WidelOT

Product Specifications



WR715

Industrial Router

5 Gigabit Ethernet ports | 5G/4G | WiFi 5|6 | Dual-SIM

Product Overview

The WR715 series is an IoT wireless router featuring five Gigabit Ethernet ports and three RS485/RS232 serial ports (with an optional configuration of 1 DI + 1 DO + 2 serial ports), integrating technologies such as 5G, 4G, 3G, Wi-Fi, PPPoE networking, virtual VPN private networks and wireless DTU data transmission. The 5G connectivity feature supports high-bandwidth (up to 2.5 Gbps), low-latency (down to 10 ms) and highly reliable access to 5G base stations, making it ideal for smart factories and industrial applications; The Wi-Fi connectivity features dual-band 2.4GHz and 5.8GHz operation, with optional Wi-Fi 5 and Wi-Fi 6 modules. It supports IEEE 802.11ac technology (compatible with 802.11a/b/g/n), offering data transfer rates of up to 1.3 Gbps. This high-speed, stable Wi-Fi performance enables enterprises to deploy highly reliable WLAN solutions.



The WR715 series is ideal for large-scale device networking and is widely used in wireless networking for smart factories, manufacturing machinery, self-service vending machines, multimedia advertising displays, and smart medical devices, as well as in industry-wide digital transformation initiatives. With support for multiple network access methods, ease of deployment and comprehensive management features, the series supports a wide range of industry clients in their digital transformation and industrial upgrading projects.

Product features

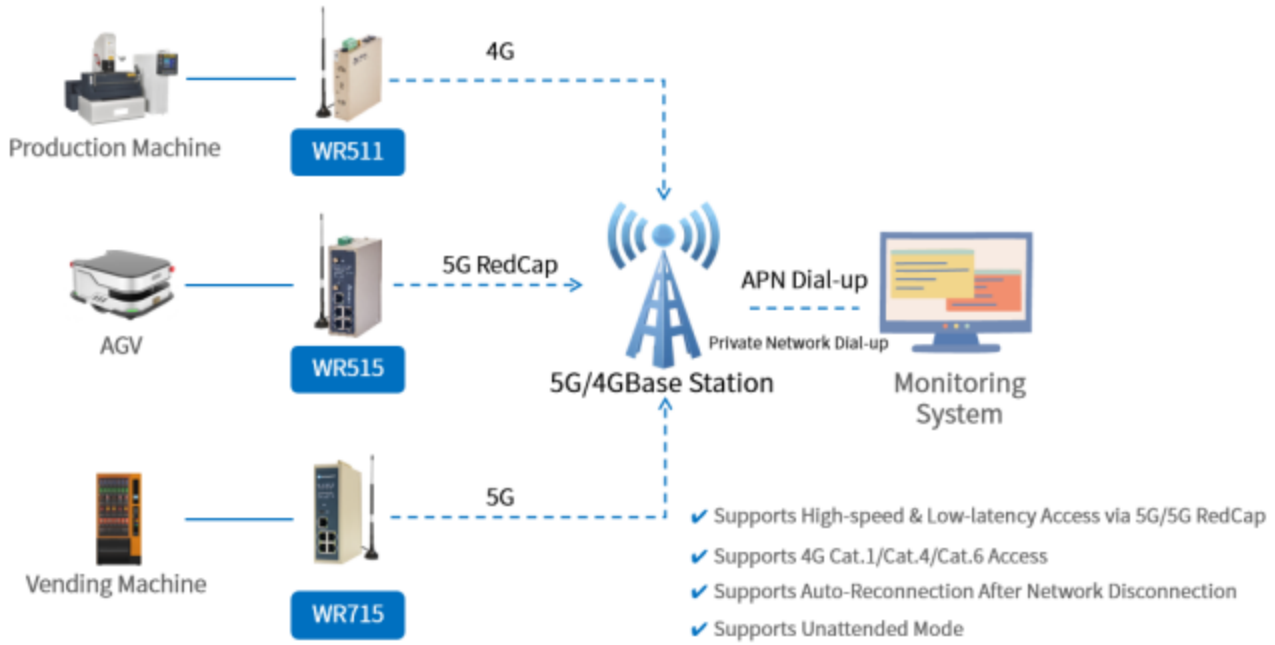
- ✓ **Easy to Deploy and Use:** Supports multiple network types and interfaces, enabling connectivity across various scenarios and devices. Flexible and user-friendly, with multiple operating modes available to meet different application requirements.
- ✓ **Unattended Operation:** Built-in firewall functions ensure network security. Supports multiple link backup mechanisms and automatic reconnection, keeping devices online

in real time and enabling reliable unattended operation.

