



AT-WA7500

Dual Radio Wireless Access Point

Next Generation Wireless Access Point

The next-generation dual radio access point AT-WA7500 accommodates radios operating within the 2.4GHz and 5GHz frequency bands. Configured for either single or dual radios, the AT-WA7500 is fully compliant with IEEE 802.11a, 802.11b, and 802.11g standards and is easily upgradeable for future radio environments and needs.

Advanced Security

The AT-WA7500 is equipped with advanced encryption and authentication capabilities such as WPA, WEP 128 with auto key rotation, IEEE 802.1x, EAP/TLS and EAP/TTLS authentication, and an embedded RADIUS server. In addition to securing the wireless local area network, these features enable faster roaming and enhanced mobility, while the secure high-speed exchange enforces network security as it maintains a seamless connection.

Enterprise-class Features

The enterprise-class access point AT-WA7500 provides the features necessary to support mission-critical applications. Allied Telesis' industry leading IP tunneling enables mobile workers to roam from access point to access point—or even onto older switches that do not support backward learning—without breaking network connections, eliminating the need for dedicated servers, manual IP address entry, or mobile IP software on the clients. In addition, IP addresses are easier and less expensive to administer with Dynamic Host Configuration Protocol (DHCP)

server functionality, and Network Access Translation (NAT) support enables the AT-WA7500 to assign and manage static IP addresses. Last, but not least, AT-WA7500 comes with Avalanche Enabler, a remote management software that discovers, configures, and manages the wireless clients remotely.

High Performance & Flexibility

In order to ensure fewer dropped packets, less network congestion, and better overall performance, the AT-WA7500 uses packet filtering. And the AT-WA7500 PoE capable solution eliminates the need and expense of installing separate cables and outlets.

Additional Information

There is no antenna requirement for the AT-WA7500 model that has an IEEE 802.11a radio installed in slot number one. All IEEE 802.11a radios for this model are manufactured with a bonded and integrated antenna connected directly to the IEEE 802.11a radio.

However, all AT-WA7500 Access Point product model configurations require customers to order separately at least one basic antenna for each IEEE 802.11b radio configured within the AT-WA7500 product. The AT-WA7500 products will not functional according to IEEE 802.11b radio specifications without the antenna.

Key Features

- Dual-Radio wireless access point operates with a selection of IEEE 802.11b/g, IEEE 802.11g and IEEE 802.11a radios
- Security support via WPA-PSK, IEEE 802.1x, EAP-TLS and WEP
- Secure, fast roaming based on patented wireless Spanning Tree technology
- Supports up to 54Mbps data rate
- Power-over-Ethernet capable
- High-performance 10/100Mbps Ethernet support
- Use of Access Control Lists (ACL) to control access to the network through a list of valid MAC addresses
- Wi-Fi and WPA certified for IEEE802.11a and IEEE802.11g radios
- IEEE802.11i hardware-supported AES accelerator for IEEE802.11b/g radio
- Multiple SSID and Virtual LANs (VLANs) per radio on selected radios
- Remote-management of wireless devices via Avalanche Enabler

Ordering Information

AT-WA7500xx/aa
802.11a/b/g Dual Radio Wireless Access Point

Where xx = A Single 802.11a radio
 = B Single 802.11b radio
 = G Single 802.11g radio
 = AA Dual radios (two 802.11a radios)
 = AB Dual radios (one 802.11a & one 802.11b radio)
 = BB Dual radios (two 802.11b radios)
 = AG Dual radios (one 802.11a & one 802.11g radio)
 = GG Dual radios (two 802.11g radios)

Where aa = NA North America
 = EU Europe
 = MSF Mexico, Singapore and F

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Wireless Radio Characteristics

IEEE 802.11a Wireless Radio

Frequency Band: 5.15 – 5.35GHz frequency band
Radio Type: IEEE 802.11a OFDM
Radio Power Output: 12.4dBm @ 6-36Mbps, 9.2dBm @ 48Mbps, 7dBm @ 54Mbps.
Radio Data Rate: 54Mbps, 48Mbps, 36Mbps, 24Mbps, 18Mbps, 12Mbps, 9Mbps, 6Mbps —with automatic fallback for increased range
Channels: United States (FCC) 8 channels, Other countries per local regulations
Receiver Sensitivity: -65dBm @ 54Mbps, -70dBm @ 36Mbps, -82dBm @ 24Mbps
Range: approximately 10m @ 54Mbps, approximately 30m @ 36Mbps, Extended Range with roaming
Compatibility: Designed to comply with IEEE 802.11a wireless LAN standard for 5GHz radio implementations
Bit Error Rate: Better than 10-5

