byte set (Defaults to 1000 bytes). This frame is sent to the network as a TCP or UDP packet. The "time threshold" here is the time between packages. The range of settable is 10ms~60000ms.Factory default: 10ms.

This parameter can be set by AT command, AT+UARTFT=<time>.



8.1.2.2. Length Trigger

When G806s receives data from the UART, it constantly checks the number of bytes received. If the number of bytes received is equal to a certain "length threshold", a frame is considered to have ended, then this frame is sent to the network as a TCP or UDP packet. The "length threshold" here is the package length. The settable range is 5~1500 bytes. Factory default 1000.

This parameter can be set by AT command, AT+UARTFL=<length>.



8.2. Operating Mode

USR-G806s supports three operating modes: NET(Transparent transmission), MODBUS(MODBUS RTU to MODBUS TCP), HTTPD(HTTP Client mode).



Be Honest	, Do Best !	USR-G806s User M	anual	Technical Support: h.usriot.com
Communication Expert of Indust	trial IOT			Be Honest, Do Best!
USR-G806s Status Services VPN Network Firewall WAAVLAN Port U General Settings Serial Port Settings SOCKET HTTPD System Logout		DTU Setup DTU General Configurations Configurations Type NET Restarting Without Dats	Save & Apply	
		Jinan USR IOT Technology	Limited http://www.pusr.com/	•

8.2.1.NET Mode

In this mode, user can achieve transparent data transmission between the serial device and the network server with simple parameter settings.

USR-G806s supports 4 socket connections, socket A~socket D, which are independent with each other. Socket A supports TCP client/TCP server, UDP client/server, socket B/C/D supports TCP client, UDP client/server.

Here we connect the RS485 port to the computer via a serial to USB adaptor to test:

1. Set the operating mode to NET.

USR IOT Communication Expert of Indu	maior Be Honest, Do Best! ■■■
USR-G806s	DTU Setup
> Status	DTU General Configurations
> Services	Configurations
> VPN	Perstevel Several Solicit Laserfloors Exclare Backet Backet
> Network	
> Firewall	Type NET ~
> WAN/LAN Port	Restarting Without Data OFF 💙
V DTU	
General Settings	
SOCKET	Save & Apply Save
HTTPD	
System	
Logout	
	Jinan USR IOT Technology Limited http://www.pusr.com/



Technical Support: h.usriot.com

2. Set the serial port parameters.

Communication Expert of Indu	ania lor	Honest, Do Best!
USR-G806s Status Services VPN Network Firewall WAN/LAN Port DU General Settings SocKET HTTPD System Logout	Serial Port Settings Te taxis resting of serial post Configuration Baid Rat 11520 Data Bils 2 Stop Bils 2 Packaging Interval 0 Difference 0 Stop Bils 0 Packaging Interval 0 Stop Bils 0 Stop Bils 0 Stop Bils 0 Stop Bils 0 Packaging Interval 0 Stop Bils 0	
	Jinan USR IOT Technology Limited http://www.pusr.com/	

3. Set the device to TCP client, server address to test.usr.cn, port 2317.

USR IOT Communication Expert of Industri	Be Ho	onest, Do Best!
USR-G806s Status Services VPN Network Firewall WAN/LAN Port U General Settings Serial Port Settings SCRET HTTPD System Logout	source & good by the server address to be address to be server address to be server address t	
	Jinan USR IOT Technology Limited http://www.pusr.com/	

4. After setting all parameters, restart the device to take the parameters effect.



Be Honest	USR-G806s User Manual	Technical Support: h.usriot.com
Communication Expert of Indust	nal IOT	Be Honest, Do Best!
USR-G806s	Reboot	
> Status	Restart the operating system of the device.	
> Services	Reboot The Device	
> VPN > Network	2 Reboot	
> Firewall	1	
> WAN/LAN Port		
 System 	,	
System		
Administration Reboot Scheduler		
Backup/Upgrade		
Reboot		
	Jinan USR IOT Technology Limited http:	- //www.pust.com/

5. After the device restarts, when we send data from the serial port, will receive the same data replied by the test server.