- ✓ **Powerful Features:** Integrates a variety of network diagnostic tools, supports multiple VPN networking solutions, and provides DTU and other advanced communication functions.
- ✓ **Secure and Reliable:** Designed to industrial-grade standards, delivering a secure, reliable, and stable data transmission link for demanding industrial environments.
- ✓ **Certified and Proven:** Complies with CE, EMC, high/low temperature, and industrial safety connection certifications and testing requirements.

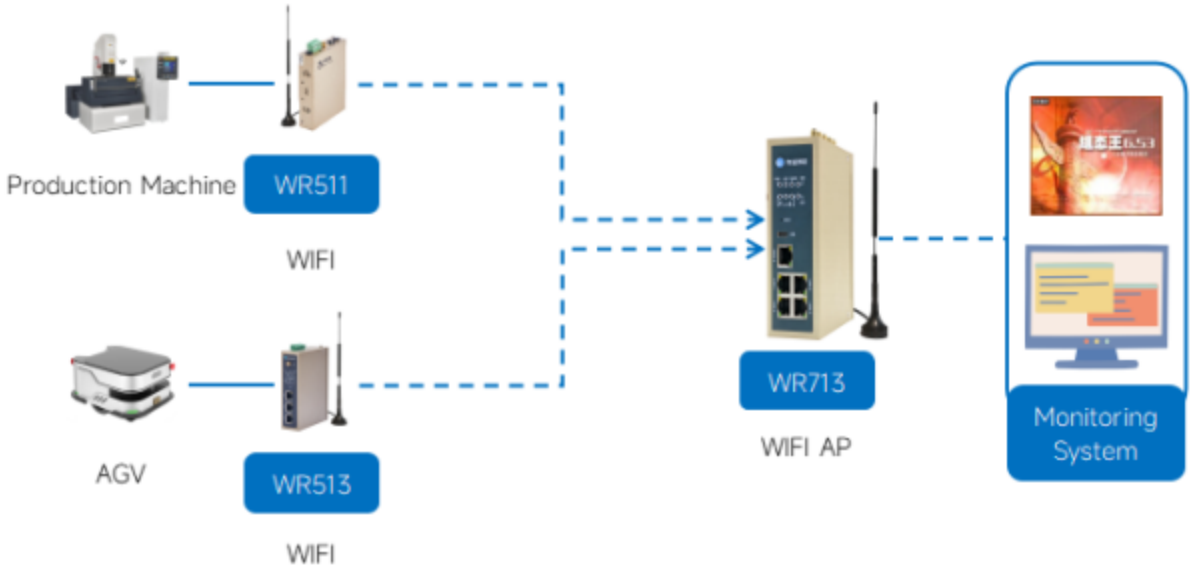
Methods of application

➢ 5G/4G connectivity



- ✔ Supports High-speed & Low-latency Access via 5G/5G RedCap
- ✔ Supports 4G Cat.1/Cat.4/Cat.6 Access
- ✔ Supports Auto-Reconnection After Network Disconnection
- ✔ Supports Unattended Mode
- ✔ Industrial-grade High-reliability Design

➢ WiFi networking



- ✔ 2.4 GHz/5.8 GHz Dual-band Optional
- ✔ Supports WiFi4/ WiFi5/ WiFi6
- ✔ Supports STA, AP (Fat AP/Fit AP) and Relay Modes
- ✔ Industrial-grade Stability and Reliability

➢ VPN networking



- ✔ Supports Multiple VPN Networking Modes: IPSec VPN, OpenVPN, PPTP VPN, L2TP VPN
- ✔ Supports Auto-Reconnection on VPN Disconnection and Network Disconnection
- ✔ Supports Multiple Network Access Methods: 5G, 4G, WiFi, Ethernet

