

IRG5500 Cellular LTE Routers

Enterprise-Class Edge Cellular Routers & Gateways


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- LTE Router for Primary or Failover Connectivity
- Out of band management for remote troubleshooting
- LTE-Advanced (LTE-A and LTE-A Pro) for 10x faster downlink speeds and 3x faster uplink speeds
- [Cloud Hosting](#) -- Deploy and manage your network from the cloud
- 2-port or 4-port 10/100/1000 Ethernet
- Network connectivity via LTE, Wi-Fi, Ethernet, USB 3.2, and Serial
- RS232, RS485, Alarm Relay, and multiple I/O to connect equipment
- Advanced feature set with NO Annual Fees

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Perle IRG5500 LTE Routers and Gateways have the most comprehensive set of features, functionality, and performance to provide **primary or failover back-up connectivity** to remote infrastructure and assets. These ultra-low-power, rugged, high-performance Cellular Routers, with dual-SIM slots, also have models with WLAN capabilities making them a single network point of contact for fast deployments. And, there is no need for training because an IRG5500 Router comes with an intuitive web GUI. For advanced admin scrips, CLI commands are also available.

Perle IRG5500 Routers provide **fast, secure, and reliable managed LTE network connectivity** where wired options are impossible to deploy or require a backup. This is crucial for enabling a wide range of applications while ensuring the highest degree of security to protect the integrity of critical services. Reduce the cost of downtime and service calls, and bringing distributed sites online faster. With support for **Data, SMS, Voice, and Video**, an IRG5500 and can be integrated into any enterprise cloud, building, industrial, or mobile location network infrastructure.

- Building and process automation controllers, Internet of Things (IoT)
- Smart grid assets (meters, switches, controllers), Telco infrastructure controllers
- SCADA, Distribution management systems, Remote data loggers, flow meters, sensing equipment
- Digital signage, ATMs, POS, Kiosks, Temporary "pop-up" stores
- Video surveillance controllers, IP cameras, Mobile hotspots
- Fleet management, GPS/GNSS Location tracking, Taxis, Public Service Vehicles, vehicle area networking (VAN)
- Public Service Vehicles, First responders, Command Centers
- Transit systems, Buses, Metro Subways, Railways



Cellular Band Operation Certified Worldwide over 4G LTE, DC-HSPA+, HSPA+, HSPA, and UMTS (WCDMA)

Perle IRG5500 Routers and Gateways have three cellular options to ensure **support for your carrier's primary bands** in deployment areas:

1. **IRG5500+:** LTE-A PRO CAT12. 600Mbps downlink and 150Mbps uplink speeds. Support for 24x LTE Bands and 9x UMTS/WCDMA Bands
2. **IRG5500:** LTE-A CAT6. 300Mbps downlink and 50Mbps uplink speeds. Support for 15x LTE Bands and 6x UMTS/WCDMA Bands
3. **IRG5500+ FN:** FirstNet Ready™ support for Band 14 (B14). LTE-A PRO CAT12. 600Mbps downlink and 150Mbps uplink speeds. Support for 24x LTE Bands and 8x UMTS/WCDMA Bands

Edge Routers with Enterprise-Grade Routing Capabilities

Perle does not charge any annual subscription or license fees to maintain operation, download software updates, or access features. IRG5500 routers have all the of the advance routing functionality found in the most advanced enterprise routers. **Extensive protocol routing support** means they can be easily deployed in hierarchical or large mesh network structures. A fast CPU and lots of memory ensure the router can handle a consistent and heavy workload all day long.



- RIP, RIPv2, RIPng, OSPFv1/2/3, BGP-4, VRRP
- When BGP peering with multiple ISPs, the IRG5500 delivers carrier-grade routing performance capable of handling the full Internet routing table
- IPv4 & IPv6
- OpenVPN & IPsec VPN
- DHCP & DHCPv6
- IP Passthrough for deployments requiring the router to operate in Gateway or Bridge mode
- Route between any interface (LTE, WLAN, Ethernet, USB, or serial RS232)
- Reduce unwanted network traffic by creating collision and/or broadcast domains

