

Product Highlights

The WirelessGRID™ -300 series of outdoor wireless bridges deliver a comprehensive range of product features, ensuring fast, secure and reliable networking services, including...

- ◆ **Integrated outdoor architecture** for ease of installation, configuration, use and management
- ◆ **Data Rates** up to 300 Mbps per radio utilizing adaptive modulation while operating on 40 or 20 MHz wide channels
- ◆ **3x3:2 MIMO Radio** provides multiple transmit and receive paths for radio signals, improving link reliability and performance
- ◆ **SecureRF™ Architecture** provides layered security, including unique layer-2 bridge protocol, mutual radio authentication and 128-bit AES (WPA2) data encryption for secure backbone transmitting TCP/IP and UDP up to 100 Mbps.
- ◆ **Compatible** with all standard 1000/100/10 Mbps Ethernet switches, routers, 802.11q, 802.11p
- ◆ **Real-time antenna alignment tools** simplify antenna alignment, optimize link quality, and maximizes system throughput
- ◆ **Real-time monitoring of WirelessGRID™** displays signal strength, connected radios, and radio statistics via SNMP, Telnet (CLI), and Web



Integrated Architecture

The integrated outdoor architecture of WirelessGRID™ outdoor bridges provides for simple installation, maximum range and capacity, delivering outstanding performance in a weatherproof design. Utilizing a 3x3 MIMO Radio, with Adaptive Modulation and OFDM technology in the 5GHz (4.90-5.85 GHz) frequency range, WirelessGRID™ radios operate at a range of up to 30 miles* and at speeds up to 300 Mbps.

Outstanding Cost-Effective Performance

Ideally suited for bandwidth-hungry applications that require fast, reliable, affordable and secure point-to-point connectivity (up to 100 Mbps TCP/IP capacity), the fully-integrated outdoor radio bridges provides, coupled with external antennas, deliver optimized IP voice, data, and video services. With a 20 and 40 MHz wide channel plan, available channels can be used to meet your capacity, speed, scalability, and user needs, while complying with local regulations.

Whether you are connecting video surveillance systems, two buildings, a campus, or a city-wide municipal network, the WirelessGRID™ architecture provides you with the flexibility to deploy fast, affordable and proven outdoor wireless bridge solutions.

Simplified Antenna Alignment and System Monitoring

Simply run the integrated tool between any two points and the signal strength in dB is streamed across your computer screen, allowing you to maximize signal quality and improve performance and reliability. While in operation, you can also monitor signal strength between local and remote locations in real time to check for changes in the environment and troubleshoot technical problems.



Proven, Fast, Reliable

WirelessGRID-300 outdoor Wireless Backhaul Link (4.9-5.850 GHz, Up to 300 Mbps)

For low-latency, high performance backhaul (point to point) applications

Radio			
Frequency	5.725-5.850 GHz license-exempt UNII & ISM Bands Non-overlapping Channels: ISM, UNII: 5 x 20 MHz, 2 x 40 MHz. * International Versions can operate between 4.9-6.0 GHz. (Frequencies Depends on Local Regulations)		
Radio Type	OFDM with MIMO (3x3:2)		
Standards	802.3, 802.3AB, 802.1Q, 802.1P		
Total System EIRP and Radio Output Power	Radio output power: Max: 18 dBm (Set to local regulatory requirements to comply with transmit, conducted and EIRP power limits)		
Radio Receiver Sensitivity	Data Rate	Sensitivity	Modulation
	6.5 to 300 Mbps	-65 to -90 dBm	64QAM, 16QAM, QPSK, BPSK
Antenna Types	29 dBi Parabolic Dish with mounting hardware kit 28 dBi GRID with mounting hardware kit 24 dBi Panel or integrated with mounting hardware kit		
Operating Mode	Backhaul (Point-to-Point)		

Models and Ordering Information – PoE Injector Cables Purchased Separately	
WirelessGRID-300-ONB	Outdoor Radio Link - Includes 2 radio bridges with Waterproof Bulkhead Ethernet Connectors, N-type Female Connectors. No Antennas
WirelessGRID-300-ONB-24	Complete Backhaul kit - Includes 2 radio bridges with Waterproof Bulkhead Ethernet Connectors, N-type Female Connectors, 2 x 24 dBi Panel Antennas, 2 x 6ft RF Cables, and outdoor mounting brackets
WirelessGRID-300-ONB-28	Complete Backhaul kit - Includes 2 radio bridges with Waterproof Ethernet Connectors, N-type Female Connectors, 2 x 28 dBi GRID Antennas, 2 x 6ft RF Cables, and outdoor mounting brackets
WirelessGRID-300-ONB-29	Complete Backhaul kit - Includes 2 radio bridges with Waterproof Ethernet Connectors, N-type Female Connectors, 2 x 29 dBi Parabolic Antennas, 2 x 6ft RF Cables, and outdoor mounting brackets

SecureRF™ Radio Security	
SecureRF™ Layered Security Design	SecureRF™ Architecture – Unique radio mask, mandatory mutual radio authentication, 128-bit AES (WPA2) data encryption

Range	
AI108-4958-ONB-24	Up to 5 miles (8 km)
AI108-4958-ONB-xxx	Up to 30 miles (50 km) with maximum radio output power and optional external high gain parabolic antennas

Indoor Injector to Outdoor Radio Communication <small>Ordered Separately</small>	
Cable Type	CAT 5e 4 x 2 x 24AWG gel-filled (UV protected, weatherized)
Maximum Distance	328 ft (100 m) between network connection and outdoor units

Configuration and Management	
Configuration Utility	Built-in Web server. Telnet/CLI
Software upgrades	FTP Download
Antenna alignment	Real-time RSSI (signal strength) monitor, link optimization and throughput maximization utility
Indoor Status Indicator	Remote Power Indicator
Real-time Monitoring	Real-time signal strength, system uptime, data rate, channel selection via HTTP, Telnet/CLI, and SNMP
Real-time Throughput	Data throughput monitor built-in to all radios. Displays RX/TX throughput and packet forwarding rates at each radio.

Mechanical Dimensions	
Integrated Outdoor Radio/Antenna (OB)	15 x 15 4 in (38 x 38 x 12 cm)
Outdoor Unit with N-Type Connectors (ONB)	10 x 8 x 6 in (25.4 x 20.3 x 15.2 cm)
Indoor Injector	6 x 3 x 1 in (15.2 x 7.6 x 2.5 cm)
Outdoor Unit Mounting	Includes mast mount and clamp kit for 1" (26 mm) diameter thru 4.5" (115 mm) diameter masts / wall mounts

Environmental		
Operating Temperature	Outdoor Radio:	Indoor Injector:
	-22° F to 140° F (-30° C to 60° C)	32° F to 122° F (0° C to 50° C)
Operating Humidity	Outdoor Radio: Weather Proof. NEMA 4/IP66	Indoor Injector:
		5 to 95% non-condensing
Lightning Protection	UL/CE Certified PoE protection built-in	
Wind Survivability	130 MPH Sustained	140 MPH for 3 Seconds

Compliance and Certification	
Radio	FCC 15.407 (UNII, ISM), Industry Canada RSS-210, ETSI CE Mark (w/TPC and DFS) coming soon
Safety	UL - Canada, USA, CE Mark (Pending), RoHS, WEEE
EMC	FCC Part 15, Industry Canada RSS-210, ETSI, EN 301 893, EN 301 489-17, EN 50385, RoHS

Antenna Types



24 dBi Panel

28 dBi GRID

29 dBi Parabolic

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