WR310

High Performance and Secure Dual-SIM 5G & WiFi Router with GNSS, RS232 and RS485 for Various Industrial Applications



- 5G SA/NSA
- Reliable Connectivity with Dual SIM
- IEEE 802.11 a/b/g/n/ac/ax (WiFi 6)
- 4 GE Interfaces (1 WAN, 3 LAN)
- BLE 5.2
- VPN Secure Connection
- RS232 and RS485 Serial Port
- GNSS Location

5G SA/NSA | Wi-Fi 6 | Multiple Interfaces

The WR310 is a premier solution for industrial connectivity, offering cutting-edge 5G technology for high-speed and reliable data transfer. With Dual SIM functionality, it provides continuous communication and network redundancy. The device features RS232/RS485 serial ports, accommodating diverse industrial requirements. Powered by OpenWRT, the WR310 provides customizable and advanced networking features, enhanced security, and an intuitive web interface for easy management, making it perfectly suited for complex industrial environments and applications.

Intelligent Industry



Edge Computing



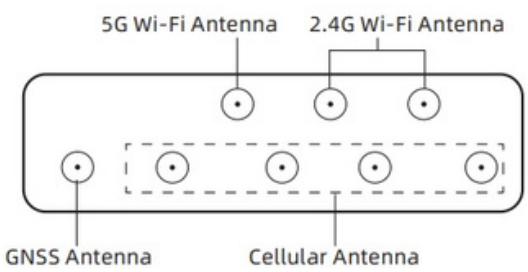
Smart Energy

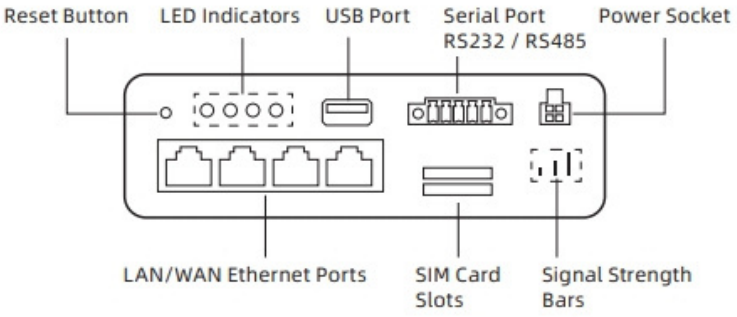


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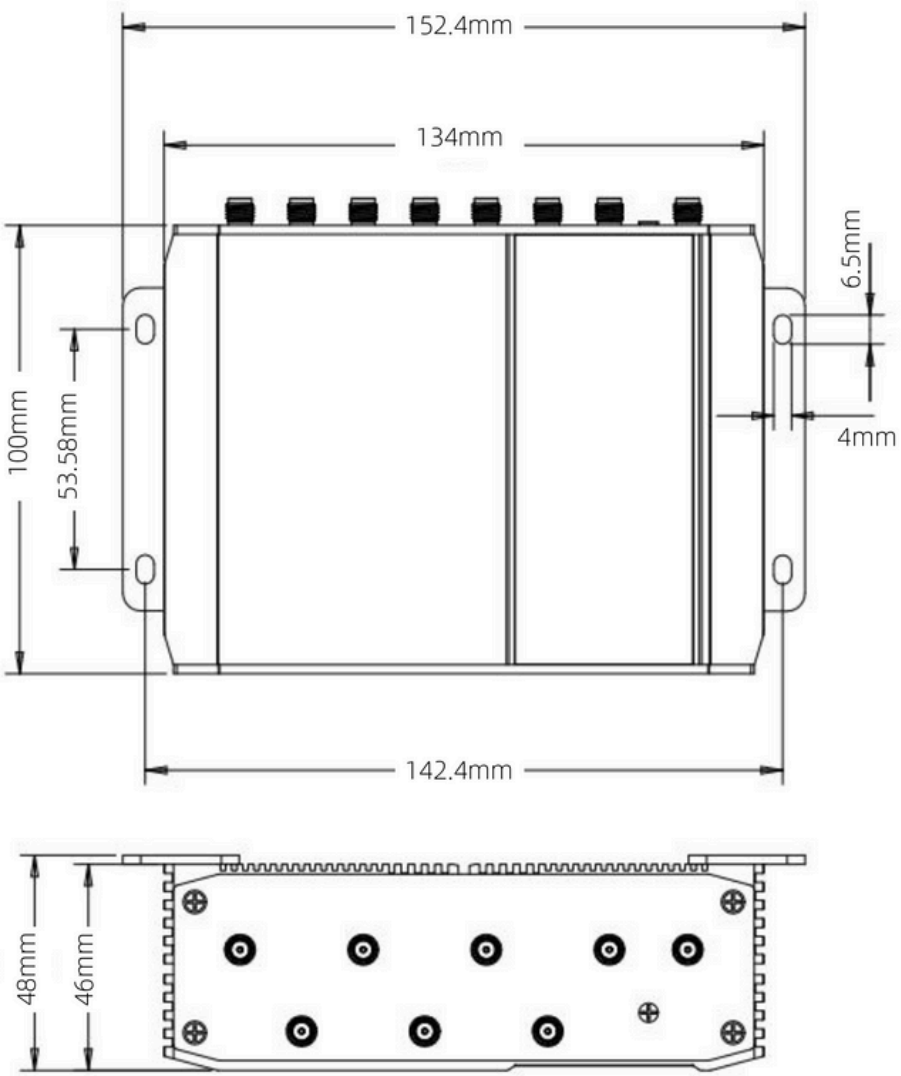
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Interfaces