IEEE 802.11b Wireless Radio

Frequency Band: 2.4GHz, actual frequencies vary by country
Radio Type: IEEE 802.11b High Rate (11Mbps)
Modulation: Direct Sequence Spread Spectrum (CCK, DQPSK, DBPSK)
Radio Power Output: 15 dBm
Radio Data Rate: 11Mbps High /5.5Mbps Medium/2Mbps Standard /1Mbps Low Automatic Fallback for increased range
Channels: United States (FCC) 11 Channels, Europe (ETSI) 13 Channels, Other countries per local regulations
Bit Error Rate: Better than 10-5

IEEE 802.11b/g Wireless Radio

Frequency Band: 2.4GHz, actual frequencies vary by country
Radio Type: IEEE 802.11b (11Mbps) and IEEE802.11g (54Mbps)
Modulation: 802.11g: Orthogonal Frequency Division Multiplexing (OFDM)
PSK @ 6 and 9 Mbps
QPSK @ 12 and 18 Mbps
16-QAM @ 24 and 36 Mbps
64-QAM @ 48 and 54 Mbps
802.11b & 802.11g: Direct sequence spread spectrum (DSSS)
DBPSK @ 1 Mbps
DQPSK @ 2 Mbps
CCK @ 5.5 and 11 Mbps

Radio Power Output: 12.5~18 dBm depending on frequencies
Radio Data Rate: 54, 48, 36, 24, 18, 12, 9, and 6Mbps OFDM, 11 and 5.5Mbps CCK and legacy 2 and 1Mbps data rates.

Channels: United States (FCC) 11 Channels, Europe (ETSI) 13 Channels, Other countries per local regulations

Range	1Mbps	2Mbps
Open Environment:	1750ft (533m)	1300ft(396m)
Semi-Open	375ft (114m)	300ft(91m)

Closed Environment:	165ft(50m)	130ft(40m)
Receiver Sensitivity	-95.5 dBm	-92 dBm

Range	5.5Mbps	11Mbps
Open Environment	885ft (270m)	525ft (160m)
Semi-Open Environment	230ft (70m)	165ft (50m)
Closed Environment	115ft (35m)	80ft (24m)
Receiver Sensitivity	-87 dBm	-82 dBm

Security

WPA-802.1x and WPA-PSK
IEEE 802.1x
IEEE 802.11 Wired Equivalent Privacy (WEP) both WEP64 and WEP128 supported

Network Information

Ethernet Data Rate: 10/100Mbps
Filtering Rate: Full Ethernet Rate
Protocol Filters: IP, IPX, NetBEUI, DECNET, AppleTalk Other Broadcast
Traffic Filters: IP ARP, Novell RIP, SAP and LSP, Adjustable bandwidth allocation
Software Upgrades: Downloadable using Web Browser or TFTP over the network or serial port

Management

Management Interfaces: SNMP Secure Web browser-based manager, serial port or Telnet via RF, and Ethernet
SNMP Agent: SNMPv1 supported
SNMPv3*
SNMP Traps: Cold start, Authentication Failure
SNMP MIBs: RFC 1213 (MIB-II), RFC 1643 (802 Dot3), SNMP v1 versions of the IEEE 802.11 MIB and a MIB for IEEE 802.x and proprietary security related events.

* Available at a later date. Contact your sales representative for more information

Technical Specifications

Power Characteristics

Input voltage: Power over Ethernet
Voltage Range: 36 to 57VDC
Current: 350 mA @ 48 volts
Detection Methods: IEEE 802.3af standard PowerDsine's capacitance

Environmental Specifications

Operating Temp. Standard Unit: -20°C to +55°C with IEEE 802.11b radio (other radios options vary)

Storage Temp. -30°C to +75°C
10% to 90% Relative Humidity, non-condensing

Physical Characteristics

Dimensions: 38mm (H) x 250mm (L) x 159mm (D) (1.49" x 9.84" x 6.27")
Weight: 0.625kg (1.38lbs)

Standards Compliance

Regulatory Approvals:

EN 550022/CISPR 22 Class A; FCC Part 15 & ICES-003 Class A; C-Tick Marked (AS 3548); CE Market, Compliant with RTT&E, EMC, LVD Directives; (See separate radio approvals);

UL Listed, UL 1950 & IEC 60529-IP53; CSA Certified, C22.2 #950 & C22.3 #94-ENC 3.5; TUV Licensed, EN 60950 & EN 60529-IP53; NYCE Certified, NOM 19.

Radio Approvals:

IEEE 802.11a:
FCC Part 15.407 Certified; Canada RSS 210 Certified; SCT NOMEM121 Certified; Compliant with Australian RF Regulations; EN 301 893;
EN 301 489 transmitter EMC; CE Mark emissions/immunity; TUV/GS License; EN 60950 CB.

IEEE 802.11b:
FCC Part 15.247 Certified; Canada RSS 210 Certified; ETSI 300 328 Type Approved; SCT NOM-EM121 Certified; Compliant with Australian RF Regulations.

IEEE 802.11g:
US: FCC 15.247
Canada IC
Europe CE Mark
Others upon requested

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