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Communication Expert
of Industrial IOT

Dual Band Wi-Fi Device Server

USR-W630s



Introduction

USR-W630s is a dual band Wi-Fi 5 industrial wireless device with high speed, wide connection, low delay, and high stability. It supports standard 802.11a/b/g/n/ac protocols. In AP mode, it can carry more than 16+ Wi-Fi users. It integrates rich hardware interfaces: 1*RS232, 1*RS485, Ethernet ports (1LAN+1WAN/LAN). It supports AP/STA/AP+STA/bridge mode and can provide stable and reliable networking solutions for different scenarios and industries.

This device adopts industrial-grade standards: wide temperature and wide voltage and high EMC protection. In software, it supports MODBUS, MQTT, TCP, UDP and other transmission protocols. The built-in software and hardware dual watchdog, fault self-recovery can ensure the device operate stably and reliably in different harsh environments and industry scenarios like AGV automated transportation, robot, smart medical, smart storage, smart factories etc.

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Product Features

Stable And Reliable

- Metal housing, IP30 protection.
- Wide operating temperature: -25℃~+75℃.
- EMC protection: Surge protection, level 3; ESD protection, level 3; EFT protection, level 3; IEC61000
- Wide voltage input: DC 9-36V, with power reverse protection.
- Built-in hardware watchdog, fault self-detection, self-repair, firmware backup and restore functions to ensure system stability without crashing.
- Supports wall mounting, desktop placement.

Flexible Networking

- Support 802.11a/b/g/n/ac, 2.4G & 5.8G WiFi;
- Multiple network methods: AP/STA/AP+STA/Bridge
- Support 2 Ethernet ports: 1 x WAN/LAN configurable, 1 x LAN.
- Support RS232/RS485, serial port data acquisition is easier.
- Compatible with mainstream data transmission protocols: TCP/UDP/MODBUS/HTTP/MQTT, etc.
- WPA3 encryption and SSL protocol is supported, make it more security for user's data transmission.
- Supports connecting to mainstream cloud platforms such as Alibaba Cloud and AWS Cloud.

Powerful features

- Support a complete anti-drop mechanism to ensure the stability of data transmission.
- Support wired/STA multi-network intelligent backup function, keep the link always unblocked.
- Support remote management via PUSR cloud, users can login the web page to check and set all the parameters.
- Support SNMP, NTP time calibration, MAC-IP binding, anti-access restriction and other special functions.

