

AT-AP500

Cloud-enabled, Enterprise-grade Wireless Access Point

The Allied Telesis AT-AP500 cloud-enabled, Enterprise-grade dual radio wireless access point features the latest IEEE 802.11ac wave2 standard, capable of up to 2.65Gbps of raw wireless capacity.



Overview

AT-AP500 Enterprise-grade wireless access points support the latest IEEE 802.11ac standard, including simultaneous transmission to multiple clients (MU-MIMO), maximizing wireless capacity and providing the best connectivity for Wi-Fi devices in high-density environments.

Cloud-based management simplifies deployments across large campuses and branch offices, minimizing the total cost of ownership of the wireless network.



Key Features

Cloud-based management

- ▶ For large-scale campus-wide deployments and distributed branch offices deployments, the Enterprise-class cloud management enables centralized control, operation and administration for thousands of Access Points (APs).

IEEE 802.11ac technology

- ▶ With the IEEE 802.11ac wave 2 radio, the AT-AP500 supports up to 2.2Gbps of raw wireless capacity in the 5GHz band.
- ▶ Both radios are capable of performing spectrum analysis while simultaneously providing client access (future software release).
- ▶ 802.11ac wave 2 MU-MIMO means that the AT-AP500 can simultaneously send traffic to up to four client devices.

Multiple-SSIDs and SSID-to-VLAN mapping

- ▶ SSID enables wireless connectivity for client devices that are assigned different security policies. Mapping SSIDs to VLANs creates logical network separation, which differentiates between communication by application, functions or user communities.

Dynamic VLANs

- ▶ Dynamic VLANs allow VLANs to be dynamically assigned on a per-user (wireless client) basis. The Dynamic VLAN feature interacts with an external RADIUS server, so that user information is centralized in RADIUS for ease of management. It is not necessary to configure user information on APs.
- ▶ The AT-AP500 also supports RADIUS server redundancy, via configuration of a secondary RADIUS server.

PoE - IEEE 802.3at conformance

- ▶ The AT-AP500 conforms to the IEEE 802.3at standard. This enables simplified deployment, lower installation costs and centralized power management capabilities for critical network devices.

Mounting options

- ▶ The AT-AP500 includes a kit for easy mounting on both walls and ceilings.

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Specifications

Operational Mode

Centrally controlled and managed via the AlliedView Cloud portal

Management

AlliedView Cloud

Bridging

VLAN tagging (up to 4094 VLANs)

Security

Authentication, authorization and accounting:

- ▶ 128-bit hardware-accelerated AES encryption/decryption
- ▶ WPA/TKIP, WPA2/CCMP
- ▶ Extensible Authentication Protocol (EAP)
- ▶ Protected Extensible Authentication Protocol (PEAP)
- ▶ MAC ACL
- ▶ IEEE 802.1X RADIUS support
- ▶ IEEE 802.1X authentication
- ▶ IEEE 802.1X port-based authentication
- ▶ IEEE 802.1X dynamic VLAN assignment
- ▶ MAC authentication with external RADIUS
- ▶ Rogue AP detection

Wireless

IEEE 802.11b/g/n 3x3:3ss SU-MIMO

IEEE 802.11a//n/ac 4x4:4ss MU-MIMO

(2x2ss, 4x1ss, or 1x2ss + 2x1ss)

IEEE 802.11d

IEEE 802.11e (WMM)

IEEE 802.11h (DFS/TPC)

IEEE 802.11i (enhanced security)

▶ WPA/WPA2-Personal

▶ WPA/WPA2-Enterprise

Extensible Authentication Protocol (EAP):

- ▶ 3rd Generation Authentication and Key Agreement (EAP-AKA)
- ▶ Flexible Authentication via Secure Tunneling (EAP-FAST)
- ▶ GSM Subscriber Identity (EAP-SIM)
- ▶ Transport Layer Security (EAP-TLS)
- ▶ Tunneled Transport Layer Security (EAP-TTLS/MSCHAPv2)
- ▶ Protected Extensible Authentication Protocol (PEAP)
- ▶ Generic Token Card (PEAPv0/EAP-MSCHAPv2)
- ▶ Microsoft CHAP v2 (PEAPv1/EAP-GTC)

Regulatory domain compliance

Operating mode:

- ▶ Access point (up to 200 clients)

Enhanced auto channel selection, with periodical refresh

SSID hiding/ignoring

Multiple SSID (up to 16 per port)

VLAN to SSID mapping

Extended Service Set (ESS)

Extended range with 4x4 Tx beamforming

Spectrum analysis

Radio/VAP scheduler

User scan list

Advanced wireless interface tuning:

- ▶ Beacon period
- ▶ Client isolation
- ▶ Client max association
- ▶ IEEE 802.11b fall-back control
- ▶ IEEE 802.11n guard Interval
- ▶ Short radio preamble
- ▶ Short slot time

