



AirTegrity™ 3106 Dual Radio Gateway WiFi & WiMAX Series
WiFi (900MHz, 2.4GHz, 5.8GHz & 4.9GHz) &
WiMAX (3.5GHz & 5.8GHz)

Key Features:

- WiMAX 3.5GHz and 5.8GHz
- Outdoor Enclosure
- Scalable Solutions
- Routing Support
- Local AP or SU Configuration
- Complete Security
- AES, IPSec
- QoS for Voice & Video
- VPN and VLAN Support
- Full IP Services
- LOS, NLOS Operation
- Unlicensed & Licensed Frequencies 900 MHz, 2.4 GHz , 5GHz & 4.9GHz Public Safety

WiMAX Backhaul, Relay and WiFi Hotspot Solutions—Dual Radio Architecture

The AT3106 features a combination of one 802.11a/b/g WiFi radio & one 802.16-2004 WiMAX radio embedded in a single housing. Functioning with the AT4005 Series Base Station controllers and the AT3605 WiMAX Access Points, the AT3106's are a versatile part of an AirTegrity Smart Network. The AT3106's can utilize the power of WiMAX and function as a relay subscriber stations at mid-points in a point-to-multipoint network. Alternatively they can also be configured as a WiMAX backhaul to a local WiFi hotspot.

Backhaul to Local Hotspot

The AT3106 can function as a WiMAX backhaul link to a local hotspot. In this configuration the embedded WiMAX radio and the internal antenna function in a point-to-point mode, backhauling bandwidth from the base station. The second embedded WiFi radio can be configured as an 802.11a/b/g WiFi access point connected by a N-Type Female connector to an Omnidirectional antenna for WiFi distribution. This dual radio architecture allows operators the convenience of preconfigured WiMAX backhaul and hotspot functionality in one module.

Relay Subscriber/Station

The AT3106 can also function as a relay gateway using the standard internal antenna (optional external antenna) and one embedded radio configured for backhaul from a base station. The gateway system can distribute bandwidth to local subscribers via a 10/100 Base T Ethernet Port. The second embedded radio is configured as a point-to-multipoint or point-to-point link to other devices on the edge of the network using an external antenna. The AT3106 is equipped with N-Type Female connector (s) for connections to the external antenna (s). This radio architecture enables operators to route around line of site obstructions and conserve bandwidth utilizing even distribution across a network.

Reduced Cost of Deployment

As an integral component of the AirTegrity family of secure wireless broadband access products, the AT3106 WMAX Dual radio Gateway introduce a new paradigm in 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. In addition, the AT4005 series supports auto configuration of AirTegrity™ Sector Controllers, Relay Gateways and Subscriber Stations/CPE devices, greatly simplifying system installation and initial configurations



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Feature	Technical Specifications	Feature	Physical Specifications
Radio Architecture	Dual WiFi/WiMAX 802.11x radios for relay station, mesh network, or backhaul with local hotspot See Radio Configuration Matrix Below	Dimensions Mount IEC Standard Wind Load	W 12 x H 12 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
Capability	LOS, non LOS, TDD (Time Division Duplex)	Temperature	-40° to +55° C,
Modulation	Auto Select BPSK, 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, Point to Multi-Point	Power / Data	PoE 19W / (1 or 2) 10/100 Base-T Ethernet Ports
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—18dBi (3.5), 21dBi (4.9) & 22dBi (5GHz)
Latency	2-6ms	GPS	Optional

3106 WiFi Series Radio 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, 1Mbps -94dBm, 6Mbps -91dBm, 12Mbps -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	External Antenna	4.900-5.350GHz 21dBi, H-9,V-9 degree beam width flat panel or External Antenna N-Type Connector	5.725-5.850GHz 22dBi, H-9,V-9 degree beam width flat panel or External Antenna N-Type Connector
*Order External antennas separately				

3106 WiMAX Radio Matrix

Frequency	3.4-3.6 GHz WiMAX	5.725-5.850GHz WiMAX
Protocol	802.16-2004	802.16-2004
Channel Size	3..5MHz & 7MHz	1.75, 3..5,.7 and 10MHz
Maximum Transmit Power	+20 dBm	+17 dBm
Fade Margin Included	20 dB	20 dB
Rx Sensitivity Data Rate, Distance.	-90 dBm, 6 Mbps -89 dBm, 9 Mbps -87 dBm, 12 Mbps -85 dBm, 18 Mbps -83 dBm, 24 Mbps -80 dBm, 36 Mbps -77 dBm, 48 Mbps -73 dBm, 54 Mbps	-89 dBm, 6Mbp -88 dBm, 9Mbps -81dBm, 12 Mbps -80 dBm, 18 Mbps -79 dBm, 24 Mbps -78 dBm, 36 Mbps -65 dBm, 48 Mbps -64dBm, 54 Mbps
Integrated Antenna Options	3.400-3.600GHz 18dBi, H-15,V-15 degree beam width flat panel or External Antenna N-Type Connector	5.725-5.850GHz 22dBi, H-9,V-9 degree beam width flat panel or External Antenna N-Type Connector
*Order External antennas separately		

3106 WiFi & WiMAX Series Ordering Options

- All radio configurations can be ordered with internal antenna when applicable or with an N-type female connector for use with a high-gain external antenna
- Includes basic mounting hardware, POE injector, and localized power cord
- Order additional mounting hardware, external antennas and GPS modules 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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