



AirTegrity™ 3200 Series
Ethernet Router/Bridge Systems
900MHz, 2.4GHz, 5GHz and 4.9 GHz



Key Features:

- Speeds up to 80 Mbps
- OFDM to 64 QAM
- Complete Security
- QoS for Voice & Video
- Up to 30 Miles
- Scalable Architecture
- Full IP Services
- AES, IPSec
- 900 MHz, 2.4 GHz, 5 GHz Unlicensed Frequencies
- 4.9 GHz Licensed Public Safety

High Speed Intra Network Pipes

The AirTegrity 3200 Series™ of Ethernet combined Routers and/or Bridges are designed for network operators looking to deploy state-of-the-art systems that provide the highest level of security and performance, while supporting carrier class QoS requirements needed for VoIP and other latency critical network data.

Using its comprehensive set of IP services, the AT3200 Routing/Bridge Series supports Bandwidth Management, Traffic Shaping, IP Routing, VPN and Encryption Services in a single pair of units. Available in a rugged NEMA 4X outdoor housing, it uses industry standard PMC (PCI Mezzanine Card) slots for flexible configuration and upgrade options.

The AirTegrity AT3200 Router/Bridge Series provides outstanding RF performance and convenient mounting options. Units can use the optional integrated high gain internal antennas or may be connected to higher gain directional antennas for extended range. The AT3200 Router/Bridge Series is ideally suited for any point-to-point application including, backhauling service provider networks, hot spots, fiber extension, campus buildings and video surveillance systems.

These systems can be configured to operate as traditional Ethernet bridges or optionally as a true IP router that supports standard RIP and OSPF routing protocols. With its wide selection of encryption protocols, including DES, DES3, IPSec and AES, you can truly deploy a secure wireless link.

High Performance Dual Radio System Architecture

The AirTegrity AT3200 Router/Bridge Series utilize OFDM Modulation with standard 20MHz channels. When operating in Turbo Mode these 20MHz channels expand to 40MHz wide to offer expanded throughput. The AT3200 Router/Bridge AT3205 supports two radios to even further enhance throughput. Using two radios both operating in Turbo mode, allows bit-rate transfer speeds of up to 216 Mbps.



7.5 x 7.5 x 4
Single Radio
Enclosure



12 x 12 x 4
Dual Radio
Enclosure

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The AirTegrity AT3200 Series Ethernet Router/Bridge systems provide outstanding RF performance and dynamically adjust the system operations to ensure link quality and system needs. Any combination of radio interfaces can be selected and integrated antennas are supported for selected 2.4, 4.9 & 5GHz operations only.

Feature	Technical Specifications	Feature	Physical Specifications
Radio Architecture	Dual WiFi 802.11a/b/g/ radios for relay station, or backhaul with local hotspot. See Radio Configuration Matrix Below	Dimensions Mount IEC Standard Wind Load	W 7.5 x H 7.5 x D 4 inches Single Radio W 12 x H 12 x D 4 inches AZ/EL control—Pole Size 1¾-3" ø Water Tightness IEC 529 / IP67 Front Thrust 47 Kg - Side Thrust 6 Kg
Capability	LOS, non LOS, TDD (Time Division Duplex)	Temperature	-40° to +55° C
Modulation	Auto Select QPSK, 16 QAM, 64 QAM	Humidity	100% condensing, NEMA 4X
Encryption	DES, 3DES, AES	Regulatory	FCC Part 15 subpart C including 15.205/207 and 247, EN 300.328
MAC	Point to Point	Power / Data	PoE 19W / single 10/100 Base-T Ethernet port
PHY	OFDM	External Antenna Connector	(Up to 2) N-Type Female
Data Rates	Configurable or Dynamically Auto Select 6-108 Mbps	Internal Panel Antenna	Optional—15.5dBi (2.4), 18dBi & 21dBi (4.9) & 18dBi & 22dBi (5GHz)
Latency	2-6ms		

