

# USR-W610 (Qualcomm version) Specification

## High-Performance WIFI Serial Device Server



## Introduction

USR-W610s is a high-performance serial port server built with Qualcomm solution. It has the characteristics of WIFI transmission far, wide connection, low latency and high stability. It supports 2.4G WIFI, 802.11b/g/n wireless protocol, Ethernet port(1WAN/LAN+1LAN), RS232+RS485, STA/AP/AP+STA/AP.

Bridge/route mode, port forwarding, can provide stable and reliable networking solutions for different scenarios and industries.

The product adopts industrial standard, wide temperature and wide voltage, strong hardware protection, and has passed many harsh environment tests; it has 1\*RS232/1\*RS485 serial port, supports TCP, UDP, MQTT, HTTP, MODBUS, PUSR Cloud, Alibaba Cloud, AWS Cloud, SNMP and other transmission protocols; built-in hardware and software dual watchdog, fault recovery and other mechanisms; it can adapt to different industry scenarios, and operate steadily and reliably in harsh environments. The device supports single-link fast roaming, and roaming can be realized in a wireless local area network composed of multiple AP without AP executing handover operation.

The product has wall-mounted, horizontal desktop installation mode, widely used in WIFI remote data acquisition, low latency requirements scenarios, such as: production detection, intelligent storage, intelligent medical, intelligent factory, video surveillance, unmanned parking lot, industrial automation, intelligent transportation, smart city and other scenarios.

## Product feature

### Stable and Reliable

Full industrial metal enclosure design, protection class IP30;

Industrial wide temperature -25°C~+70°C wide temperature design, EMC 3 protection;

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

Built-in hardware watchdog, fault self-test, self-repair, firmware backup restore function, ensure system stability does not crash;

Support horizontal desktop placement and wall-mounted installation;

### Flexible Networking

Support 2.4G WIFI (802.11b/g/n), STA/AP/AP+STA/bridge/routing mode arbitrary networking;

Support 1\*WAN/LAN, 1\*LAN port;

Support RS232/RS485, can work independently, serial data acquisition is easier;

Support port forwarding function;

Compatible with mainstream industrial protocols: TCP/UDP/MODBUS/HTTP/MQTT/SNMP, etc.

Support connection to Alibaba Cloud, Amazon Cloud, PUSR Cloud and other mainstream cloud platforms, so that devices can easily go to the cloud;

### Powerful

Support a complete anti-drop mechanism to ensure the stability of data transmission;

