

R520 4G 3G Router

WLINK WL-R520 series Router is an M2M/IoT mobile broadband router which can optional work on the 4G or 3G cellular network to provide reliable, high speed and secure and wireless connectivity with VPN supported. It is a powerful and programmable industrial mobile router with high performance and harden casing design for remote management, telemetry, condition monitoring, CCTV, ATMs, vending machine and other M2M applications.

WLINK WL-R520 is a high-performance M2M/IoT mobile 4G 3G router designed to deliver reliable, high-speed, and secure wireless connectivity over 4G/3G networks, with integrated VPN support. Built for industrial applications, this rugged and programmable router features a hardened casing, making it ideal for remote management, telemetry, condition monitoring, CCTV, ATM, vending machines, and other M2M/IoT use cases.

WL-R520 4G router excels in applications requiring large data transfers, offering speeds of up to 150Mbps download and 50Mbps upload. Its configurable VPN ensures secure data transmission, while its robust design withstands the demands of industrial and commercial environments.

With dual SIM functionality, the router ensures uninterrupted connectivity by switching between SIM cards. The optional GPS capability also makes it suitable for fleet tracking and access management.

Additionally, the R520 supports customizable PoE 802.3af technology, enabling power delivery to PoE-enabled devices via a CATx cable, simplifying installation in remote or hard-to-access locations.



Basic Features

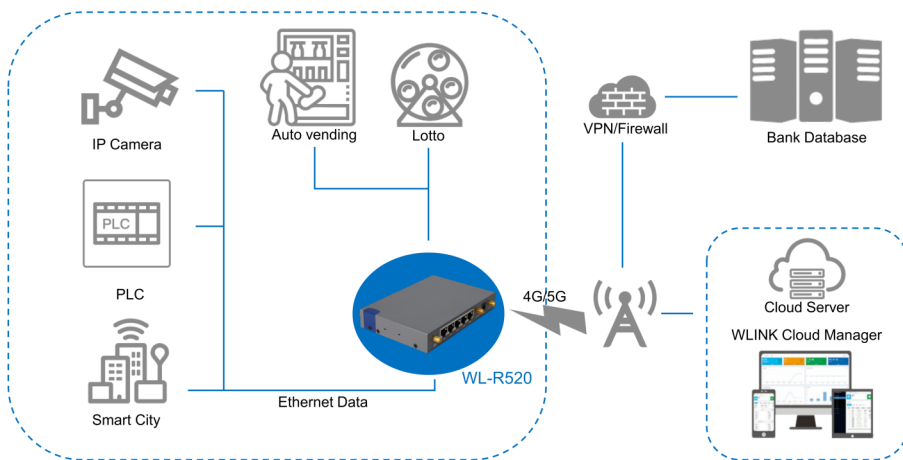
- **Durable Industrial Design:** Compact metal housing with robust construction for harsh environments.
- **High-Speed Connectivity:** Supports FDD/TDD 4G and 3G networks, with backward compatibility for 2.5G.
- **Electromagnetic Interference Resistance:** Built to withstand strong electromagnetic interference.
- **Thermal Performance:** Excellent heat endurance and radiation dissipation capabilities.
- **Reliability Features:** Built-in watchdog and multi-link detection for uninterrupted operation.
- **Advanced Security:** Supports multiple VPN protocols, including PPTP, L2TP, GRE, IPsec, and OpenVPN.
- **Industrial Protocol Support:** Compatible with ModBus TCP for industrial applications.
- **High Reliability:** Hardware link self-recovery ensures consistent performance.
- **Enhanced Connectivity:** MIMO antenna technology for superior 4G signal reception.
- **Always Online:** Automatic reboot and reconnection in case of disconnection to maintain continuous connectivity.
- **Private Network Access:** Supports APN and VPDN for secure wireless private network access.
- **Network Monitoring:** LCP/ICMP/flow/heartbeat checks to ensure network availability and usability.
- **Flexible Configuration:** Web-based interface, CLI, SSH, and management platform support for easy setup and management.
- **Network Management:** SNMP support for efficient network monitoring and NTP for time synchronization.
- **Remote Management:** Local and remote configuration, status monitoring, and firmware upgrades.
- **DHCP Server:** Built-in DHCP server for simplified network configuration.
- **DNS Support:** DNS proxy and Dynamic DNS (DDNS) for seamless domain management.
- **Timing Operations:** Supports scheduled tasks and timing-based operations.
- **Status Indication:** LED indicators for real-time status monitoring.
- **Rugged Design:** Shock and vibration resistant for reliable operation in demanding environments.