Single Radio & Channel Configuration Matrix

Frequency	900 MHz	2.4-2.484 GHz	4.950-4.990 GHz Public Safety Band	5.725-5.850GHz
Protocol	802.11g	802.11b/g	802.11a	802.11a
Channel Size	5, 10, 20MHz	22MHz	5, 10, 20 MHz	20 MHz
Maximum Transmit Power	+28 dBm	+28 dBm	+26 dBm	+28 dBm
Fade Margin Included	20 dB	20 dB	20 dB	20 dB
Rx Sensitivity Data Rate, Distance.	-93 dBm, 1Mbps -92 dBm, 2 Mbps -90 dBm, 6 Mbps -88 dBm, 11 Mbps -86 dBm, 18 Mbps -82 dBm, 24 Mbps -73 dBm, 48 Mbps -70 dBm, 54 Mbps	-97dBm, 1.0Mbps -94dBm, 6.0Mbps -91dBm, 12.0Mbps -90dBm, 18Mbps -86dBm, 24Mbps -83dBm, 36 Mbps -77dBm, 48 Mbps -74dBm, 54 Mbps	-93 dBm, 6 Mbps -92 dBm, 9 Mbps -91 dBm, 12 Mbps -90 dBm, 18 Mbps -85 dBm, 24 Mbps -82 dBm, 36 Mbps -76 dBm, 48 Mbps -73 dBm, 54 Mbps	-94dBm, 6Mbps,12Mbps -93dBm, 9Mbps,18Mbps -91dBm, 12 Mbps,24Mbps -90dBm, 18 Mbps,36Mbps -86dBm, 24 Mbps,48Mbps -83dBm, 36 Mbps,72Mbps -77dBm, 48 Mbps,96Mbps -74dBm, 54 Mbps,108Mbps
Integrated Antenna Options	External Antenna	2.400-2.475GHz, 15.5dBi, H-32, V-32 degree beam width flat panel available for AT3204 ONLY or External Antenna Options	4.900-5.350GHz, 18dBi, H-9, V-9 degree beam width flat pane for AT3204 Only 4.900-5.350GHz 21dBi, H-9,V-9 degree beam width flat panel for AT3205 Only	5.150-5.875GHz 18dBi, H-18, V-18 degree beam width flat panel for AT3204 Only 5.725-5.850GHz 22dBi, H-9,V-9 degree beam width flat panel for AT3205 Only
*Order optional external high-gain antennae separately				

3200 Series Ordering Options

- Radio configurations can be ordered with integrated antenna options when applicable or with an N-type female connector for use with a high-gain external antennas
- Includes basic mounting hardware, POE injector, and localized power cord
- Order additional mounting hardware and optional external antenna separately
- Contact an AirTegrity representative for details on optional configurations



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About AirTegrity Wireless, Inc.

AirTegrity™ Wireless is a market leader providing a secure wireless broadband platform that encompasses all networking and security requirements for the delivery of voice and data services in a single cohesive product. AirTegrity award winning wireless modules operate in both licensed and unlicensed frequencies. AirTegrity™ Networks dramatically reduce the cost of network deployment, ownership and management by integrating Multi-Channel Radio and Antenna technology with powerful routing, switching and security functions into each AirTegrity™ system. Common applications include:

- Residential or business customer aggregation
- Solar Power relay Gateways Systems
- Enterprise/Campus Inter-building Connectivity
- Wireless Backhaul/Circuit Replacement
- Public Hot Spots



Reduced Cost of Deployment

As an integral component of the AirTegrity family of secure wireless broadband access products, the AT3200 Series Ethernet Router/Bridge Systems introduce a new level of product capability by combining specific features and functionality from Wireless, Wire-line, LAN, VPN, VoIP, Security, and Management products into a single cohesive solution, negating the need for multiple devices and technologies to be configured into the network. This facilitates a dramatic shift in capital and operating expenditures, significantly reducing the cost of deployment.

Secure, Bandwidth-Managed Wireless Networks

Wireless links are managed and bandwidth usage is controlled over routed links using powerful, flexible traffic shaping and bandwidth management software. Security is assured with AirTegrity integrated IPsec based VPN functionality, which uses a hardware assisted encryption engine to support the strongest commercially available encryption techniques, including AES. VPN functionality is supported on all wireless and wire-line links and supports a total throughput of up to 40 Mbps. Subscriber access rates are configurable and allocated in 64 Kbps blocks, all with individual, powerful firewall support.

Voice Over IP

Toll quality voice is supported by AirTegrity's industry standard SIP implementation and STUN (Simple Traversal of UDP through Network Address Translation) server (RFC 3489), an implementation of the STUN protocol that enables SIP-based communication through Firewalls. The STUN protocol enables a SIP client to discover whether it is behind a NAT, to determine the type of NAT, and to cleanly traverse it while maintaining your Firewall protection.

Non-Line of Sight (NLOS) and Meshed Solutions

The entire AirTegrity product family was designed to support Non Line of Sight (NLOS) connectivity via RIP and OSPF technology, eliminating the need for each host to have direct line-of-sight access to the AT3600 Series Base Transceiver Station/Sector controllers. In addition, the AT4000 Base Station Series supports auto-configuration of all AirTegrity Sector Controller, Access Points, Multi Radio Gateway Systems, and Subscriber Stations, greatly simplifying system installation.