••		ConnUart	Assist	iant			-	- 🗆 ×
COM Settings	Data receive						SAVAGE	¥4.2.1
PortNum COM15 👻	2021-04-28	12:10:24:019	12345678	I				
BaudR 115200 🖵								
DPaity NONE 💌			- L					
DataB 8 🖃			- L					
StopB 1								
· Close								
Recv Options								
🔲 Receive to file								
🔽 Auto linefeed								
Show timestamp								
Receive as hex								
Fause receive								
<u>Save</u> <u>Clear</u>								
Send Options								
🔲 Data from file								
🔲 Auto checksum								
🗌 Auto clear input								
🗖 Send as hex	1.DCD • 2.R	XD 🔹 3.TXD 👁	<u>4.DTR</u> •	5.GND 🗢	6.DSR 🗢	<u>7.RTS</u> •	8.CTS 🗢	9.RI 🗢
Period 20 ms	12345678							
Load Clear								Send
🎯 Ready!	•			Send:	8	Recv:8	R	eset



8.2.2. Modbus Mode

In this mode, USR-G806s can achieve bidirectional protocol conversion between serial MODBUS RTU data and network MODBUS TCP data.

MODBUS mode supports 4 socket connections, which are independent with each other.

Socket A supports TCP client/server, socket B/C/D only supports TCP client.

8.2.3. HTTPD Mode

In this mode, user's serial device can send request data to the HTTP server. USR-G806s will resolve the server data then send to serial device. It will remove the HTTP header of the server data by default, users can set whether to enable this function via AT commands.

USR IOT Communication Expert of Ind	stria IOT	onest, Do Best!
USR-G806s	DTU Setup	
> Status	DTU General Configurations	
> Services	Configurations	
> VPN	Protocol Exemut Callers Under Review Durket	
> Network		
> Firewall	туре НТТРО 🗸	
> WAN/LAN Port	Restarting Without Data 🛛 OFF 😜	
✓ DTU		
General Settings		
Serial Port Settings	Save & Apply/ Save	
SOCKET		
HTTPD		
> system		
Logout		
	Jinan USR IOT Technology Limited http://www.pusr.com/	


Be Honest, Do Best !	USR-G806s User Manual	Technical Support: h.usriot.com
Communication Expert of Industrial IOT		Be Honest, Do Best!
USR-G806s Status Services VPN Network Firevall WAN/LAN Port Ceneral Settings Serial Port Settings SOCKET HTTPD System Logout	HTTPD Satis Settings Configuration Remove Header ON HTTP UR / i.she(SF) Server Address test.cn Remote Port B0 Timeot 1-60 seconds Httpd Header Accept:test/html[OD][OA]	
	Jinan USR IOT Technology Limited http://www.pusr.com	v/

8.3. General Function

8.3.1. Registry Packet

Registry packet is intended to allow the server to identify the data from which device or to use it as a password to obtain authorization for the server's functions. Registry packet can be sent when the module establishes a connection with the server, or be added as the prefix of each data package. Registry packet data can be ICCID code, IMEI code, or User-defined data.

USR IOT Communication Expert of Indust	maior Be Hon	est, Do Best!
USR-G806s	DTU Setup	
> Status	DTU General Configurations	
> Services	Configurations	
> VPN	Protocol Format Scient Hearthant Review Protocol	
> Network		
> Firewall	Enable OFF	
> WAN/LAN Port	Type User-Defined 👻	
V DTU	User-Defined Packet 0123456789	
General Settings	Choose custom is effective The allowed characters are: AF, a-5, 0-9, hex data, even bit	
Serial Port Settings	Registry Packet Contaction	
SOCKET		
HTTPD		
Logout	Save & Agply Save	
rogour		
	Jinan USR IOT Technology Limited http://www.pusr.com/	



Be Honest, Do Best !	USR-G806s User Manual Technical	Support: h.usriot.com
Item	Description	Default
Enable	ON/OFF	OFF
Туре	IMEI, ICCID, USR Cloud, User-Defined	User-Defined
User-Defined	A-F, a-f, 0-9, hex data, even bit	0123456789
packet		
Cloud ID	Registry packet parameters of USR Cloud	SN code
Cloud psw	Registry packet parameters of USR Cloud	12345678
Registry packet	After connection: Send once when establish a connection with	After connection
contained in	the server.	
	Prefix of data: Registry packet is added as the prefix of each	
	data packet.	

Note: Registry packet is only valid in TCPC, UDPC mode.

8.3.2. Heartbeat Packet

Heartbeat package can be sent to the network or serial port device. G806s defaults to send to the network to keep the connection stable and reliable.

Communication Expert of Industrial IOT	Be Hone	st, Do Best!
Connuciation Legent of Industrial IdT USR-G806s Services Services VPN Network Firewall WAN/LAN Port DTU General Settings SOCKET HTTPD System Logout	Definition Configuration Configuration	
	linus ISP IOT Tachenologie Limited — http://www.wurc.com/	

Item	Description	Default
Enable	ON/OFF	OFF
Туре	Serial heartbeat packet/Network heartbeat packet	Network heartbeat packet
User-defined packet	A-F, a-f, 0-9, hex data, even bit	0123456789
Heartbeat interval (s)	1-6000s	3

Note: Heartbeat packet is only valid in TCPC, UDPC mode.





