

# USR-G806w specification

## Better Wi-Fi industrial router



## Introduction

USR-G806w is the pro version of our all-time bestseller G806 that inherited its' best features, including industrial design, compact size, multiple connection interfaces. It delivers high performance for mission-critical cellular communication in rigorous environments.

Equipped with 4G LTE, Wi-Fi, and three Ethernet ports, this router offers unstoppable connection continuity with a backup through automatic WAN failover. The Wi-Fi is functional in: Access point, Station mode and repeater mode.

USR-G806w is an excellent fit in various IoT and M2M solutions that require easy setup, reliable network, and remote accessibility, such as service robot, inspection robot, unmanned vehicle networking, massage chair networking, AGV car and other industrial application scenarios.

## Features

### ■ Stable And Reliable

- Industrial design Metal shell, IP30 protection.
- Wide operating temperature. Wide voltage input,reverse polarity protection.
- ESD, Surge, EFT protection.
- Embedded hardware watchdog, self-recovers from malfunctions, maintaining high device availability.

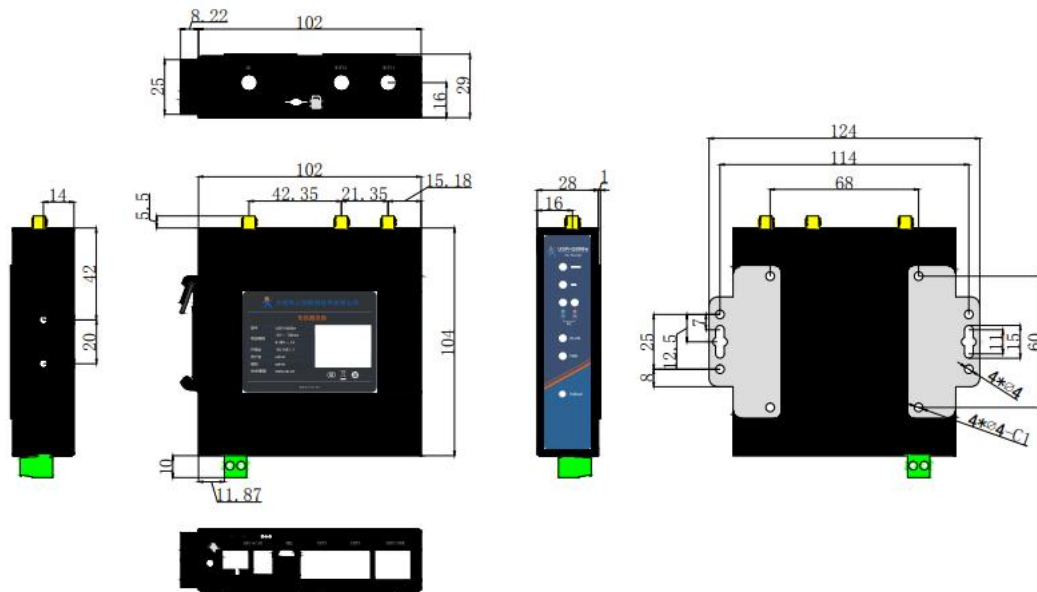
### ■ Uninterrupted network access

- Supports 4G network all over the world ,supports APN/VPDN sim card.
- Failover between 4G and WAN, ensures automatic switch to alternative backup connection, effectively ensuring uninterrupted data transmission.
- Link backup: mutual backup of wired, 4G cellular and WiFi networks
- Equipped with strong Wi-Fi capability, 802.11 a/b/g/n, 2.4G Wi-Fi, 2\*2 MIMO, up to 300Mbps, Support AP/STA/repeater mode
- VPN tunnel detection: maintains stable connection of the VPN tunnel, ensuring continuous transmission.
- Multi-layer link detection mechanism, automatic redial and recovery.

### ■ Rich functions

- Supports PUSR cloud platform to facilitate remote monitoring and central management of large-scale device networks.
- Supports remote monitoring, upgrade and parameter configuration, remote access to the built-in web pages.
- Wall-mounting and DIN-rail mounting options available, easy to install.
- Supports IPsec VPN, PPTP, L2TP, OPENVPN, GRE etc., ensuring secure data transmission.
- Supports firewall functions including NAT, access control, DDoS defense, IP-MAC binding, etc., protecting the network against external attacks.
- Supports APN automatic inspection ,mode switch ,SIM information display, supports private sim card.
- Supports DDNS, PPPOE, DHCP, Static IP.
- Allows multiple network management methods including SSH, WEB, TELNET and a network management platform.
- Supports firewall, NAT, DMZ, black and white list of access control
- Support SNMP, VLAN

## Dimensions



- Unit: mm.
- Dimensions: 104\*102\*28.0mm(L\*W\*H).Power terminal, antenna connector are not included.
- Installation Method: 35mm DIN-rail mounting,Panel mounting.