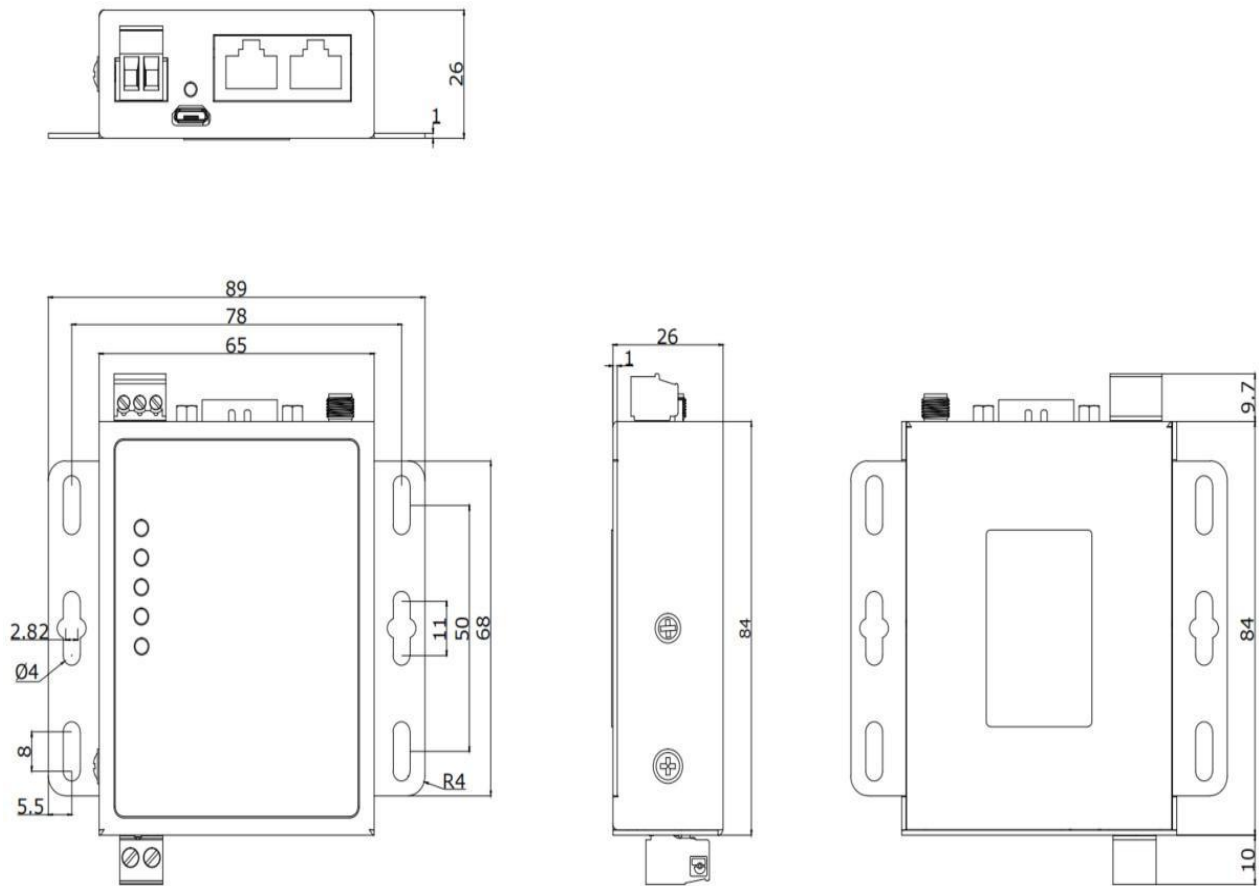
Support wired/STA multi-network intelligent backup function, keep the link unblocked at all times;

Support PUSR cloud service, open built-in web page of wireless client through cloud service,

Support SNMP, NTP time calibration, MAC-IP binding, Access restriction and other features;

## Product size(unit:mm)

### ● Fixed hole expansion



Sheet metal shell, fixing holes on both sides;

Length, width and height are 89\*103.7\*26mm(L\*W\*H, including terminals).

## Classic application scenarios

### ● USR-W610s AP mode

Ability to provide WiFi hot spots for other device connections



### ● USR-W610s STA mode

Ability to connect to other AP devices, providing serial port, Ethernet data connection WIFI network forwarding to the server



