USR-G809 specification

4G industrial cellular router

The USR-G809 is an industrial cellular VPN router that integrates 4G LTE, Wi-Fi,DIDO,serial port,Ethernet ports(4 LAN and 1 WAN) and VLAN,VPN technologies to provide state-of-the-art Internet connectivity and high-speed data access for equipment networking.

The product also supports remote management cloud platform, you can easily track your devices, enjoy better efficiency for massive deployment and preventive maintenance, reduce operational costs. Online supervision: understand the on-site network status anytime and anywhere. Remote operation and maintenance: cloud based configuration, open the built-in web page of the device anywhere without private network, configure parameters, upgrade firmware, and perform batch operations without on sites. Exception push: the maintenance personnel receive the alarm information in time when the network is abnormal.

Featuring intelligent software functions and industrial-grade design, the G809 is a full-featured LTE router developed for mission critical IIoT applications. The G809 provides best-in-class reliability, high-speed and secure communications for remote devices wherever they locate, helping enterprise customers achieve efficient large-scale network deployment and management. It is ideal for M2M and industrial IoT applications including Smart Grid, Automation, Digital manufacturing, Transportation, Vending, ATM, smart factories, solar energy , wind power generation, smart medical care and more.

Key Features

■ **Stable And Reliable**

- Industrial design, metal enclosure , protection class IP30

- Wide input voltage DC 9-36V,with reverse polarity protection

- ESD, Surge, EFT/Burst protection

- Hardware and software watchdog, multi-layer link detection mechanism make it self-recovery from unexpected failure and guarantee reliable communication between remote devices and data center

- Provides comprehensive security protections for sensitive business data, including secure VPN transmission, firewall against network attacks

■ Flexible Networking

- Supports 2G/3G/4G network all over the world ,supports APN / VPDN private network access

- Supports automatic detection of cellular network , 4G/3G/2G mode automatic switching

- Supports failover between 4G and WAN, ensures automatic switch to alternative backup connection,effectively ensuring uninterrupted data transmission

- Supports 2.4GHz WiFi, scaling more devices access, support wired and wireless connecting Internet

- Compatible with 5.8GHz WiFi(optional)

■ Powerful Functions

- Supports PUSR cloud platform to facilitate remote monitoring and central management of large-scale device networks

- Supports configuration parameters import/export,greatly improve the efficiency for massive deployment

- Support access the built-in web page of the router via PUSR cloud without the need of private network or public IP

- Supports DDNS, static routes,easy accessing devices underneath the router

- Supports firewall, NAT,DMZ,black and white list of access control

- Supports Port based VLAN separation, allows network administrators to group hosts together even if the hosts are not on the same network switch

- Supports Email/SMS/DO alarm,abnormal alert push in time

- Extensive interfaces including 4 Ethernet ports, serial port R232/RS485(alternative) , USB, 2*DI , 2*DO, Wi-Fi, and GPS(optional) further expand your choices

- Serial modem supports user-defined register & heartbeat packets, transparent TCP/UDP protocol, multi-center.

- Supports VPN(PPTP, L2TP, IPSec, OpenVPN,GRE), and VPN encryption function, suitable for various networking and high-security requirements Scenarios
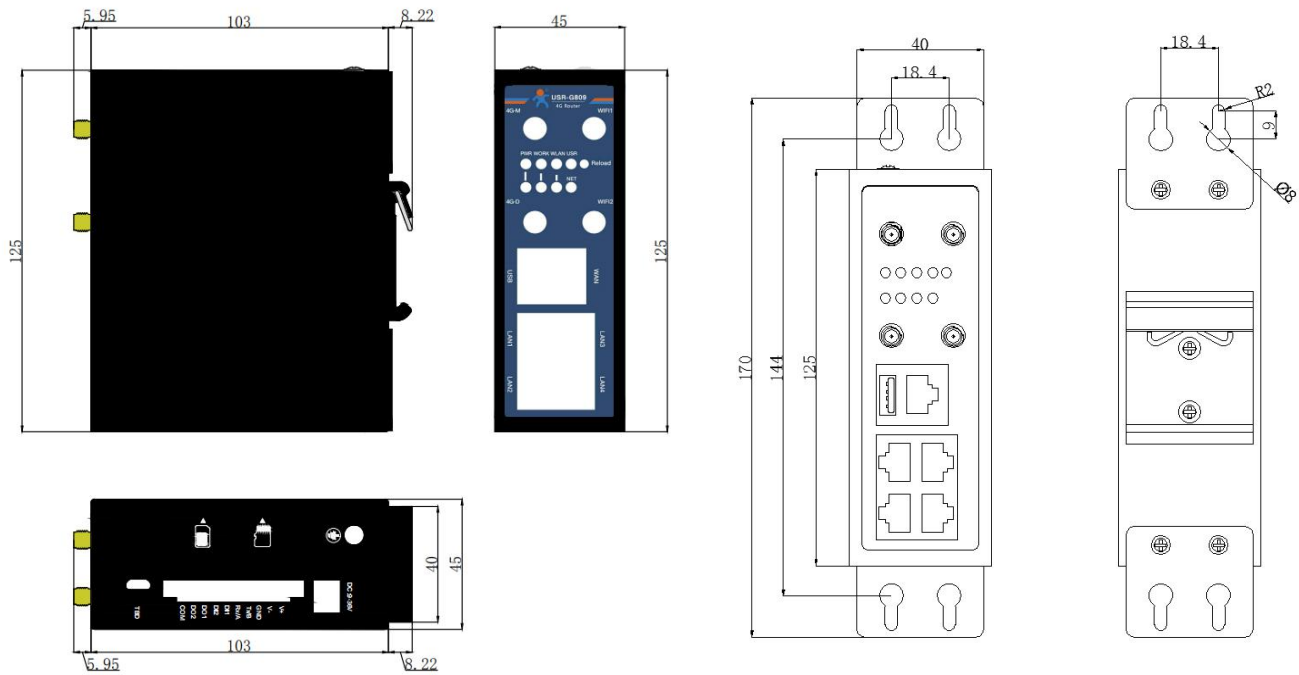
- Unit: mm.