USR-G806s User Manual

8.3.3. Restarting without Data

This function defaults to be disabled. When it is enabled, the device can actively disconnect the connection with the server and reconnect when there is no data from network side within the reconnect detection interval, which can prevent pseudo-connection due to an abnormal socket disconnection.

When the time reaches the restart detection interval, the device will restart automatically to recover the connection.

USR IOT Communication Expert of Indu	amia ror Be Honest, Do Best!
Communication Paper of Indi USR-G806s Services VPN Network Firewall WAN/LAN Port General Settings SocKet HTTPD System Logout	Configurations Type Type </th
	Jinan USR IOT Technology Limited http://www.pusr.com/

8.3.4.RFC2217





This function is similar to RFC2217, when we send the specific protocol data from the network side, can change the serial parameters in real time. Parameters take effect immediately, but it will be restored to the original after restarting.

Protocol description:

The protocol length is 8 bytes in HEX:

Item	Header	Baud rate	Bit	Parity
Bytes	3	3	1	1
Description	3 bytes reduce misjudgment	A baud rate value, high first	Please check below table	Parity of the first four digits, ignoring carry.



/	Be Honest, Do Best !	USR-G	806s User Manual	Technical	Support: h.usriot.cc) m
	Example: (115200,N,8,1)	55 AA 55	01 C2 00	83	46	
	Example: (9600,N,8,1)	55 AA 55	00 25 80	83	28	

Bit	Description	Value	Description
		00	5
1.0	Data hit	01	6
1.0	Data Dit	10	7
		11	8
0	Stop bit	0	1
2		1	2
2	Parity	0	Disable
3		1	Enable
	Parity type	00	ODD
5:4		01	EVEN
		10	Mark
7:6	NC	00	0

Note: This function needs to be enabled via AT command: AT+RFCEN.

9. AT Commands

9.1. AT Command Mode

When the device works in network transparent mode or HTTP mode, can switch to "AT command mode" by sending time-specific data by serial port. When the operation is completed in "AT command mode", send specific commands to return to the previous working mode.





Toggles the timing of command mode:

In the figure above, the horizontal axis is time, data above the time axis is sent by the serial device to G806s, data below the time axis is sent by G806s to the serial port.

Time requirement:

- T1 > current serial port packaging interval
- T2 < current serial port packaging interval time
- T3 < current serial port packaging interval time
- T4 = current serial port packaging interval time

T6 = current serial port packaging interval time

The time sequence of switching from transparent mode/HTTP mode to "AT Command mode" :

- 1. Serial device continuously sends "+++" to the device. After receiving "+++", the device will send an "a" to the serial device. No data can be sent during a packaging cycle before sending "+++".
- 2. When the serial device receives "a", a "a" must be sent to the device within 3 seconds.
- 3. After receiving 'a', the device returns "+ok" and enter "temporary command mode".
- 4. After receiving "+ok", the device has enter "temporary command mode" and now can send AT command to it.

Time sequence of switching from AT command mode to transparent mode.HTTP mode:

- 1. Serial device sends "AT+ENTM" to G806s.
- 2. After receiving the command, sends "OK" to the serial device and returns to the previous working mode.
- 3. After the serial device receives "OK", it knows that the device has returned to its previous working mode.

9.2. Serial AT Commands

In transparent mode, do not need to switch to the command mode, we can use "Command password + AT command" to query and set parameters. It does not need complicated "+++" timing sequence to enter AT command mode, so as to quickly query or set parameters.

Before sending, enter AT command mode, query the command password firstly. It defaults to "test.cn#". Restart the device after setting.