Dimensions

Unit: mm

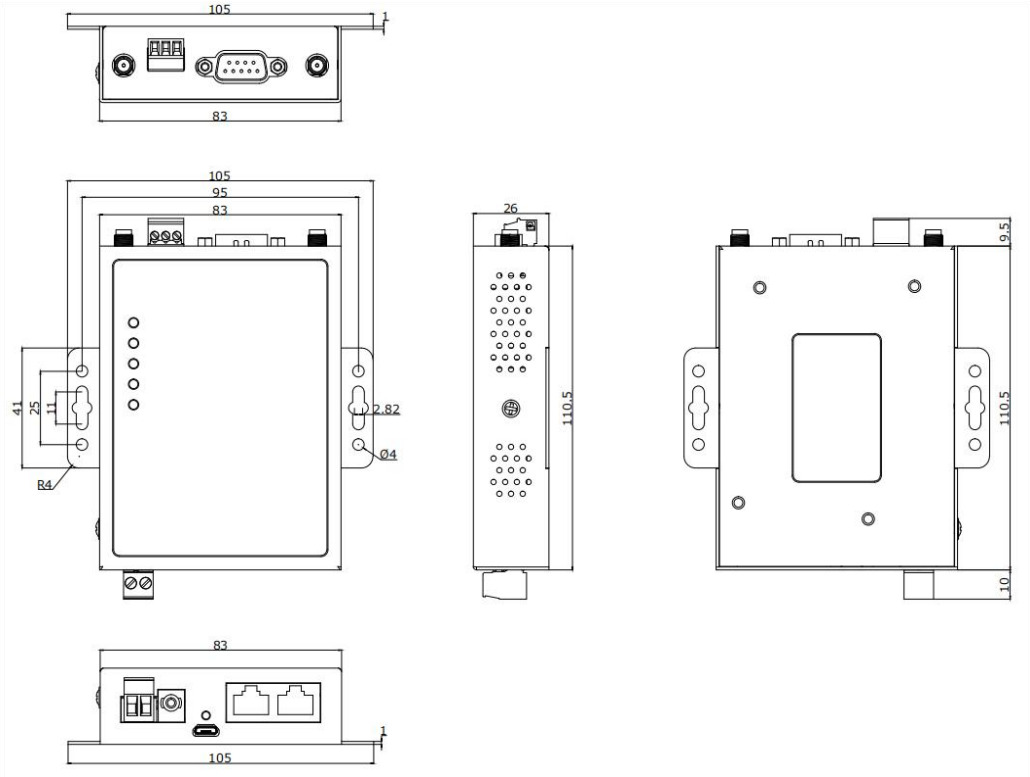


Fig.1 Dimension

Specifications

Items	Description
Power Supply	DC: 9~36V, 2-pin terminal block connector, 5.08mm-2P, reverse polarity protection, surge protection 5.5*2.1 DC jack connector
Working Current	Average: 300mA@12V, max: 900mA @12V
Serial port	
No.	1 x RS485, 3-pin terminal block connector, 3.81mm-3P 1 x RS232, DB9 male
Baud rates	RS232: 1200/2400/4800/9600/19200/38400/57600/115200/230400 RS485: 1200/2400/4800/9600/19200/38400/57600/115200/230400
Data bits	7, 8
Stop bits	1, 2
Parity	NONE, ODD, EVEN
Flow Control	RS232: Hardware flow control RS485: 485 conflict prevention
Packaging Interval	Range: 0 ~ 1000ms, default: 0ms
Packaging Length	Range: 5 ~ 1460 bytes, default: 1000 bytes
Ethernet Ports	
No.	2 x Ethernet ports: 1 x WAN/LAN(configurable), 1 x LAN
Interface	RJ45, 10/100 Mbps, compliance with IEEE 802.3, supports auto MDI/MDIX, 1.5KV network isolation transformer protection
Wi-Fi	
Standards & Frequency	IEEE 802.11b/g/n/ac, 2.4GHz & 5.8G
Working Mode	AP/STA/AP+STA/Bridge

Data speed	867Mbps(5.8GHz) & 300Mbps(2.4GHz)
MU-MIMO	2 x 2
Modulation system	DSSS(DBPSK.DOPSK,CCK)
	OFDM(BPSK,QPSK,16-QAM,64-QAM,125-QAM,256-QAM)
Covering distance	2.4G: Coverage radius up to 400 meters 5.8G: Coverage radius up to 200 meters
Wi-Fi Users	16
Antenna	2 x 5 dBi rod antenna
Antenna Connector	2 x SMA-female
Physical Property	
Casing material	Metal shell, IP30 protection
Dimensions	110.5*105*26mm(L*W*H,antenna pedestal,terminal block are not included)
Installation	Wall munting, desktop placement
EMC	Surge protection: level 3, IEC61000 ESD protection: level 3, IEC61000 EFT protection: level 3, IEC61000
Operating temperature	-25℃～+75℃
Storage temperature	-40℃～+125℃
Operating humidity	5% ~ 95% RH, non-condensing
Storage humidity	1% ~ 95% RH, non-condensing
Software Function	
Network protocols	TCP, UDP, HTTP, TLS, MQTT, ARP, DHCP, ICMP, PPPoE, IPv4, DNS, SNMP, NTP,
Modbus Gateway	Modbus RTU/TCP protocol conversion, Modbus multi-host polling
IP	DHCP/StaticIP
MQTT	Standard MQTT protocol, 16 subscription topics and 16 publish topics
Registration packet	√
Heartbeat packet	√
IOT PLATFORMS	AWS IOT, Alibaba cloud, PUSR cloud
User Configuring	Web console(HTTP), AT command
Others	
Reload	Pinhole reset button, press and hold for 3~15 to reset to factory settings
Indicators	1 x RS485, 1 x RS232, 1x WLAN, 1 x RUN, 1 x PWR
Ground protection	Screw
APPROVALS	
Regulatory	CE/RED*, RoHS*, WEEE*, FCC*

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