

Communication Expert of Industrial IoT

# **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.

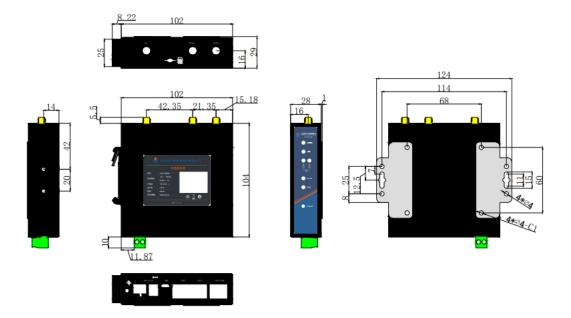
#### Uninterrupted network access

- Supports 2G/3G/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></m>                | USR-G806w- <m></m>               | USR-G806s- <m></m> |  |
| Region                  | -43: China/India                 | -43: China/India                 | -43: China/India   |  |
| <m></m>                 | -G: Global                       | -E: EMEA/Thailand                | -EAU:EMEA/Thailand |  |
|                         | -A:North America                 | -AU: Latin/Australia/New Zealand |                    |  |
|                         | -E: EMEA/South Africa/Thailand   |                                  |                    |  |
|                         | -AU: Latin/Australia/New Zealand |                                  |                    |  |
|                         | -EAU:Europe/Australia/New        |                                  |                    |  |
|                         | Zealand                          |                                  |                    |  |
| 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     |  |

#### USR-G806w datasheet

## **Specifications**

| USR-G806w hardware specification |                       |  |  |  |  |
|----------------------------------|-----------------------|--|--|--|--|
| Cellular Interface               | Frequency             | -Е   | -AU  |  |  |
|                                  |                       | TDD-LTE:B38/40/41  | TDD-LTE:B40  |  |  |
|                                  |                       | FDD-LTE: B1/3/7/8/20/28A   | FDD-LTE: B1/2/3/5/7/8/28                             |  |  |
|                                  |                       | WCDMA: B1/8  | WCDMA: B1/2/4/5/8                                    |  |  |
|                                  |                       | GSM/EDGE:B3/8  | GSM/EDGE:B2/3/5/8                                    |  |  |
|                                  | Antenna               | 1 x SMA-K  | 1 х ЅМА-К  |  |  |
|                                  | SIM card              | 1 x (3 V & 1.8 V) Standard 4FF SIM   | 1 x (3 V & 1.8 V) Standard 4FF SIM                   |  |  |
| Ethernet                         | WAN                   | $1 	ext{ wAN port}$ (can be configured to LAN) $10/100 	ext{ Mbps}$ , 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                      |  |  |  |
|                                  | PWR                   | red, always on after powered on  |  |  |  |
|                                  | WIFI                  | green,always solid on when WiFi is enab  | oled and working properly                            |  |  |
| Indicators                       | 2/3/4G mode indicator | 2G led is on after connected to 2G netwo   | 2G led is on after connected to 2G network           |  |  |
|                                  |                       | 3G led is on after connected to 3G netwo   | 3G led is on after connected to 3G network           |  |  |
|                                  |                       | Both leds is on after connected to 4G ne   | Both leds is on after connected to 4G network        |  |  |
|                                  | SIG                   | Signal strength: 2 LED is solid on, strong   | Signal strength: 2 LED is solid on, strongest signal |  |  |
|                                  | Standards & Frequency | IEEE 802.11b/g/n, 2.4GHz, AP/STA/R   | epeater mode   |  |  |
|                                  | Data speed            | 300Mbps  | 300Mbps  |  |  |
| Wi-Fi                            | Antenna               | 2 x RP-SMA-K   |  |  |  |
|                                  | МІМО                  | 2×2  |  |  |  |
|                                  | Transmission distance | 500 meters by line of sight.Actual transn  | nission distance depends on environmen               |  |  |
|                                  |                       | of the site.   |  |  |  |
|                                  | WiFi users            | Up to 20 simultaneous connections  | Up to 20 simultaneous connections                    |  |  |
|                                  | Adaptor               | DC 12V/1A  |  |  |  |
|                                  | Connector             | DC Power Jack Barrel Type Female 5.5*2.  | 1mm Round socket or 2 PIN industrial                 |  |  |
| Power Supply                     |                       | terminal block, reverse polarity protection  | n  |  |  |
|                                  | Input voltage         | DC 9-36V   |  |  |  |
|                                  | Power consumption     | Average 260mA/12V  |  |  |  |
|                                  | Casing material       | Metal shell,IP30   |  |  |  |
|                                  | Dimensions            | 104.0*102.0*28.0 (L*W*H, antenna pede  | stal,terminal block and DIN Rail are not             |  |  |
|                                  |                       | included)  |  |  |  |
| Physical                         | Installation          | Panel mounting, DIN-Rail mounting  |  |  |  |
| Characteristics                  | EMC                   | Static IEC61000-4-2, level 3   |  |  |  |
|                                  |                       | Pulsed Electric Field IEC61000-4-4, level  | 3  |  |  |
| Others                           |                       | Surge IEC61000-4-5, level 3  |  |  |  |
|                                  | Operating temperature | -20°C~+70°C  | -20°C~+70°C  |  |  |
|                                  | Storage temperature   | -40°C ~ +125°C (non-condensing)  | -40°C ~ +125°C (non-condensing)                      |  |  |
|                                  | Operating humidity    | 5%~95% (non-condensing)  | 5%~95% (non-condensing)                              |  |  |
|                                  | Reload                | Pinhole reset button   |  |  |  |
|                                  | TBD                   | Debug interface (TTL Level)  |  |  |  |
|                                  | Ground protection     | Screw  |  |  |  |

| Approvals | CE, WPC, RCM, WEEE, RoHS |
|-----------|--------------------------|
|-----------|--------------------------|

| USR-G806w Software Specifications |                   |  |  |  |
|-----------------------------------|-------------------|--|--|--|
| Network<br>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<br>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<br>Control                   |  |  |
|                                   | VPN               | Supports PPTP, L2TP, GRE, IPSEC VPN (IKEv1), OPENVPN protocols   |  |  |
|                                   | DDNS              | Remote access the device through domain name   |  |  |
|                                   | Alarm             | Email,SMS  |  |  |
|                                   |                   | NTP client   |  |  |
| Service                           | Others            | Timing task  |  |  |

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