

WLINK[®]

WL-G525 5G Router



The WLINK G525 is a next-generation multi-port 5G router that builds upon the stable, reliable heritage of the R520 and G520. Harnessing the power of 3GPP Release 17 5G and Wi-Fi 6 (802.11ax) technologies, the G525 delivers groundbreaking speeds—up to 3.4 Gbps on 5G and 3 Gbps on Wi-Fi. This ensures real-time data transmission for the most latency-sensitive industrial automation, monitoring, and control systems.

At its core, a robust dual-core 1GHz ARM Cortex-A53 processor and a dedicated hardware watchdog guarantee stable and uninterrupted operation. The router is equipped with 5x Gigabit Ethernet Ports and 1x Serial Port. It further offers unparalleled flexibility with a deeply customized, OpenWrt-based operating system (optional), supporting a wide range of open-source components and multi-runtime environments for complete solution tailoring.

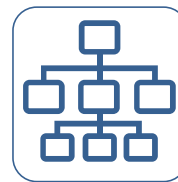
The built-in GNSS receiver simplifies design integration while providing faster, more accurate, and highly dependable positioning capabilities for applications requiring location intelligence.

As a true industrial-grade solution, the G525 is the ideal choice for a wide spectrum of applications, including Factory Automation & Smart Manufacturing, Intelligent Transportation Systems, Smart Grids & Environmental Monitoring, Security Surveillance & Public Safety, Digital Signage & Retail Advertising.



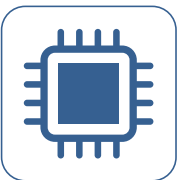
Cutting-Edge 5G Performance

Global 5G Sub-6GHz NSA&SA/4G LTE network for backup among multiple carrier networks 5G blazing fast Mobile Broadband Internet, delivering groundbreaking download speeds up to 5Gbps.



Versatile Connectivity

Multiple interfaces including Gigabit Ethernet, RS-232/RS-485, IP-based PLC communication, with support for IPv6, and plug-and-play terminals. GNSS tracking and Storage are optional.



Dual-Core Powerhouse

Qualcomm ARM Dual-core A53 processor enables efficient multitasking and low latency. Handles high-bandwidth applications like video streaming.



Flexible and Customizable OS

WLINK OS and OpenWRT OS optional. Support deeply customized OpenWrt system with open-source support. Supports multiple programming languages environment and tailored business logic development.



Blazing Fast Wi-Fi 6

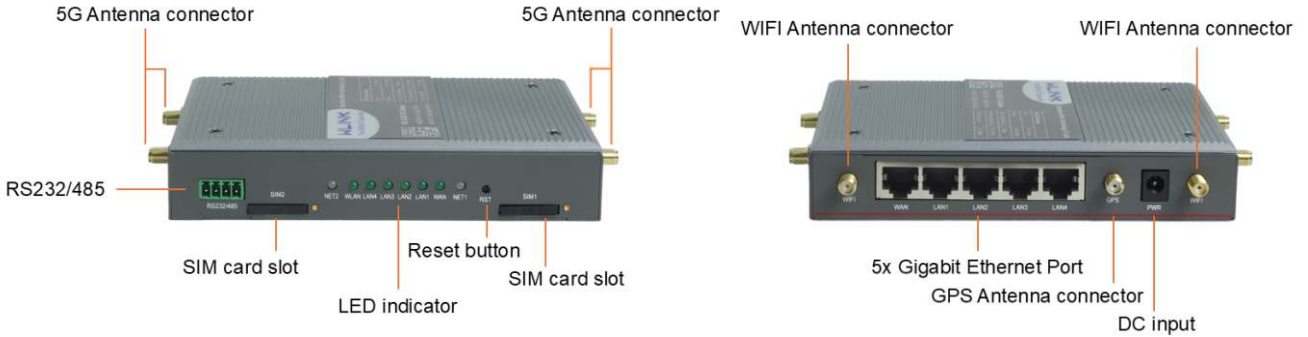
Wi-Fi 6 revolutionizes wireless connectivity with blazing speed (3Gbps), massive device capacity, ultra-low lag and robust security.