- DIN Rail mounting: 125.0*117.2*45.0mm(L*W*H, including antenna pedestal and DIN-Rail)

- Ear mounting installation:170.0*117.2*45.0mm(L*W*H,including mounting ears and antenna pedestal)

Specifications

Hardware Specifications		
Cellular Interface	Antenna	2 x SMA-K Note: North America models: 2 x SMA 4G antenna connectors.
	SIM card	1 x (3 V & 1.8 V) Standard 2FF SIM, drawer-type sim card slots
Ethernet	1 x WAN port 10/100 Mbps, compliance with IEEE 802.3, supports auto MDI/MDIX,1.5KV network isolation transformer protection	
	4 x LAN ports, 10/100 Mbps, compliance with IEEE 802.3, IEEE 802.3u standards, supports auto MDI/MDIX,1.5KV network isolation transformer protection	
Indicators	LED	PWR: red,always on after powered on Work: green,blinking when the router is ready and working properly WLAN: green,always solid on when WiFi is enabled and working properly USR:user defined. Net indicator: Red always on after connected to 2G network Green always on after connected to 3G network Orange always on after connected to 4G network Signal strength：3 solid bars,strongest signal

Terminal block	Pinout	V+,V- : 2 cores terminal power supply socket,built-in power supply phase-reversal protection
		GND: ground terminal
		Tx/B:RS-232/RS485 pin（setup by software）
		Rx/A:RS-232/RS485 pin（setup by software）
		DI:2 x Digital input,passive switch
		DO:2 x Digital open collector output, max output 36 V, 300 mA
		COM: common terminal,use in conjunction with DOs
WiFi Interface	Standards & Frequency	IEEE 802.11b/g/n,2.4GHz, AP mode
	Data speed	IEEE 802.11b/g,maximum 54Mbps.IEEE 802.11n,maximum 150Mbps
	Antenna	2 x RP-SMA-K
	Transmission distance	80 meters by line of sight.Actual transmission distance depends on environment of the site.
Power Supply	Adaptor	DC 12V/1A
	Connector	DC Power Jack Barrel Type Female 5.5*2.1mm Round socket or industrial terminal block,reverse polarity protection
	Input voltage	DC 9~36V
	Working power	Average 522mA/12V, Maximum 811mA/12V
Serial Interface	RS485/RS232(alternative)	industrial terminal block. Note:RS232 default.
	Baud rate(bps)	1200,2400,4800,9600,19200,38400,57600,115200,230400
	Data bits	8
	Stop bits	1,2
	Parity	NONE,ODD,EVEN
Physical Characteristics	Housing	Metal shell,IP30
	Dimensions	125.0*103.0*45.0mm (L*W*H,antenna pedestal,terminal block and DIN Rail are not included)
	Installation method	Ear mounting, DIN-Rail mounting
	EMC	Static IEC61000-4-2, level 3 Pulsed Electric Field IEC61000-4-4, level 3 Surge IEC61000-4-5, level 3
	Operating temperature	-20℃～+70℃
	Storage temperature	-40℃～+125℃
	Operating humidity	5%～95%RH（non-condensing）
Others	Reload	Pinhole button,restore factory defaults/firmware resume/firmware upgrading with USB
	TBD	Debug interface (TTL Level)
	USB	Firmware upgrading
	TF	TF card slot
	Ground protection	Screw
	Embedded Watchdog	Device runs self-detection, auto recovers from malfunctions
Certificate	CE	

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 Access authentication: CHAP/PAP
	WLAN security	Open system,WPA/WPA2 PSK TKIP/AES encryption
	IP routing	Static routing
	Network diagnosis	Ping,route trace,DNS
Serial modem	Work mode	NET,HTTPD
	Sockets	4 sockets,4centers ,TCPS(SOCKA)/TCPC/UDPS/UDPC
	Modbus RTU to TCP	Support
DI/DO	Events	SMS, EMAIL
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	Failover between 4G and WAN, ensures automatic switch to alternative backup connection
	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,DO
	Others	NTP client Timing task USB firmware upgrade User defined indicator

Ordering Guide

USR-G809 Ordering Guide		
Model	**USR-G809-E**	
Region	EMEA & APAC	
Frequency	TDD-LTE	B38/B40/B41
	FDD-LTE	B1/B3/B5/B7/B8/B20
	WCDMA	B1/B5/B8
	GSM/GPRS/EDGE	B3/B8
Model	**USR-G809-G(coming soon)**	
Region	Global	
Frequency	TDD-LTE	B38/B39/B40/B41
	FDD-LTE	B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28
	WCDMA	B1/B2/B4/B5/B6/B8/B19
	GSM	B2/B3/B5/B8
Model	**USR-G809-EAU(coming soon)**	
Region	Europe & Australia	
Frequency	TDD-LTE	B38/B40/B41
	FDD-LTE	B1/B3/B5/B7/B8/B20/B28
	WCDMA/HSPA+	B1/B5/B8
	GSM/EDGE/GPRS	850/900/1800MHz

Purchase and Support

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