Advanced Features

- Serial-to-IP Communication (Optional): Enables seamless integration of legacy serial devices into IP-based networks.
- Dual SIM Dual Modem (Optional): Supports load balancing and failover for enhanced network reliability and performance.
- Captive Portal for Wi-Fi Hotspot (Optional): Facilitates secure and customizable Wi-Fi access control for public or private networks.
- Scheduled Reboot: Ensures optimal performance and stability with automated system reboots.
- Customizable Solutions: Tailored configurations to meet specific operational requirements.
- Customizable PoE 802.3af/at: Supports up to four PoE ports with a total power output of 60W, simplifying deployment and reducing cabling needs.

Typical Application

Energy	Digital Oil Field, Smart Mining, Solar, Smart Grid, Transformer Monitoring, Connectivity for EV Charge Station, Wind Power
Retail	ATM, POS(Point-of-Sale), Self-service Kiosk, Vending Machine, Lottery Machine, Branch network, Digital Signage, Video Surveillance, failover between WAN&4G/3G
Industry	Remote Telemetry, Tanking Monitoring, Automation, Remote PLC, Remote AMR, Smart Irrigation, Urban Heat supply system, Geological Disaster Monitoring System, Smart Ware house, Smart Factory
Smart City	Traffic, Street lighting, Public Safety &Security, 5G/4G Public hotspot, Environment monitoring, Video Surveillance, Smart Package Locker, Utilities, Wastewater Treatment, Smart Trash Can, Remote control of Golf Irrigation System, Smart Building
Healthcare	Mobile Medical Equipment Remote Monitoring, Telemedicine
Transportation	Bus WiFi, WiFi on Board, Vehicle video surveillance, Fleet tracking and management, Bus Advertising, Cold Chain Logistic, Highway Monitoring



Specification

Physical			
Optional Cellular Network	<ul style="list-style-type: none"> • LTE-A • LTE • HSPA/UMTS • EDGE/GPRS 	Hardware System	<ul style="list-style-type: none"> • MIPS32 Core 580Mhz • 128Mb Flash, 512Mb DDR2 RAM • Hardware Watchdog
Interface	<ul style="list-style-type: none"> • 5× 10/100Mb LAN (4XLAN, 1xWAN configurable) • 1× RS-232/RS-485 • 1(2)× SMA-K, 1(2)× SMA-RP antenna connectors • 1× Standard SIM/R-UIM Slot • 1× power connector 	GPS (Optional)	<ul style="list-style-type: none"> • GPS Sensitivity: -160dBm • GPS Accuracy: 2.5m CEP • Update Rate: 1Hz@5Hz • Tim to First Fix: Cold Status 27s, Hot status 1s. • Protocol: NMEA-0183 2.3V
LED Indicators	<ul style="list-style-type: none"> • NET • WLAN • WAN • LAN (LAN1~LAN4) 	Wi-Fi	<ul style="list-style-type: none"> • IEEE 802.11 b/g/n • 2.4G
Consumption	<ul style="list-style-type: none"> • Idle: 180mA@+12VDC • Single Module Communications: 210mA@+12VDC • Dual Module Communications: 600mA@+12VDC 	Other	<ul style="list-style-type: none"> • Dimension: 150mm x 102mm x 25mm • Weight: 400g • Operation temperature: -30~+70 degree • Storage temperature: -40~+85 degree • Relative humidity: <95% (non-condensing) • Gurantee: Two Years
Compliance	<ul style="list-style-type: none"> • FCC • CE • RoHS • CCC 	Package Content	<ul style="list-style-type: none"> • 1x WL-R520 Router • 1x Wi-Fi antenna • 2x 4G Magnetic antenna • 1x Ethernet Cable • 1x Power Supply Adapter
Software			
Operating System	<ul style="list-style-type: none"> • WLINK OS based on Linux 	Firewall	<ul style="list-style-type: none"> • IP Filter • Mac Filter • Domain name Filter
Network Protocol	<ul style="list-style-type: none"> • IPv4, IPv6 (Optional) • PPPoE • UDP/TCP/ICMP/NTP/DHCP, • HTTP/HTTPS • UPNP • SNMP 	Network Monitoring	<ul style="list-style-type: none"> • ICMP Check • Traffic Check • Traceroute • Data Capture • Bandwidth Graph • Data Traffic Graph
VPN	<ul style="list-style-type: none"> • Wireguard/Zerotier/GRE Tunnel • OpenVPN Client/Server • PPTP/L2TP Client/Server • L2TP V3 • IPsec Client/Server • DMVPN 	Network Features	<ul style="list-style-type: none"> • 4G/WAN Failover • VLAN • Bandwidth Management • NAT/DMZ • IP Passthrough / Port Redirection • Static/Dynamic routing
Router Management	<ul style="list-style-type: none"> • Local/Remote GUI • Telnet/SSH • WLINK M2M Platform 	WLAN Mode	<ul style="list-style-type: none"> • Access Point • AP + WDS • Wireless Client • Wireless Ethernet Bridge • WDS
Wi-Fi Network Mode	<ul style="list-style-type: none"> • 2.4G 	WiFi Security	<ul style="list-style-type: none"> • WEP • WPA Personal/Enterprise • WPA2 Personal/Enterprise • WPA/WPA2 Personal/Etherprise • Radius