Dimensions





Casing Material	Aluminium housing
Dimensions	130(W) x 100(D) x 45(H) mm 5.1'' x 3.9'' x 1.8'' (Exclude antenna connectors and mounting bracket)
Weight	552g
Mounting Options	Flat surface placement and DIN Rail
Operating Voltage	8 ~ 32V DC
Operating Temperature	- 30°C ~ 70°C - 22°F ~ 167°F
Storage Temperature	- 40°C ~ 85°C - 40°F ~ 185°F
Operating Humidity	10% ~ 90% non-condensing

Connectivity

Region		**WR310 FEU**	**WR310 FAU**	**WR310 FNA**
		EMEA, AP, Brazil	LATAM	NA
Mobile		**WR310 FEU**	**WR310 FAU**	**WR310 FNA**
	5G NR	3GPP Rel-16 NSA/SA operation, Sub-6 GHz	3GPP Rel-16 NSA/SA operation, Sub-6 GHz	3GPP Rel-16 NSA/SA operation, Sub-6 GHz
		5G NR NSA: n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/n75/n76/n77/n78	5G NR NSA: n2/n5/n7/n8/n28/n38/n40/n66/n71/n78	5G NR NSA: n2/n5/n7/n12/n13/n14/n25/n26/n29/n30/n38/n41/n48/n66/n70/n71/n77/n78
		5G NR SA: n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/n75/n76/n77/n78	5G NR SA: n2/n5/n7/n8/n28/n38/n40/n66/n71/n78	5G NR SA: n2/n5/n7/n12/n13/n14/n25/n26/n29/n30/n38/n41/n48/n66/n70/n71/n77/n78
	LTE	Cat 19 (Downlink) / Cat 18 (Uplink)	Cat 19 (Downlink) / Cat 18 (Uplink)	Cat 19 (Downlink) / Cat 18 (Uplink)
		LTE-FDD: B1/B3/B5/B7/B8/B20/B28/B32	LTE-FDD: B2/B4/B5/B7/B8/B26/B28/B66	LTE-FDD: B2/B4/B5/B7/B12/B13/B14/B17/B25/B26/B29/B30/B66/B71
		LTE-TDD: B38/B40/B41/B42/B43	LTE-TDD: /B38/B40/B42/B43	LTE-TDD: B38/B41/B42/B43/B48
	WCDMA	B1/B5/B8	B2/B4/B5	-
Network Features	2 x SIM cards, auto-switch cases: weak signal, no network, network denied, data connection fail			
	APN: Auto APN			
	Bridge: Direct connection (bridge) between mobile ISP and device on LAN			
	Static/Dynamic routing (RIP Protocol v1/v2)			

Connectivity

Wi-Fi	IEEE 802.11 a/b/g/n/ac/ax
	2475 Mbps (5 GHz) and 591 Mbps (2.4 GHz) (MU-MIMO), Access Point (AP), Station (STA)
Wi-Fi Security	WPA-PSK, WPA2-PSK, AES
Wi-Fi Users	Up to 100 simultaneous connections
Ethernet	4 x RJ45 ports: 1 x WAN, 3 x LAN ports, 10/100/1000 Mbps, comply IEEE 802.3, IEEE 802.3u standards, supports auto MDI/MDIX
Network Protocol	TCP, UDP, IPv4, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SSL v3, TLS, ARP, PPP, PPPoE, SSH, DHCP, Telnet, Modbus