Cloud-Based Platform Management

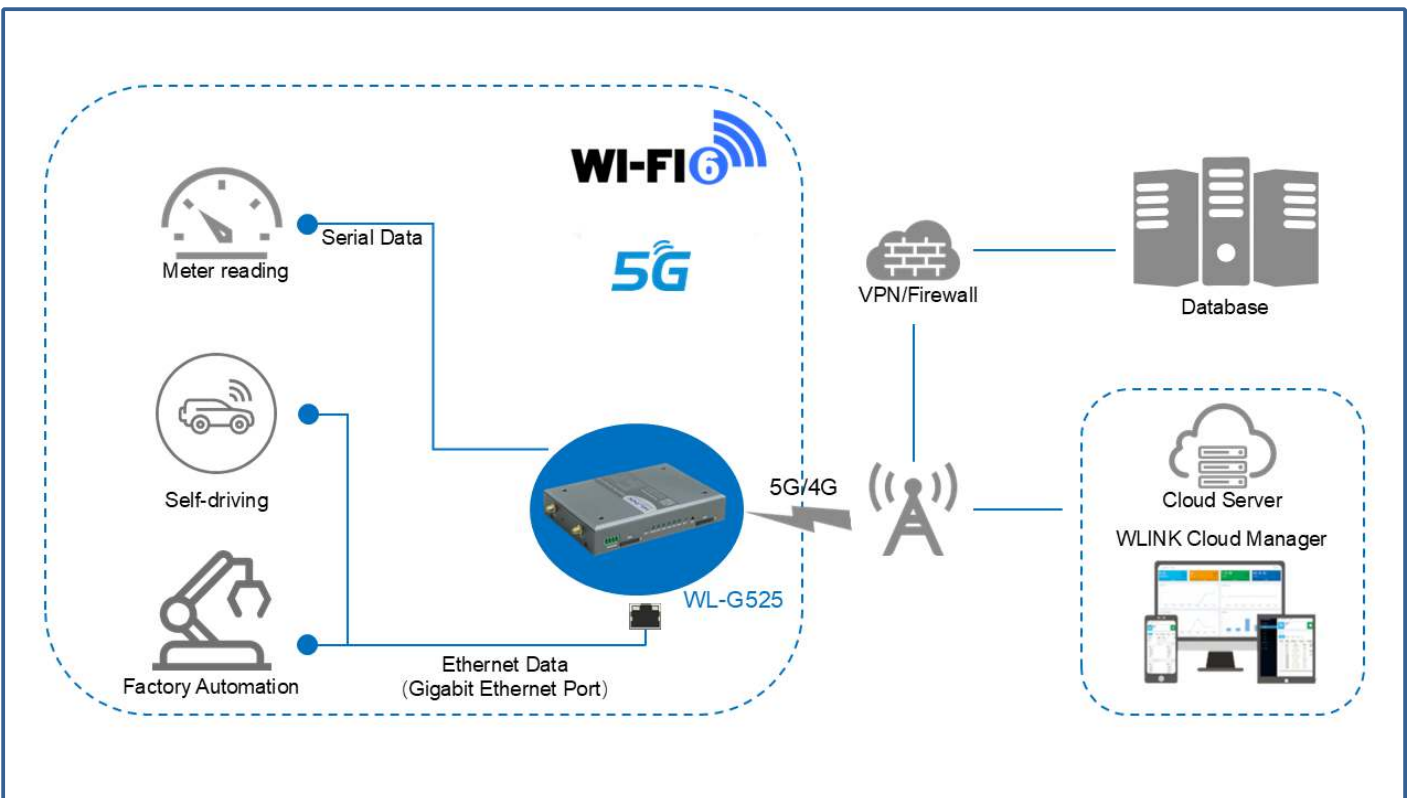
G525 can be managed via cloud management platform which provide easy setup, centralized configuration, network analysis and maintenance of large installations.