USR-G806s User Manual

🔮 USR-TCP232-Test RS	232 to Ethernet Conve	rt tester				- 🗆 X
File(F) Options(O) Help	э(H)					
COMSettings	COM port data receive			Network data receive		NetSettings
PortNum COM45 💌	at					(1) Protocol
BaudR 115200 -	OK					TCP Server 💌
DPaity NONE -	+ERR: 1					(2) Local host IP
DataR 8bit ▼	AT +CMDPW					169.254.63.50
	+CMDFW:test.cn#					(3) Local host port
StopB Dic						19999
💓 Close						Listening
Recv Options						Recv Options
🔲 Receive to file						🔲 Receive to file
🥅 Add line return						🔲 Add line return
🔲 Receive As HEX						🗌 Receive As HEX
🔲 Receive Pause						🔲 Receive Pause
<u>Save</u> <u>Clear</u>						Save Clear
Send Options						Send Options
🗌 Data from file						🔲 Data from file
🔲 Auto Checksum						🔲 Auto Checksum
🦳 Auto Clear Input						🗌 Auto Clear Input
🔲 Send As Hex						🗌 Send As Hex
🔲 Send Recycle						🗌 Send Recycle
Interval 1000 ms	AT+CMDPW	^	Send	http://en.usr.cn	Send	Interval 1000 ms
Load Clear	1	×				Load <u>Clear</u>
💣 Ready!	Send: 79	Recv: 51	Reset	💣 Ready!	Send: 0	Recv: 0 Reset

Send "test.cn#AT+MAC" from the serial port (there is an "Enter" after the command), then can receive the response from the device:

🔮 USR-TCP232-Test RS2	32 to Ethernet Conve	rt tester				- 🗆 X
File(F) Options(O) Help((H)					
COMSettings	COM port data receive			Network data receive		NetSettings
PortNum COM45 💌	at			[Receive from 192.168.21.13	3 : 50567] :	(1) Protocol
BaudB 115200 -	OK			1///RP-1/1 0 0.02		TCP Server
NONE T	+ERR: 1			TYER. VI. 0. 05		(2) Local host IP
	AT +CMDPW					192.168.20.120
DataB 8 bit	+CMDPW:test.cn#					(3) Local host port
StopB 1 bit 💌	HWAC-GOUS					2317
) Close	SIRC. SCR52SR8555					🔆 Disconnect
Recv Options						Recv Options
Receive to file						Receive to file
Add line return						Add line return
🔲 Receive As HEX						🔲 Receive As HEX
🗌 Receive Pause						🔲 Receive Pause
Save Clear						<u>Save</u> <u>Clear</u>
Send Options						Send Options
🗖 Data from file						🔲 Data from file
🗌 Auto Checksum						🔲 Auto Checksum
🗌 Auto Clear Input						🗌 Auto Clear Input
🗌 Send As Hex				1 Prove 192100.21122-505	-1	🔲 Send As Hex
🗌 Send Recycle				reers. [132.160.21.133.303]	1	🔲 Send Recycle
Interval 1000 ms	test.cn#at+mac	^	Send	test.cn#at+ver	Send	Interval 1000 ms
Load Clear		×]		Load Clear
💣 Ready!	Send: 95	Recv: 80	Reset	💣 Ready!	Send:16	Recv : 16 Reset

9.3. Network AT Commands

Network AT command refers to set and query parameters by sending "Command password + AT command" through the network when working in transparent mode. Here we query the firmware version of the device, there is an "Enter" after the command.



USR-G806s User Manual

Technical Support: h.usriot.com

🔮 USR-TCP232-Test RS232 to Ethernet Conver	– 🗆 X		
File(F) Options(<u>O</u>) Help(<u>H</u>)			
COMSettings COM port data receive		Network data receive	NetSettings
PortNum COM21 💌		[Receive from 172.16.11.31 : 53521	1 : (1) Protocol
PaudP 115200 ▼			TCP Server 🗾
Bauun jiiozoo		+VER: V1. 0. 05	(2) Local host IP
DPaity NUNE			172.16.11.21
DataB 8 bit 💌			(2) I as all here and
StopB 1 bit 💌			8899
Open 🖉			💮 Disconnect
Recv Options			Recv Options
🗖 Receive to file			🗖 Receive to file
🔽 Add line return		\ \	🔽 Add line return
🔽 Receive As HEX			🗖 Receive As HEX
🗖 Receive Pause			🗖 Receive Pause
Save Clear			<u>Save</u> <u>Clear</u>
Send Ontions			Send Options
Data from file			Data from file
Auto Checksum			Auto Checksum
Auto Clear Input			Auto Clear Input
🔲 Send As Hex			Send As Hex
🗖 Send Recycle		Peers: 172.16.11.31:53521	🔽 Send Recycle
Interval 1000 ms Jinan USR Technology	Co.,	test. cn#AT+VER	Interval 225 ms
Load Clear	Send		Load Clear
🞯 Input text to send Send: O	Recv: 0 Reset	💣 Input text to send 🛛 Sen	d:16 Recv:16 Reset

9.4. SMS AT Commands

In transparent mode, we can also send SMS to query and set the device parameters. Here we send "Command password+AT Commands" to query the socket connection status.



For detailed AT Commands, please refer to AT Command set.