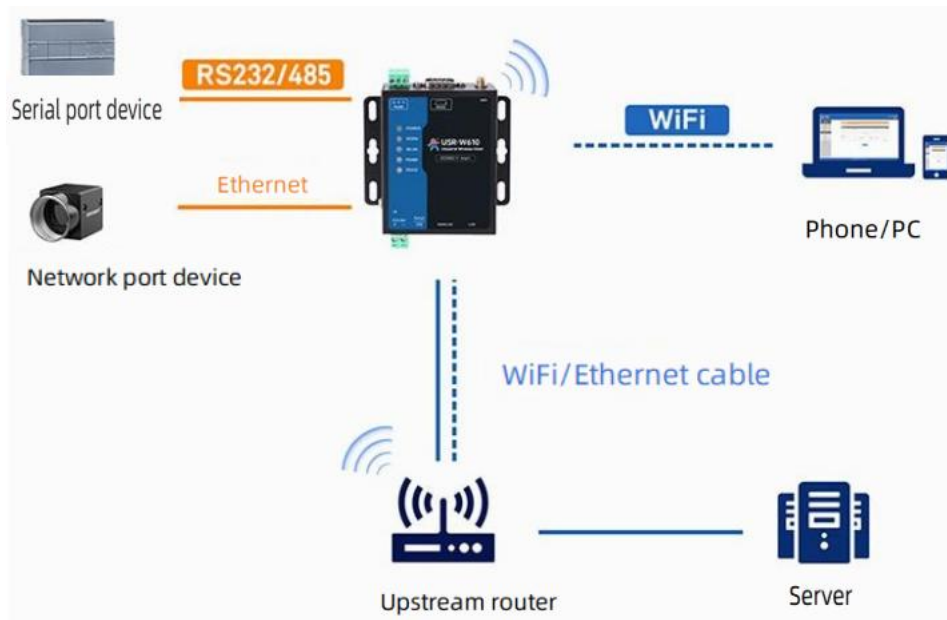
### ● USR-W610s AP+STA mode

W610s can provide hot spots, but also support other terminal equipment serial port, Ethernet data connection WIFI network forwarding to the server



## ● USR-W610s Wired + Wireless Applications

W610s can be connected to serial port and network port devices to forward local data to remote server or mobile phone/PC via WIFI



## Hardware specifications

Project		Model/Specification
WiFi	Wireless standards	IEEE 802.11b/g/n
	Frequency Range	2.412GHz-2.484GHz
	WiFi mode	AP/STA/AP+STA/Bridging/Routing
	Number of client connections	8
	Data rate	300 Mbps
	MIMO	2x2
	Power out	HT20 (18dBm) ; HT40(17dBm)
	WiFi Antenna	1* Rod antenna (5 dBi)
	Coverage distance	Outdoor open/unobstructed, coverage radius up to 400 meters
DTU	Socket mode	TCP/STCP/UDPS/UDPC/MODBUS/MQTT/HTTP/ Alibaba Cloud/AWS/PUSR CLOUD
	Heartbeat package/ Registration package	Support
	Serial port baud rate	RS232 interface: 1200/2400/4800/9600/19200/38400/57600/115200/230400  RS485 interface: 1200/2400/4800/9600/19200/38400/57600/115200/230400
	Data bits	7, 8
	Stop bit	1, 2
	Parity bit	NONE,ODD,EVEN
	Serial port type	1*RS232/1*RS485
Physical property	Operating temperature	-25°C~ +70°C
	Storage temperature	-40°C~+125°C
	Operating humidity	5%~95%RH (no condensation)
	Storage humidity	1%~95%RH (no condensation)
	Service voltage	DC 9-36V
	Adapter	12V/1A
	Working Current	Average current 155 mA (DC12V) Max current 270 mA at (DC12V)

	Size	89*103.7*26mm (L*W*H )
	Installation method	Wall mount, horizontal desktop placement
	EMC class	Grade 3
Hardware interface	Net opening	1*WAN/LAN+1*LAN RJ45 interface: 10/100Mbps adaptive, compliant with IEEE802.3
	Indicator light	PWR、WORK、WLAN、485、232
	Power interface	2P terminal, size 5.08mm* 2P, with reverse polarity protection
	Terminal interface	RS232 interface: DB9 RS485 interface: 3P Phoenix terminal
	Reload key	Press and hold for 3 to 15 seconds, then release to restore the factory settings
	Ground protection	Ground screw

## Status indicator lamp

Name	Instruction
PWR	Power indicator light, long on after correct power-on
WORK	The indicator light is used, and the internal system is always on when it is started. After it is fully started, it flashes periodically for 500ms. During the upgrading process, it will flash with a cycle of 250ms.
WLAN	Off: STA not turned on Green light is always on: RSSI $\geq$ -60dBm, WLAN access AP green light Green Flashing: RSSI $\geq$ -60dBm, WLAN access and data communication green Flashing Green Off: RSSI $\geq$ -60dBm, WLAN not access green Off Red light is always on: RSSI $<$ -60dBm, WLAN access AP red light is always on Red Flashing: RSSI $<$ -60dBm, WLAN access and data communication Red Off: RSSI $<$ -60dBm, WLAN is not connected, the red light will go out
485	The uplink data indicator flashes red and the downlink data indicator flashes green
232	The upward data indicator flashes red, and the downward data indicator flashes green.

## Network Default Settings Table

Parameter	Default setting
2.4G SSID	USR-W610s-XXXX
LAN port IP address	192.168.1.1
User name	admin
Password	admin
Wireless password	None

## History

2025-02-26 V1.0.1 Initial Edition





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