Interfaces

Ethernet Ports	1 for WAN (10/100/1000Mbps) 3 for LAN (10/100/1000Mbps) Comply to IEEE 802.3, IEEE 802.3u standards, support auto MDI/MDIX
RS232 Serial Port	1 x RS232 (without RTS, CTS), 300-115200 baud rate
RS485 Serial Port	1 x RS485 half duplex (2 wires), 300-115200 baud rate
USB	1
SIM Slot	2
eSIM (Reservered)	2.5 mm x 2.3 mm 0.1'' x 0.09''
Mobile Antennas	4 x SMA for 5G
WiFi Antennas	3 x RP-SMA, WiFi 2.4G/5.G antenna
GNSS Antenna	1 x SMA
Power Sockets	4-pin industrial DC power connector
Inputs/Outputs	1 x digital input, 1 x digital output in power connector
LED Indicators	Power, Net, WiFi, GNSS, mobile status, mobile signal strength 2 x WAN, 6 x LAN
USB	USB for external devices
BLE (Reservered)	BLE 5.2
RTC (Reservered)	RTC to keep track of time
GNSS	Built-in 5G module
Grounding Point	1 x grounding point for enclosure grounding
Reset Button	1

GNSS

GNSS type	All-in-One GNSS receiver
Sensitivity	Cold start : -146 dBm Reacquisition: -156 dBm Tracking: -147 dBm
Position Accuracy (CEP)	Autonomous: <4m
TTFF (Open Sky)	Cold start: 35s average Warm start: 28s average Hot start: 2s average

Power

Connection	4-pin industrial DC power connector
Operating Voltage	8 ~ 32V DC (4-pin industrial socket), reverse polarity protection
Power Consumption	18W (average)

Network

Connection Monitoring	Ping Reboot, LCP and ICMP for link inspection, Timing Task
DHCP	Static and dynamic IP allocation
Alternative Link	Mobile, Wire, WiFi. Primary and backup link configured as requirement, auto load balance
VPN	PPTP, L2TP, IPsec, GRE, OpenVPN
Firewall	Web Filter, IP/Domain Filter, MAC Filter, NAT, DDOS Preventionon voltage and accelerometer
Diagnostic	Tcpdump, Ping, Tracert

Software

Operating System	OpenWrt based Linux OS
Alternative Link	Mobile, Wire, WiFi. Primary and backup link configured as requirement, auto load balance
WEB UI	HTTP, status, configuration, FW update, update FW from file, configuration load, configuration backup, FOTA, Update FW without losing current configuration
Connection Monitoring	Ping Reboot, LCP and ICMP for link inspection, Timing Task
SMS	Reboot, switch SIM, get status, restore factory setting

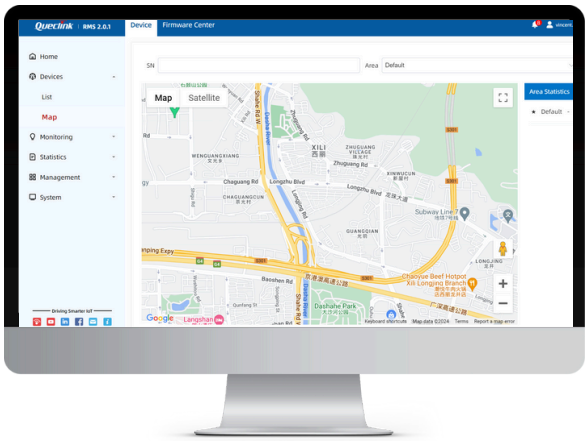
System Characteristics

CPU	Dual-core ARM 64bit A53@1.0GHz
RAM	256MB, DDR4
Flash Memory	256MB Flash

CUSTOMIZATION

Deploy the Nebulink on your own servers

Queclink's Nebulink (Remote Management System) is an all-in-one centralized control cloud platform. It offers clear device status visibility and capabilities for alert, task management, and data analytics, all without on-site visits.



ACCESSORIES



GNSS Adhesive Antenna



Mobile Antenna 5G/WiFi



UK/US/EU-Standard Power Supply



Mounting Bracket



Ethernet Cable



5 Pin Connector