Application scenarios


Smart Manufacturing


Smart retail


Smart grid


Smart City


Intelligent Transport


Renewable energy


Utilities


Smart Healthcare


Industrial Internet of Things


Water Resources and Environmental Protection


Smart Agriculture


Mines and oilfields

Product specifications

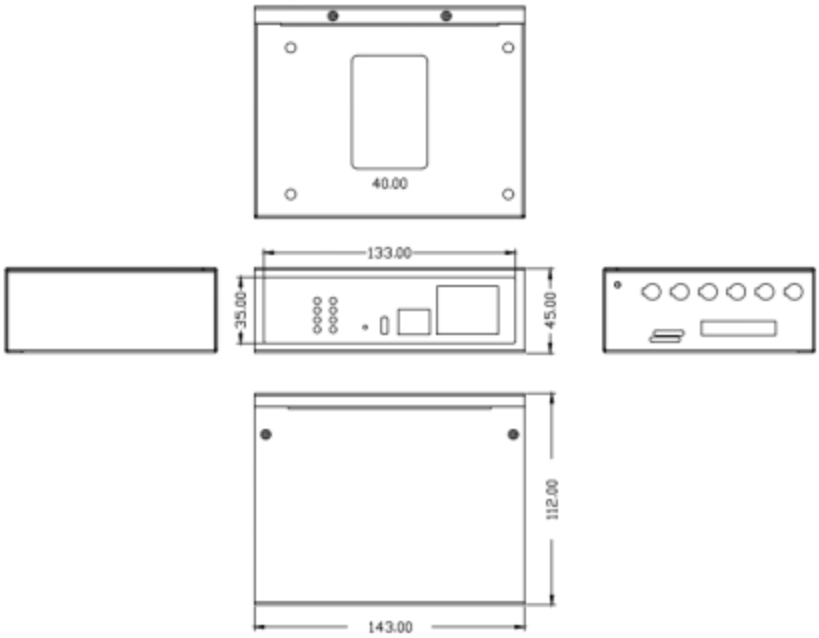
Hardware Parameters	
Hardware platform	
CPU Core	880 MHz dual-core
Runtime storage	256MB DDR3
Programme storage	32MB SPI-FLASH
Interface specifications	
Power socket	DC 9V-35V （terminal block）
Ethernet port	5*10/100 0Mbps Ethernet ports , 1.5KV Network isolation and transformer protection, supports WAN/LAN
Serial port	3 RS485/RS232 serial ports (optional configurations: 2 serial ports + 1 DI + 1 DO, or 1 serial port + 2 DI + 2 DO), 15 kV ESD protection, with a theoretical capacity of 255 slave devices per bus
5G network	5G Sub-6 GHz, supporting both 5G NSA and 5G SA modes. 5G NSA: Maximum downlink speed of 2.5 Gbps and maximum uplink speed of 650 Mbps. 5G SA: Maximum downlink speed of 2.1 Gbps and maximum uplink speed of 900 Mbps. LTE: Maximum downlink speed of 1.0 Gbps and maximum uplink speed of 200 Mbps. WCDMA: Maximum downlink speed of 42 Mbps and maximum uplink speed of 5.76 Mbps.
4G network	LTE Cat 4: Supports a maximum downlink speed of 150 Mbps and a maximum uplink speed of 50 Mbps. LTE Cat 1: Supports a maximum downlink speed of 10 Mbps and a maximum uplink speed of 5 Mbps.
WIFI network	Dual-band 2.4 GHz and 5.8 GHz Wi-Fi, with optional Wi-Fi 5 or Wi-Fi 6 modules available. Supports wireless data rates ranging from 300 Mbps to 1300 Mbps. Compliant with IEEE 802.11b/g/n or IEEE 802.11ac/b/g/n standards (optional, depending on the selected module)
GNSS network	Supports Beidou, GPS ,etc. positioning systems (optional)
SIM card slot	Nano-SIM * 2 （eSIM optional）
Reset button	Pinhole reset button
Antenna connector	5G network：SMA x 4、4G network：SMA x 2、WLAN: RP-SMA x 2 (Up to 6)
Mechanical properties	
Dimensions	143 x 112 x 45 (mm)

Installation method	Rail-mounted
Equipment housing	Metal casing
Protection rating	IP30
Heat dissipation	Fanless heat dissipation
Weight	608g(Weights vary depending on the configuration)
Power consumption	
Power	4.5W
Equipment operating environment	
Ambient humidity	5% ~ 95% (Non-condensing)
Storage temperature	-40 °C~ 85°C
Operating temperature	-30°C ~ 70°C
Indicator light	
3*3 indicator light	PWR power indicator (red)、LIVE Status indicator (green)、WARN Warning indicator (yellow)、ERR Fault indicator (red) 3 mobile network signal strength indicators (green)、NET Network indicator (Green)
EMC Standards	
Electrostatic discharge immunity	GB/T17626.2-2018,level4
Electrical Fast Transient Pulse Immunity	GB/T17626.4-2018,level4
Oscillating magnetic field Immunity to interference	GB/T17626.18-2016,level4
Radio-frequency electromagnetic fields Radiated immunity	GB/T17626.3-2016,level4
Surge (transient) Immunity	GB/T17626.5-2019,level4
Power-frequency magnetic field Immunity	GB/T17626.8-2006,level4
Physical properties	
Vibration	GB/T2423.10-2008
Impact	GB/T2423.5-2019
Fall	GB/T2423.8-1995