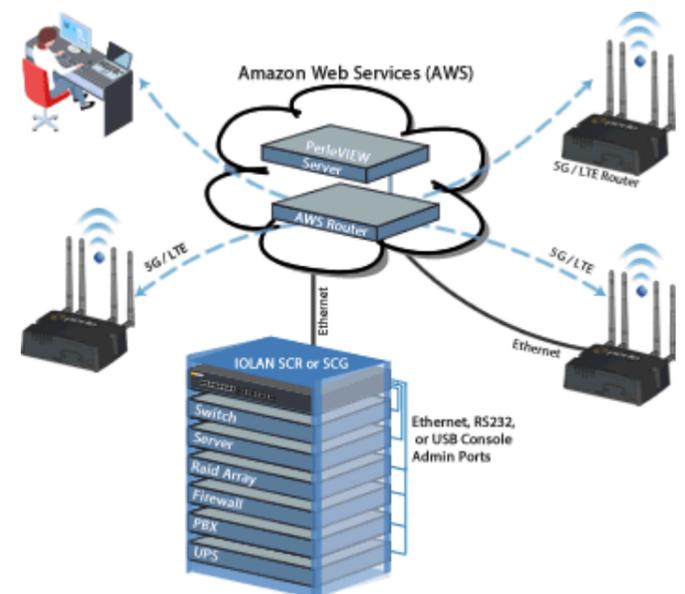
Integrated Zone-Based Policy Firewall

The IRG5500 built-in firewall offers intuitive policies for multiple-interface routers to **protect inside networks from unauthorized access** by users on an outside network. The firewall also protects inside networks from each other, for example, by keeping a human resources network separate from a user network. If there are network resources that need to be available to an outside user, such as a web or FTP server, these resources can be placed on a separate network behind the firewall, in a demilitarized zone (DMZ). The firewall will allow limited access to the DMZ, but because the DMZ only includes the public servers, any attacks there will not affect the inside network. The firewall controls when inside users access outside networks (for example, access to the Internet), by allowing only certain addresses out, by requiring authentication or authorization, or by coordinating with an external URL filtering server. A deny-all (blacklist) policy can be used to prohibit traffic between firewall security zones until an explicit policy is applied to allow desirable traffic. Router ports are assigned to zones and firewall inspection policies are applied to traffic moving between the zones. Firewall inter-zone policies come with considerable flexibility and granularity so that different firewall inspection policies can be applied to the same router port.

High Availability Access and Enhanced Security with 2 Factor Authentication

With multiple concurrent VPN sessions and 2 Factor Authentication, Perle IRG5500 Routers enable secure communications to multiple back-end systems.

- Remote authentication (RADIUS, TACACS+, LDAP) management, integrates with enterprise-grade systems to control access to devices in the field.
- Software image CRC control protects the software upgrade process against unwanted software corruption and malware
- High-speed OpenVPN, IP Security (IPsec), Triple Data Encryption Standard (3DES), and Advanced Encryption Standard (AES) encryption for data privacy over the Internet.
- Intrusion prevention enforces security policies in a large enterprise or service provider networks.
- Perle's cloud-based centralized management solution puts all your network and IT infrastructure into a single application and provides secure reliable access and visibility during normal operations and critical network failures. Scalable to suit any business requirement, [Cloud Centralized Management](#) reduces human error and guarantees repeatability.



GPS / Global Navigation Satellite System (GNSS) Included

GPS and GNSS (Galileo, Glonass, and Beidou) are included by default in all IRG5500 Routers and Gateways. This enables **real-time location tracking** of remote assets. Also, you can get **real-time network clock updates** in the router, or any attached equipment, for accurate time-stamp usage in time-sensitive applications.

Cutting-edge design certified for a wide range of deployment scenarios

High-performance components and features enable customers to take advantage of broadband network speeds while running **secure concurrent data, voice, and video services**. All IRG5500 routers have **high MTBF rates** because they are developed with certified high-end components to provide superior reliability and uninterrupted operation.