Interface Diagram



eMBB(enhanced Mobile Broadband)	URLLC(Ultra Reliable Low Latency Communications)	Massive IoT
<p>Key network considerations</p> <p>Per-connection peak speed,network capacity Includes streaming and high definition video,360 degree video,public transit,and other data-intensive and image-intensive use cases</p>	<p>Key network considerations Reliability, latency such as VR and AR,remote control of critical infrastructure,vehicles,Industrial automation and utilities</p>	<p>Key network considerations scalability to very large number of connections includes Smart City,Connected Vehicles,Smart Home,Smart Media,Smart Factories, Healthcare,Smart Metering,Smart Grid, Oil and gas</p>

Typical Application



Specification

Physical			
Cellular Network	5G SA/NSA n1/2/3/5/7/8/12/13/14/18/20/25/26/28/29/30/38/40/41/48/66/70/71/75/76/77/78/79 LTE-A/LTE B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71/34/38/39/40/41/42/43/48	Hardware System	Qualcomm ARM A53 Dual-core 1GHz 512MB DDR3 RAM 16MB NOR FLASH 128MB NAND FLASH Hardware Watchdog
Interface	5 x Gigabit Ethernet (5x LAN, 4X LAN/1x WAN Configurable) 1 x RS232(RS485 optional) 1 x DC (Non-polarized, anti-reverse protection) 2 x SIM Slots 1 x RST 4x SMA-K (Female) 5G Antenna Interface 2x RP-SMA Wi-Fi Interface 1 x SMA-K(Female) GPS Antenna (optional)	GPS(optional)	GPS sensitivity: -160dBm GPS accuracy: 2.5m CEP Update Rate: 1Hz@5Hz Time to First Fix: Cold Status 27s, Hot status 1s. Protocol: NMEA-0183 2.3V
LED Indicator	NET(NET1~NET2) WLAN LAN (LAN1~LAN4) WAN	WLAN(Wi-Fi6)	IEEE 802.11b/g/n/ax 2x2 2.4GHz&5GHz MUMIMO OFDMA 3000Mbps
Consumption	Voltage: DC +12~32V (standard 12V/2A power adapter) SIM/R-UIM Card: 1.8V/3V Idle: 600mA@+12VDC Online: 850mA@+12VDC	Others	Dimension:150×102×24.5mm Weight: 420g (not including accessories) Mount: Wall Mount Operation temperature: -30~ + 75 °C Store temperature: -40~ +85 °C Related humidity: 0~95% (non-condensing) Guarantee: two years
Ethernet Protocol	IEEE 802.3, IEEE 802.3u, 802.3az, Auto MDI/MDIX	Certification	CE, CCC, RoHS
Software			
Operating System	WLINK OS Based Linux as default OpenWRT OS Optional	Firewall	SNAT/DMZ Port Forwarding IP/Mac/Key Word/Domain Name Filter Anti-DoS Access Control
Network Protocol	IPv4/v6, PPPoE, UDP, TCP, ICMP, NTP, DHCP, Modbus, HTTP/HTTPS, UPNP, SNMPv3, TR069, DDNS,Telnet/SSH, MQTT	Network Monitoring	Ethernet Ports Status ICMP Check Traceroute Data Capture Bandwidth Graph Data Traffic Graph System Debugging Log
VPN	CRE Tunnel Zerotier VPN Wireguard VPN Client and Sever supported OpenVPN: TLS1.2, Encryption as DES, RC2, BF,3DES, CAST5,AES,SEED 45 encryption methods PPTP/L2TP: Client mode, L2TPv3 supported IPSec: GRE Over IPsec, L2TP over IPsec, Two tunnels Failover, IKEv1, IKEv2, DES, 3DES, AES128, AES192, AES256 multiple encryption methods supported. DMVPN: mGRE, NHRP, IPsec	Network Features	Dual-SIM Failover WAN/4G Failover Serial Port Client/Server Applications AT command over IP VRRP VLAN IP Passthrough Bandwidth Management Static Routing/Policy Routing RIPV2/OSPF/BGP Dynamic Routing
Router Management	Local/Remote GUI Telnet/SSH SNMP v3/TR069 WLINK M2M Management Platform	WLAN	IEEE 802.11b/g/n/ac/ax, AP, Wireless Client and Ethernet Bridge modes WiFi users up to 128 simultaneous connections Wi-Fi Hotspot Wireless Black/White List Multi-SSID WPA Personal WPA2 Personal WPA/WPA2 Personal AES, TKIP, Auto Cipher modes Wi-Fi Captive Hotspot

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