Partial Order Number List

Part No.	Region	4G	3G	Interface	DL	UL	Dual SIM	WiFi	GPS
WL-R520LA	Asia Europe Africa	LTE-FDD: B1/3/5/7/8/20/28 LTE-TDD: B38/40/41	B1/5/8	4xLAN 1xWAN/LAN 1xRS-232	FDD 150M TDD 130M	FDD 50M TDD 35M		√	
WL-R520LA-d							√	√	
WL-R520LA-g								√	√
WL-R520LA-dg							√	√	√
WL-R520LFX	Asia Europe Africa	LTE-FDD: B1/3/7/8/20/28A LTE-TDD: B38/40/41	B1/8	4xLAN 1xWAN/LAN 1xRS-232	FDD 150M TDD 130M	FDD 50M TDD 35M		√	
WL-R520LFX-d							√	√	
WL-R520LFX-g								√	√
WL-R520LFX-dg							√	√	√
WL-R520LF	Asia Europe Africa	LTE-FDD: B1/3/5/7/8/20 LTE-TDD: B38/40/41	B1/5/8	4xLAN 1xWAN/LAN 1xRS-232	FDD 150M TDD 130M	FDD 50M TDD 35M		√	
WL-R520LF-d							√	√	
WL-R520LF-g								√	√
WL-R520LF-dg							√	√	√
WL-R520LA1	Latin America Australia New Zealand	LTE-FDD: B1/2/3/4/5/7/8/ 28/66 LTE-TDD: B40	B1/2/4/5/8	4xLAN 1xWAN/LAN 1xRS-232	FDD 150M TDD 130M	FDD 50M TDD 35M		√	
WL-R520LA1-d							√	√	
WL-R520LA1-g								√	√
WL-R520LA1-dg							√	√	√
WL-R520LF1	Latin America Australia New Zealand	LLTE-FDD: B1/2/3/4/5/ 7/8/28 LTE-TDD: B40	B1/2/4/5/8	4xLAN 1xWAN/LAN 1xRS-232	FDD 150M TDD 130M	FDD 50M TDD 35M		√	
WL-R520LF1-d							√	√	
WL-R520LF1-g								√	√
WL-R520LF1-dg							√	√	√
WL-R520LF2	North America FirstNet	LTE-FDD: B2/4/5/12/13/ 14/66/71	B2/4/5	4xLAN 1xWAN/LAN 1xRS-232	FDD 150M	FDD 50M		√	
WL-R520LF2-d							√	√	
WL-R520LF2-g								√	√
WL-R520LF2-dg							√	√	√
WL-R520LF3	Japan	LTE-FDD: B1/3/8/18/19/ 26/41	B1/6/8/19	4xLAN 1xWAN/LAN 1xRS-232	FDD 150M	FDD 50M		√	
WL-R520LF3-d							√	√	
WL-R520LF3-g								√	√
WL-R520LF3-dg							√	√	√
WL-R520LG	Global	LTE-FDD: B1/2/3/4/5/7/8/ 12/13/18/19/20/25/26/28 LTE-TDD: B38/39/40/41	B1/2/4/5/ 6/8/19	4xLAN 1xWAN/LAN 1xRS-232	FDD 150M TDD 130M	FDD 50M TDD 35M		√	
WL-R520LG-d							√	√	
WL-R520LG-g								√	√
WL-R520LG-dg							√	√	√
WL-R520H2	Global	N/A	HSPA 2100/ 1900/900/ 850MHz	4xLAN 1xWAN/LAN 1xRS-232	14M	5.76M		√	
WL-R520H2-d							√	√	
WL-R520H2-g								√	√
WL-R520H2-dg							√	√	√
WL-R520LA-dm	Asia Europe Africa	LTE-FDD: B1/3/5/7/8/20/28 LTE-TDD: B38/40/41	B1/5/8	4xLAN 1xWAN/LAN 1xRS-232	FDD 150M TDD 130M	FDD 50M TDD 35M	√	√	
WL-R520LA-dmg							√	√	√
WL-R520LFX-dm	Asia Europe Africa	LTE-FDD: B1/3/7/8/20/28A LTE-TDD: B38/40/41	B1/8	4xLAN 1xWAN/LAN 1xRS-232	FDD 150M TDD 130M	FDD 50M TDD 35M	√	√	
WL-R520LFX-dmg							√	√	√

Note:

1. If request other frequency band model, please consult WLink sales
2. Please specify when order if request other optional features
3. The above list includes partial of WLINK models only, please consult WLink sales or distributor if can't find a suitable model from the above list.

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