



AirTegrity™ 3600 Series
Base Transceiver Stations/Access Points
900MHz, 2.4GHz, 5GHz and 4.9 GHz



Key Features:

- Speeds up to 54 Mbps
- OFDM BPSK to 64QAM
- Complete Security
- QoS for Voice & Video
- Modular Design
- Scalable Architecture
- Full IP Services
- AES, IPSec
- VPN & VLAN
- Optional GPS for Network Timestamp



7 x 2 x 8
Indoor
Enclosure



12 x 12 x 4
Outdoor
Enclosure

Elements of the Complete WiFi Solution

The AirTegrity™ 3600 Series Sector Controller/AP products are designed for applications that specifically meet the current and evolving requirements of Telco's, Service Providers and Enterprise for delivery of secure voice, data and video services.

High Performance System Architecture

The AirTegrity 3600 Series Sector Controller/Access Points can be deployed by themselves, providing a powerful AP solution to fulfill all standard PMP or PtP applications, or they can be deployed in conjunction with the 4000 Series Base Station controllers to implement a full Carrier-Class integrated WiFi/WiMAX solution.

Auto Modulation Negotiation

The AirTegrity™ 3600 series Sector Controller/Access Points provide outstanding RF performance and dynamically adjust the modulation scheme for each subscriber to ensure the highest bandwidth and performance possible.

Dynamic Routing (RIP, OSPF) - AirTegrity offers two widely accepted and versatile dynamic routing protocols to adapt to smaller, less demanding networks, as well as city wide metropolitan MESH networks.

RIP is a mature, stable, widely supported, and easy to configure routing protocol. Its simplicity is well suited for use in small autonomous systems that do not have enough redundant paths to warrant the extra system overhead and user administration of a more sophisticated protocol.

OSPF (Open Shortest Path First) protocol is a hierarchical IGP, using a link-state in the individual areas that make up the hierarchy. The state of the link is a description of that interface and of its relationship to its neighboring routers. For example, the IP address of the interface, the mask, the type of network it is connected to, the routers connected to that network and so on. The collection of all these link-states would form a link-state database for better load balancing and different methods of password authentication. Also, updates are only sent when routing changes occur instead of periodically. This ensures a better use of bandwidth. This of course would lead to more complexity in configuring and troubleshooting OSPF networks. Also, this will introduce more overhead in memory allocation and CPU utilization. Ethernet port.





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3600 Series Technical Specifications

Feature	Technical Specifications	Feature	Physical Specifications
Capability	LOS, non LOS, TDD (Time Division Duplex)	Dimensions Mount IEC Standard Wind Load	W 7.x H 2 x D 8 inches Indoor Enclosure W 12 x H 12 x D 4 inches Outdoor Enclosure AZ/EL control—Pole Size 1¾-3" ø Water Tightness IEC 529 / IP67 Front Thrust 47 Kg - Side Thrust 6 Kg
Modulation	Auto Select QPSK, 16 QAM, 64 QAM	Temperature	-40° to +55° C,
Encryption	DES, 3DES, AES	Humidity	100% condensing, NEMA 4X
MAC	Point to Point, 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 / Single 10/100 Base-T Ethernet ports
Data Rates	Configurable or Dynamically Auto Select 6-108Mbps	External Antenna Connector	N-Type Female
Latency	2-6ms	GPS	Optional

3600 Radio Configuration Matrix Options

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				

Access Point Performance

The total number of subscribers supported from a base station depends on the customer mix and distance from the base station. Distance and throughput can be altered with external antennas. A typical model using 20-22MHz channelization is shown in the following table. The table below show the expected loading for a single channel.

Range	Less than 4 Miles	4-6 Miles	Greater than 6 Mile
Adaptive Modulation	64 QAM	16 QAM	BPSK to 16 QAM
Raw Throughput	50 Mbps	25 Mbps	8 Mbps
Business Users (5x Over subscription) @ 1.5Mbps	65	40	15 - 20
Residential Users (12.5x Over subscription) @ 512kbps	625	300	100 - 200



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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 AT3600 Series Sector Controller/ Access Points 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.