



AirTegrity™ 3204 Series  
Single Radio Ethernet  
Router/Bridge Systems  
900MHz, 2.4GHz, 5GHz and 4.9 GHz



### Key Features:

- Speeds up to 108 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, 5.8 GHz **U n l i c e n s e d** Frequencies
- 4.9 GHz Licensed Public Safety



### High Speed Intra Network Pipes

The AirTegrity AT3204 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 AT3204 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 an industry standard PMC (PCI Mezzanine Card) slot for flexible radio card configurations.

The AirTegrity AT3204 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 AT3204 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, to feed any small, medium or large network.

### High Performance Single Radio System Architecture

The AirTegrity AT3204 Router/Bridge Series utilize OFDM modulation with standard 20MHz channels. When operating in Turbo Mode these 20MHz channels expand to 40MHz wide to offer twice the throughput -Turbo mode, allows bit-rate transfer speeds of up to 108 Mbps.

The AirTegrity AT3204 Series Ethernet Router/Bridge systems provide outstanding RF performance and dynamically adjust the system operations to ensure link quality and system needs. Any radio interfaces card can be selected and integrated antennas are supported for the 2.4 & 5.8GHz frequencies only.

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Feature	Technical Specifications	Feature	Physical Specifications
<b>Radio Architecture</b>	WiFi 802.11a/b/g radios for backhaul See Radio Configuration Matrix Below	<b>Dimensions Mount IEC Standard Wind Load</b>	W 7.5 x H 7.5 x D 4 inches AZ/EL control—Pole Size 1¼-3" ø Water Tightness IEC 529 / IP67 Front Thrust 47 Kg - Side Thrust 6 Kg
<b>Capability</b>	LOS, non LOS, TDD (Time Division Duplex)	<b>Temperature</b>	-55° to +75° C
<b>Modulation</b>	Auto Select QPSK, 16 QAM, 64 QAM	<b>Humidity</b>	100% condensing, NEMA 4X
<b>Encryption</b>	DES, 3DES, AES	<b>Regulatory</b>	FCC Part 15 subpart C including 15.205/207 and 247, EN 300.328
<b>MAC</b>	Point to Point, Point to Multi-Point	<b>Power / Data</b>	PoE 19W / Single 10/100 Mbps Ethernet port
<b>PHY</b>	OFDM	<b>External Antenna Connector</b>	N Type Female or
<b>Data Rates</b>	Configurable or Dynamically Auto Select 6-108Mbps	<b>Internal Panel Antenna</b>	Optional—12dBi (2.4) & 17dBi (5.8)
<b>Latency</b>	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
<b>Protocol</b>	802.11g	802.11b/g	802.11a	802.11a
<b>Channel Size</b>	5, 10, 20MHz	22, 40MHz	5, 10, 20, 40MHz	20, 40MHz
<b>Maximum Transmit Power</b>	+28 dBm	+26 dBm	+26 dBm	+26 dBm
<b>Fade Margin Included</b>	20 dB	20 dB	20 dB	20 dB
<b>Rx Sensitivity, Data Rate, Turbo</b>	-93 dBm, 1Mbps, n/a -92 dBm, 2 Mbps, n/a -90 dBm, 6 Mbps, n/a -88 dBm, 11 Mbps, n/a -86 dBm, 18 Mbps, n/a -82 dBm, 24 Mbps, n/a -73 dBm, 48 Mbps, n/a -70 dBm, 54 Mbps, n/a	-97dBm, 1.0Mbps, 2Mbps -94dBm, 6.0Mbps, 12Mbps -91dBm, 12.0Mbps, 24Mbps -90dBm, 18Mbps, 36Mbps -86dBm, 24Mbps, 48Mbps -83dBm, 36 Mbps, 72Mbps -77dBm, 48 Mbps, 96Mbps -74dBm, 54 Mbps, 108Mbps	-93 dBm, 6 Mbps, 12Mbps -92 dBm, 9 Mbps, 18Mbps -91 dBm, 12 Mbps, 24Mbps -90 dBm, 18 Mbps, 36Mbps -85 dBm, 24 Mbps, 48Mbps -82 dBm, 36 Mbps, 72Mbps -76 dBm, 48 Mbps, 96Mbps -73 dBm, 54 Mbps, 108Mbps	-94dBm, 6Mbps -93dBm, 9Mbps -91dBm, 12 Mbps -90dBm, 18 Mbps -86dBm, 24 Mbps -83dBm, 36 Mbps -77dBm, 48 Mbps -74dBm, 54 Mbps
<b>Internal Antenna</b> *Order Omni-directional antennae for hotspot applications separately	External Antenna	2.4-2.484GHz, 12dBi, H-44, V-38 degree beam width flat panel or External Antenna N-Type Connector.	External Antenna	5.725-5.850GHz 17dBi, H-22, V-17 degree beam width flat panel or External Antenna N-Type Connector

### AT3204 Series Ordering Options

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

### 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™ Smart 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.

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