Software specifications	
Network functions	
Network access	Supports 5G/5G-RedCap/4G-Cat4/4G-Cat1,WIFI(AP|STA|Relay) and Ethernet access
Network certification	Supports CHAP/PAP authentication ， Supports APN and VPDN access
Cellular network	GSM/GPRS/EDGEUMTS/HSPA+/CDMA2000-EVDO/TD-SCDMA/ TDD-LTE/FDD-LTE/5G-RedCap/NR 5G **For further details, please refer to the 'List of Cellular Network Bands'**
LAN protocol	Supports ARP and Ethernet
WAN protocol	Supports PPP, PPPoE, DHCP and static IP
IP Applications	Supports Ping、Trace、DHCP Server 、DHCP Relay、 DHCP Client、DNS relay
IP routing	Supports static routing
NAT	Source NAT, Destination NAT, DMZ
WLAN	
Protocol standard	Supports IEEE 802.11b/g/n standards.
Operating mode	Supports multiple operating modes, including AP (Access Point), Client, and WDS (Wireless Distribution System).
Rate	Up to 300 Mbps wireless throughput.
Safety features	Supports Open System, Shared Key, and WPA/WPA2 authentication. Supports WEP, TKIP, and AES encryption.
Transmission distance	100m （The actual transmission distance depends on the site environment）
Safety	
Security Features	Built-in firewall delivers comprehensive network security and protection, featuring Stateful Packet Inspection (SPI), DoS attack mitigation, ICMP/Ping packet filtering, source and destination port mapping, DMZ support, Access Control Lists (ACL), and IP-MAC binding.
Data Security	Supports multiple VPN technologies, including L2TP VPN, PPTP VPN, OpenVPN, IPsec VPN, ZeroTier VPN, and more.
Security Certifications	Supports TLS encryption with access authentication via username/password and digital certificates.
Reliability	
Link detection	Supports heartbeat packet detection and automatic reconnection in the event of a network disconnection.
Multi-network redundancy	Supports seamless switching between Ethernet, Wi-Fi, 4G, 5G, and other network connections.
Watchdog protection	Built-in hardware and software watchdog protection ensures system self-diagnosis and self-healing in case of operational failures.

Application monitoring	Real-time monitoring of application modules with proactive fault detection and self-healing capabilities.
Management & Maintenance	
Traffic Management	Supports bandwidth statistics, traffic control, and IP-based bandwidth limiting
Configuration Methods	Supports Telnet, Web UI, SSH, and remote platform-based configuration and management.
Upgrade Methods	Supports firmware upgrades via Web interface and remote upgrade mechanisms.
Logging Features	Supports local and remote log management, with critical logs retained during power outages.
Network Management Features	Supports cloud network management platforms and batch device management.
Maintenance Tools	Supports Ping, DNS resolution, route tracing, network interface status monitoring, AT command testing, and other maintenance tools.
Status Query	Supports monitoring and querying of system status, module status, network connection status, routing status, and other operational information.

Product dimensions



Order details

Hardware Selection	
Order number	WR715-<N>-<S>
N (Network type)	LL07: 4G CAT4, 7-mode (TDD-LTE, FDD-LTE, etc.), China version; LL02: 4G CAT1, all-network compatible (supports TDD-LTE and FDD-LTE only), China version; NF02:5G RedCap NF38:5G
M (Module)	W: WiFi G: GNSS
Example	WR715-LL07-W (5 Ethernet ports, 4G CAT4 universal connectivity, WiFi) WR715-LL07-WG (5 Ethernet ports, 4G CAT4 universal connectivity,WiFi, GNSS) .....

*This table is for reference only. The exact model selection shall be determined by the engineering team

For further information, please visit the WidelOT website: https://www.wideiot.com.

Alternatively, please contact us via the following methods:

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About WidelOT

Founded in 2011 and headquartered in Xiamen, China, WidelOT is a specialist provider of industrial IoT products and digital solutions, focusing on sectors such as smart factories, smart equipment, energy management, hydrology and water resources, smart water management, and smart cities; The company offers a comprehensive range of products, including industrial wireless routers, industrial switches, industrial smart gateways, industrial data terminals, smart I/O modules, industrial converters, AI edge computers and IoT data cloud platforms. It is a high-tech enterprise integrating R&D, production, sales and service.



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