<p>Primary or failover back-up connectivity</p>	<p>Perle is the only company to offer LTE edge routers with all of the enterprise-grade features and protocols needed to be a fully functional primary or failover back-up LTE Router. If the main network connection goes down for any reason, Perle IRG5500 routers provide an always-on, cost-effective redundant connection. As a failover solution, wireless speeds are fast enough to keep your network humming and distributed enterprises can enjoy the same reliability and competitive advantage as large enterprises. The relatively low cost of LTE for branch continuity means a greater return on investment and scalability for multiple locations. Simply put, an IRG5500 LTE Router ensures maximum uptime, cost-effective scalability, and ease of deployment and management with limited IT resources.</p>
<p>Compact light-weight design</p>	<p>Deploy in many different environments where space, heat dissipation, and low power consumption are critical factors. The optional DIN-Rail mounting brackets or wall-mount brackets ensure easy installation.</p> 
<p>Ultra-Low-Power</p>	<p>IRG5500 LTE Routers are designed to operate on limited power sources by consuming less than 1 Watt in idle mode. This makes them ideal for battery and solar applications. In addition, Standby Mode can be used to protect power sources by dropping power consumption to a target of 53 mW. This can be triggered by timers, low voltage detection, or I/O. IRG5500 Routers also work with the existing power infrastructure in 2G/3G deployments that are migrating to LTE thus, eliminating the need to invest in replacement equipment.</p>
<p>Rugged Environment Certifications</p>	<ul style="list-style-type: none"> • Rugged die-cast aluminum IP54 enclosure for dust & water ingress • Shock and vibration resistance certified to MIL-STD-810G, SAE J1455 & EN 61373 • Hazloc per IECEx/IECx, ATEX, & ANSI/ISA Class 1 Div 2 • -40°C to +70°C operating temperature
<p>Vehicle Deployment</p>	<ul style="list-style-type: none"> • Cellular tower connectivity can be established and maintained at up to 100 meters per second (360km/224mi per hour) • E-Mark Certification, ISO 7637-2, and ISO 16750-2 Compliance • Built-in battery charge protection, with no requirement for external power conditioning, to safeguard vehicle operation • Vehicle awareness applications can be used to remotely monitor vehicle speed, acceleration, position, and more. • Ignition Power Management can schedule a delayed shutdown or startup of the IRG5500 based on the vehicle ignition status
<p>FirstNet Ready™ Deployments</p>	<p>Built for first responders and field personnel, the IRG5500+ FN LTE Routers are certified Band 14 and FirstNet Ready™. With long range Gigabit Wi-Fi and Gigabit Ethernet, and up to 600 Mbps downlink and 150 Mbps speeds over LTE-Advanced Pro, fleets can be united with the enterprise network to enables multiple field applications to work simultaneously, further and faster from the vehicle than ever before. Host up to 128 simultaneous Wi-Fi clients, and concurrently connect multiple mission critical applications in and around the vehicle including laptops, DVRs and tablets. Additionally, live video streaming, and rapid and secure access to remote databases, such as record management systems makes the IRG5500+ FN ideal.</p>
<p>Railway Deployment</p>	<p>Perle IRG5500 Routers and Gateways are fully approved and certified for Railway rolling stock application deployments. They are perfectly suited for installation directly in the train or subway cabin, the dusty and humid environments of metro tunnels or, the enclosures found alongside rail tracks.</p> <ul style="list-style-type: none"> • European Certifications EN50155 & EN50121 • International Certifications IEC60571 & IEC62236 • Cellular tower connectivity can be established and maintained at up to 100 meters per second (360km/224mi per hour)

Dual-SIM LTE Failover for true Business Continuity

Perle IRG5500 Routers and Gateways come with redundant SIM slots to ensure reliable network connectivity and cellular multihoming support in LTE and HSPA-based networks. This is particularly useful:

- When the primary carrier contract data cap has been exceeded, the IRG5500 will automatically switch over to a back-up data plan.
- When the IRG5500 is deployed in a mobile environment long-distance roaming can be enabled and used.
- When there is a lack of coverage, or carrier network failure, the IRG5500 will automatically switch over to a back-up carrier.

Dual-band WiFi Models available with Integrated WLAN Access Point

Integrated Wi-Fi (**up to 866Mbps**) for LAN connectivity allows up to 128 simultaneous clients to work concurrently. Integrates 802.11 a/b/g/n/ac Access Point for mission-critical applications. The 2X2 MIMO Access Point creates a self-healing, self-optimizing wireless network.

More Features and Benefits

WAN Connectivity	LTE, 10/100/1000 Ethernet, & WiFi
Central Management Configuration	<p>Perle IRG5500 Routers and Gateways use PerleView, a web-based server configuration tool that simplifies setup and deployment. Centralized management capabilities give network managers visibility and control over network configurations at remote sites. Other Perle IRG5500 management capabilities include:</p> <ul style="list-style-type: none"> • Fast Setup - Available when the router is in factory default (initial) configuration • Web Manager - Available using a browser • CLI - Command Line Interface • SNMP - Using a Network Management System • No ongoing monthly or yearly licensing fees.
Serial Port	<p>Perle IRG5500 Routers come with an IOLAN Secure Device Server built-in for a secure serial to IP (Ethernet/LTE) connectivity applications. This makes it ideal for applications that require remote device console management, data capture, or monitoring. Some of the supported applications are:</p> <ul style="list-style-type: none"> • TrueSerial® packet technology delivers the most authentic serial connections across Ethernet for serial protocol integrity. • Serial Port Access: connect directly using Telnet / SSH • Terminal Server: Telnet, SSH, Rlogin, LPD, RCP printer • Serial machine to IP (Ethernet) • Raw serial data over Ethernet/LTE/TCP/IP/UDP • Virtual modem simulation • TruePort redirector • ModBus, DNP3 and IEC-870-5-101 encapsulation • Line access permissions via TACACS+ and RADIUS servers • Dial direct serial: PPP, PAP/CHAP, SLIP

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