## G806 series ordering guide

| USR-G806 ordering guide |                                                                                                                                                               |                                                                           |                                        |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------|
| model                   | USR-G806-<M>                                                                                                                                                  | USR-G806w-<M>                                                             | USR-G806s-<M>                          |
| Region<br><M>           | -43: China/India<br>-G: Global<br>-A:North America<br>-E: EMEA/South Africa/Thailand<br>-AU: Latin/Australia/New Zealand<br>-EAU:Europe/Australia/New Zealand | -43: China/India<br>-E: EMEA/Thailand<br>-AU: Latin/Australia/New Zealand | -43: China/India<br>-EAU:EMEA/Thailand |
| Wi-Fi                   | AP                                                                                                                                                            | AP/STA/Repeater                                                           | AP                                     |
| Ethernet port           | 1WAN/LAN+1LAN                                                                                                                                                 | 1WAN/LAN+2LAN                                                             | 1WAN/LAN+1LAN                          |
| Serial port             | --                                                                                                                                                            | ---                                                                       | RS485                                  |
| Dimensions (mm)         | 100.0*94.0*29.0                                                                                                                                               | 104.0*102.0*28.0                                                          | 90.0*84.0*25.0                         |

## Specifications

| USR-G806w hardware specification |                       |                                                                                                                                                         |
|----------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cellular Interface               | Frequency             | TDD-LTE:B41<br>FDD-LTE: B2/4/5/12/13/20/25/26                                                                                                           |
|                                  | Antenna               | 1 x SMA-K                                                                                                                                               |
|                                  | SIM card              | 1 x (3 V & 1.8 V) Standard 4FF SIM                                                                                                                      |
| Ethernet                         | WAN                   | 1 x WAN port (can be configured to LAN) 10/100 Mbps, compliance with IEEE 802.3, supports auto MDI/MDIX, 1.5KV network isolation transformer protection |
|                                  | LAN                   | 1 x LAN port, 10/100 Mbps, compliance with IEEE 802.3, IEEE 802.3u standards, supports auto MDI/MDIX, 1.5KV network isolation transformer protection    |
| Indicators                       | PWR                   | red, always on after powered on                                                                                                                         |
|                                  | WIFI                  | green, always solid on when WiFi is enabled and working properly                                                                                        |
|                                  | 4G mode indicator     | Both leds is on after connected to 4G network                                                                                                           |
|                                  | SIG                   | Signal strength: 2 LED is solid on, strongest signal                                                                                                    |
| Wi-Fi                            | Standards & Frequency | IEEE 802.11b/g/n, 2.4GHz, AP/STA/Repeater mode                                                                                                          |
|                                  | Data speed            | 300Mbps                                                                                                                                                 |
|                                  | Antenna               | 2 x RP-SMA-K                                                                                                                                            |
|                                  | MIMO                  | 2×2                                                                                                                                                     |
|                                  | Transmission distance | 500 meters by line of sight. Actual transmission distance depends on environment of the site.                                                           |
|                                  | WiFi users            | Up to 20 simultaneous connections                                                                                                                       |
| Power Supply                     | Adaptor               | DC 12V/1A                                                                                                                                               |
|                                  | Connector             | DC Power Jack Barrel Type Female 5.5*2.1mm Round socket or 2 PIN industrial terminal block, reverse polarity protection                                 |
|                                  | Input voltage         | DC 9-36V                                                                                                                                                |
|                                  | Power consumption     | Average 260mA/12V                                                                                                                                       |
| Physical Characteristics         | Casing material       | Metal shell, IP30                                                                                                                                       |
|                                  | Dimensions            | 104.0*102.0*28.0 (L*W*H, antenna pedestal, terminal block and DIN Rail are not included)                                                                |
|                                  | Installation          | Panel mounting, DIN-Rail mounting                                                                                                                       |
|                                  | EMC                   | Static IEC61000-4-2, level 3<br>Pulsed Electric Field IEC61000-4-4, level 3<br>Surge IEC61000-4-5, level 3                                              |
|                                  | Operating temperature | -20℃~+70℃                                                                                                                                               |
|                                  | Storage temperature   | -40℃~+125℃ (non-condensing)                                                                                                                             |
|                                  | Operating humidity    | 5%~95% (non-condensing)                                                                                                                                 |
| Others                           | Reload                | Pinhole reset button                                                                                                                                    |
|                                  | TBD                   | Debug interface (TTL Level)                                                                                                                             |
|                                  | Ground protection     | Screw                                                                                                                                                   |
|                                  | Approvals             | CE, WPC, RCM, WEEE, RoHS                                                                                                                                |

| USR-G806w Software Specifications |                   |                                                                                                              |
|-----------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------|
| Network Connection                | WAN protocol      | PPP, PPPoE, DHCP client                                                                                      |
|                                   | LAN protocol      | ARP, DHCP server, NAT, VLAN                                                                                  |
|                                   | 4G network access | Auto APN/VPDN, private network<br>Access authentication: CHAP/PAP                                            |
|                                   | WLAN security     | Open system, WPA/WPA2 PSK<br>TKIP/AES encryption                                                             |
|                                   | IP routing        | Static routing                                                                                               |
|                                   | Network diagnosis | Ping, route trace, DNS                                                                                       |
|                                   |                   |                                                                                                              |
| Device management                 | Configuration     | Web                                                                                                          |
|                                   | Remote management | SSH, AT command, SNMP, SMS                                                                                   |
|                                   | PUSR platform     | Remote monitoring, remote upgrade, alarming, base station location, remote access to web pages of the router |
| Security                          | Failover backup   | WiFi WAN, Mobile, Wired options, each of which can be used as an automatic Failover                          |
|                                   | Firewall          | DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control                          |
|                                   | VPN               | Supports PPTP, L2TP, GRE, IPSEC VPN (IKEv1), OPENVPN protocols                                               |
| Service                           | DDNS              | Remote access the device through domain name                                                                 |
|                                   | Alarm             | Email, SMS                                                                                                   |
|                                   |                   | NTP client                                                                                                   |
|                                   | Others            | Timing task                                                                                                  |

**FCC Warning**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection

against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: -Reorient or relocate the receiving antenna. -Increase the separation between the equipment and receiver. -Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. -Consult the dealer or an experienced radio/TV technician for help. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

**■ For more information please visit our websites:**

Official website: <https://pusr.com>

Official shop: <https://shop.usriot.com>

Technical support: <http://h.usriot.com/>