



Atlas 5010 Series™

5.8 GHz High Capacity Backhaul

45 Mbps Wireless Ethernet Bridge



EXT



INT

The Atlas 5010 Series™ is a 5.8 GHz point-to-point OFDM wireless Ethernet Bridge capable of sustained throughput of up to 45 Mbps with outstanding features such as dual-polarity antennas and adaptable rate modulation. This high-capacity backhaul solution offers long-range connectivity and exceptional performance at a great value for wireless Internet service providers (WISPs), Municipal and Enterprise connectivity, Utility SCADA systems, IP-based surveillance systems, or as a T1/E1 replacement for “last mile” connectivity applications.

Product Highlights

» PERFORMANCE & FLEXIBILITY

The Atlas Series is a point-to-point backhaul solution that delivers up to 45 Mbps for the license-exempt 5.8 GHz ISM band. The Atlas Series utilizes a high-performance OFDM radio with a contention-free point-to-point protocol and user-selectable data rates of 6, 12, 18, 24, 36, 48 and 54 Mbps. Outstanding features include FEC and ARQ with variable-size sliding window. Packet aggregation allows superior FTP performance over long transmission ranges.

» CHANNEL FLEXIBILITY

The Atlas 5010 has 6 non-overlapping user-changeable channels and. When combined with software-selectable dual-polarized antennas, exceptional frequency agility can be attained.

» INTERFERENCE MITIGATION

The Atlas Series offers several powerful interference mitigation tools such as site survey tool, adjustable channel center frequencies and dual-polarity antennas.

» COMPACT/RUGGED DESIGN

The Atlas Series radio is designed to withstand the harshest environments, encased in a heavy-duty aluminum housing. These fully weatherized outdoor units, with rugged conduit adapter, offer a small footprint and operate from -40° F to 140° F. The ATLAS5010-INT radio is integrated onto the backside of a 22-inch dual-polarity patch panel antenna, while the ATLAS5010-EXT is a stand-alone radio with a connection for an external 2- to 4-foot dual-polarity dish antennas. Both models are powered using Power-over-Ethernet (PoE) ensuring ease of installation and quick deployment.

» SECURITY AND AUTHENTICATION

The Atlas Series features MAC level address authentication, 128-bit proprietary encryption, over-the-air data scrambling and two-level password control via SSL for secure operation.

» MANAGEMENT FEATURES

The Atlas Series enables remote and local management via Telnet, SNMP and HTTP via browser. Powerful tools such as site survey, asymmetrical bandwidth control, and remote temperature and input voltage measurements allow operators total control/flexibility to monitor and manage their network. The radios also feature a built-in LED alignment tool and a universal mounting bracket to minimize deployment costs.

- Up to 45 Mbps
- 40-mile Range
- OFDM, ARQ

Ultimate Wireless Connectivity

COMPATIBILITY / RANGE CHART			
Model / Part Number	Model Type	Antenna	Range / Fade Margin*
ATLAS5010-INT	Radio with integrated antenna	Internal, 23 dBi	6 miles @ 45 Mbps / 10 dB
ATLAS5010-EXT	Radio with connection for external antenna	External, 34 dBi or other	20 miles @ 45 Mbps / 18 dB

* At 5.8 GHz with maximum RF modulation speed. Adaptive modulation enables longer range links up to 40 miles at lower speeds.

Specifications

RADIO PARAMETERS	
Frequency of Operation	5725-5845 MHz (ISM band)
Channels	6 non-overlapping, software selectable
Channel Spacing	20 MHz
RF Power Output	+21 dBm Max Setting (6 Mbps mode) +17 dBm Max Setting (54 Mbps mode)
Modulation Format	OFDM
Modulation Speeds	6, 12, 18, 24, 36, 48 and 54 Mbps; User selectable
Certification / Compliance	FCC Part 15.247, 15.407
Receiver Sensitivity (BER 10-6)	-92 dBm (6 Mbps mode) to -73 dBm (54 Mbps mode) typical
DATA AND OPERATIONAL PARAMETERS	
User Data throughput	5 Mbps (6 Mbps mode) to 45 Mbps (54 Mbps mode)
Upstream/Downstream Throughput	Dynamic, automatically adjusts to suit demand
Bandwidth Control	Asymmetrical MIR bandwidth control
Latency	< 5 ms
Interference Handling	Forward Error Correction (FEC) & Automatic Retransmit Request (ARQ)
Security	Proprietary MAC address authentication; over the air data scrambling; two level password control.
Encryption	128-bit STEP (Secure Trango Encryption Protocol)
Configuration & Management	Telnet, SNMP, HTTP; TFTP server daemon for firmware upgrades; Built-in Link Performance tests; Remote temperature and input voltage measurement
ANTENNA PARAMETERS	
Internal Antenna	Integrated 23 dBi 9° × 9° patch dual-polarized (HPOL/VPOL), Electrically selectable polarization
External Antenna (Optional)	28 to 34 dBi dual-polarized dish antennas, 2- to 4-ft. diameter
POWER PARAMETERS	
Power Method	Power-over-Ethernet (PoE Injector J-Box included)
Voltage Input	10.5 VDC - 24 VDC Max; Input voltage measurement via Telnet, SNMP, HTTP
Standard Power Supply	Universal 24VDC/750mA, 90-260VAC/50-60Hz
PoE Cat-5 Max Cable Length	100 meters on 24 AWG STP Cat-5 cable
Power Consumption	< 15 W
PHYSICAL AND ENVIRONMENTAL	
Ethernet Interface	RJ45, 10/100BaseT, IEEE 802.3 Ethernet compliant, auto-sense, auto-negotiate
External Antenna Connector	SMA reverse polarity (-EXT Models only)
Reset Button	Resets password and IP configuration
Radio Enclosure	All-weather, powder coated, heavy duty aluminum construction with conduit adapter
Temperature Range	-40° to 60° C (-40° to 140° F); Temperature measurement via Telnet, SNMP, HTTP
Radio Weight	7 lbs (ATLAS5010-INT with integrated Patch Panel Antenna) 3 lbs (ATLAS5010-EXT stand-alone radio)
Radio Dimensions	15" × 15" (ATLAS5010-INT with integrated Patch Panel Antenna) 7" × 7" (ATLAS5010-EXT stand-alone radio)

All specifications are typical and subject to change without notice.

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