



AirTegrity™ 1500 Series
SMB/SOHO Single-Radio Subscriber Stations
900MHz, 2.4GHz, 5GHz & 4.9GHz

Key Features:

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

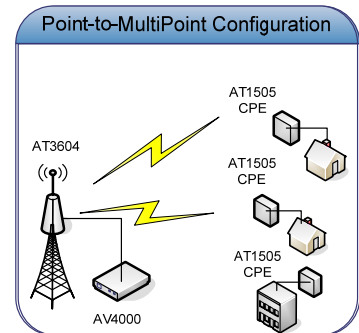
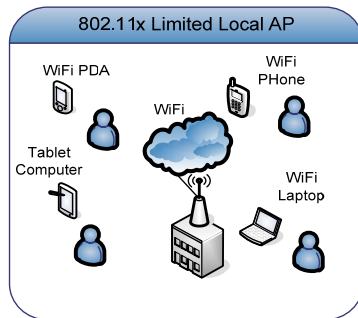
1500 Series SMB/SOHO Single-Radio Subscriber Station Solutions

The AirTegrity™ AT1500 Series Single-Radio Subscriber Station or Customer Premises Equipment (CPE) provides high-powered 802.11a/b/g & 802.16-2004 solutions to end users seeking higher throughput and/or longer distance solutions.

As part of the AirTegrity family of solutions, the AT1500 Series Single-Radio Subscriber Station provides a cost effective means of providing data, VoIP, and streaming video services in areas where traditional wire-line doesn't exist and RF interference is not an issue. They supports firewall, VLAN, VPN, SNMP and the most secure encryption techniques available including AES, DES and 3DES enabling them to function in both enterprise and residential settings.

The AT1500 Series Single-Radio Subscriber Station provides outstanding RF performance and convenient mounting options. The CPE can be ordered in two different configurations:

- 1) Integrated Antenna's 2.4GHz (15.5dBi), 4.9GHz (18dBi), 5Ghz (18dBi) panel antenna.
- 2) External Antenna's 900MHz, 2.4GHz, 3.5GHz, 4.9GHz, 5GHz



7 x 2 x 8
Indoor
Enclosure



7.5 x 7.5 x 4
Outdoor
Enclosure

Each configuration is housed in a rugged NEMA 4X enclosure to withstand some of the harshest weather. The CPE connects to a customer's data equipment via 10/100 base T Ethernet interface. Data signals are transmitted from the CPE to the customer's equipment using low-cost outdoor CAT5 cable and RJ45 connectors. Power is supplied via a Power-over-Ethernet (PoE) injector using the CAT5 cable.





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Residential and Commercial Service

Functioning with one of the AT3600 BTS Base Transceiver Station series radios or in conjunction with the AT4000 Series Base Station Controller, the AT1500 Series Subscriber Station/Customer Premise Equipment provides an easily deployable, rugged solution that can overcome NLOS (non-line of site) issues. The AT1500 Series supports firewall and the most secure encryption techniques available, including AES, VPN and VLAN enabling them to function securely in both enterprise and residential settings. AirTegrity WiFi systems are capable of delivering up to 11 Mbps in 802.11b mode and 54 Mbps in 802.11a,g modes.

Voice and Data Applications

Utilizing intelligent traffic shaping techniques and supporting the SIP proxy standard, AirTegrity solutions provide flawless transmission of voice and streaming video.

Feature	Technical Specifications	Feature	Physical Specifications
Capability	LOS, non LOS, TDD (Time Division Duplex)	Dimensions	W 7.x H 2 x D 8 inches Indoor Enclosure W 7.5 .x H 7.5 x D 4 inches Outdoor Enclosure
Modulation	Auto Select QPSK, 16 QAM, 64 QAM	Temperature	-40° to +55° C, Outdoor Enclosure & Indoor Enclosure
Encryption	DES, 3DES, AES	Humidity	100% condensing, NEMA 4X
MAC	Point to Multi-Point , Ad Hoc	Regulatory	FCC Part 15 subpart C including 15.205/207 and 247, EN 300.328
PHY	OFDM	Power / Data	PoE 19W, 10/ 100 Base-T Ethernet Ports
Data Rates	Configurable or Dynamically Auto Select 6-54 Mbps	External Antenna Connector	N Type Female
Latency	2-6ms		

1500 Series SMB/SOHO Radio Configuration Matrix

Frequency	900 MHz	2.4-2.484 GHz	4.950-4.990 GHz Public Safety Band	5.725-5.850GHz	5.725-5.850GHz
Protocol	802.11g	802.11b/g	802.11a	802.11a	802.16-2004
Channel Size	5, 10, 20MHz	22MHz	5, 10, 20MHz	20, 40MHz	1.75, 3.5 or 10Mhz–5.8Ghz 802.16 Radio
Maximum Transmit Power	+28 dBm	+28 dBm	+26 dBm	+28 dBm	+17dBm
Fade Margin Included	20 dB	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, 6Mbps -94dBm, 9Mbps -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	--89dBm BPSK -80dBm QPSK -79dBm, 16 QAM -65,dBm 64 QAM
Integrated Antenna Options	External Antenna ONLY	2.400-2.475GHz, 15.5dBi, H-32, V-32 degree beam width flat panel or External Antenna N-Type Connector.	4.900-5.350GHz, 18dBi, H-9, V-9 degree beam width flat panel or External Antenna N-Type Connector.	5.150-5.875GHz 18dBi, H-18, V-18 degree beam width flat panel or External Antenna N-Type Connector	External Antenna
*Order optional external high-gain antennae separately					

1500 Series Ordering Options

- Radio configurations can be ordered with internal antennas (when applicable) or with an N-type female connector for use with high-gain external antenna
- 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™ 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. 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 AT1500 Series SMB/SOHO Single Radio Subscriber Station introduces 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 Sub- scribe Stations, greatly simplifying system installation.