

Atlas Series™

5250-5875 MHz

45 Mbps Wireless Ethernet Bridge



Introducing the first tri-band ready (5250 MHz – 5875 MHz), point-to-point OFDM Wireless Ethernet Bridge capable of sustained throughput of 45 Mbps with outstanding features including Dynamic Frequency Selection and Adaptable Rate Modulation. The Atlas Series provides exceptional performance and value as a high-capacity backhaul solution for Enterprise and Municipal connectivity, SCADA systems, IP surveillance systems, and “last mile” connectivity solutions (Internet, T1, leased-lines).

Product Highlights

- **PERFORMANCE & FLEXIBILITY**

The Atlas Series is a carrier-grade, point-to-point backhaul solution that delivers up to 45 Mbps for the license-exempt 5.8 GHz ISM band, the lower 5.3 GHz U-NII band, and the proposed upper 5.47 GHz U-NII 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 Dynamic Frequency Selection*, TPC*, FEC and ARQ with variable-size sliding window. Packet aggregation allows superior FTP performance over long transmission ranges.

- **CHANNEL FLEXIBILITY**

The Atlas Series is configured to support up to 23 channels across the U-NII and ISM bands. 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 FEC, ARQ, and automatic RF transmit power control (TPC).

- **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° to 140° F. The ATLAS5010-INT radio is integrated onto the backside of a dual-polarity patch panel antenna, while the ATLAS5010-EXT is a stand-alone connectorized radio supporting external 2-foot to 4-foot dual-polarity dish antennas. Both radios 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.

* DFS, TPC and 5.47-5.725 GHz channels available pending FCC approval

Atlas Series Specifications

COMPATIBILITY / RANGE CHART

Part Number	Model Type	Antenna	Range / Fade Margin*
ATLAS5010-INT	Radio w/ integrated antenna	Internal, 23 dBi	6 miles / 10 dB
ATLAS5010-EXT	Connectorized radio	External, 34 dBi, other	20 miles / 18 dB

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

RADIO PARAMETERS

Frequency of Operation	5250-5350 MHz and 5470-5725 MHz (U-NII Bands), and 5725-5875 MHz (ISM Band)
Channels	23 non-overlapping, user changeable
Channel Spacing	20 MHz
RF Power Output (ISM Band)	+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, 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 Encryption Protocol)
Configuration & Management	Telnet, SNMP, HTTP; TFTP server daemon for firmware upgrades; Built-in Link Performance tests; Remote temperature and input voltage measurement.
Protocol Support	802.1p (QoS) upgrade option

ANTENNA PARAMETERS

Internal Antenna	Integrated 23 dBi 9° X 9° patch dual-polarized (HPOL/VPOL), Electrically selectable polarization
External Antenna (Optional)	28 to 34 dBi dual-polarized dish antennas, 2-4 ft. diam.

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	300 feet 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" x 15" (ATLAS5010-INT with integrated Patch Panel Antenna) 7" x 7" (ATLAS5010-EXT stand-alone radio)

Specifications are typical and subject to change without notice.