Advanced wireless service via Cloud management:

- ▶ Captive portal
- ▶ Dynamic channel planning
- ▶ Dynamic RF coverage optimization
- ▶ Plug and Play support (authentication and configuration)
- ▶ Standalone fallback
- ▶ Wireless IDS

Media access protocol

- ▶ CSMA/CA with ACK architecture 32-bit MAC

Compliance

Certificates

CE

EAC

FCC

IC

KC

RCM

TUV-T

Wi-Fi Certified

Electromagnetic Compatibility

EN 301 489-1

EN 301 489-17

EN 55022, Class B

EN 55024

EN 61000-3-2, Class A

EN 61000-3-3

EN 61000-4-2

EN 61000-4-3

EN 61000-4-4

EN 61000-4-5

EN 61000-4-6

EN 61000-4-11

AS/NZS CISPR 22, Class B

FCC 47 CFR Part 15, Subpart B

ICES-003

Medical (EMC)

EN 60601-1-2

CISPR 11

Radio Equipment

EN 300 328

EN 301 893

AS/NZS 4268

FCC 47 CFR Part 15, Subpart C

FCC 47 CFR Part 15, Subpart E

FCC part 2

RSS-210

RSS-Gen

RSS-102

Safety

UL 60950-1: 2003, First Edition

CSA c22.2 No.60950-1 1st Ed. April 1, 2003

EN 60950-1

IEC 60950-1

Technical Specifications

Power Characteristics

PoE

- ▶ Input voltage: IEEE 802.3at

- ▶ Maximum consumption: 16W

- ▶ Average consumption: 11.8W

AC/DC power adapter

- ▶ Rated input voltage: AC 100–240 V

- ▶ Input voltage range: AC 90–264 V

- ▶ Rated frequency: 50/60 Hz

- ▶ Maximum consumption: 17W

- ▶ Average consumption: 13.8W

Environmental Specifications

Operating temperature: 0° to 45°C (32° to 113°F)

Operating humidity: ≤80% relative (non-condensing)

Storage temperature: -20° to 60°C (-4° to 140°F)

Storage humidity: ≤95% relative (non-condensing)

Physical Specifications

Dimensions (W x D x H): 170 mm x 170 mm x 35 mm
(6.70 in x 6.70 in x 1.38 in)

Weight: 476g (1.05 lbs)

Enclosure: Metal base, plastic cover

Interfaces

Wired

Ethernet

Standard: IEEE 802.3 (10T)
IEEE 802.3u (100TX)
IEEE 802.3ab (1000T)
Ports: 1
Connector: RJ-45 female

Console

Standard: RS232
Ports: 1
Connector: RJ-45 female

Wireless

WLAN radio

5 GHz: IEEE 802.11a/n

IEEE 802.11ac Wave 2

2.4 GHz: IEEE 802.11b/g/n

Embedded Antennas

Omni-directional

Frequency band: 2.4 GHz
Max. peak gain: 3 dBi

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Omni-directional

Frequency band: 5 GHz
Max. peak gain: 4 dBi

Radio Characteristics

Standard

- ▶ IEEE 802.11 a/b/g/n/ac

Supported frequencies (country-specific restrictions apply)

- ▶ 2.400 ~ 2.4835 GHz (ISM)
- ▶ 5.150 ~ 5.250 GHz (U-NII-1)
- ▶ 5.250 ~ 5.350 GHz (U-NII-2A)
- ▶ 5.470 ~ 5.725 GHz (U-NII-2C)
- ▶ 5.725 ~ 5.850 GHz (U-NII-3)

Modulation Technique

- ▶ 802.11a/g/n/ac: OFDM
- ▶ 802.11b: DSSS, CCK, DQPSK, DBPSK
- ▶ 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
- ▶ 802.11a/g/n: BPSK, QPSK, 16QAM, 64QAM

Media access

- ▶ CSMA/CA + Ack with RTS/CTS

Diversity

- ▶ Spatial diversity

Channel width

- ▶ 802.11a/b/g: 20MHz
- ▶ 802.11n: 20/40MHz
- ▶ 802.11ac: 20/40/80/80+80/160MHz

Data Rate

- ▶ 802.11a/g: 54/48/36/24/18/12/9/6Mbps
- ▶ 802.11b: 11/5.5/2/1Mbps
- ▶ 802.11n: 6.5 – 450Mbps (MCS 0 - 23)
- ▶ 802.11ac: 6.5 – 2200Mbps (MCS 0 - 9, NSS 1 - 4)

¹ Output power is the maximum signal level delivered by the radio.
The signal level is automatically limited in accordance to the selected regulatory domain.

Ordering Information

AT-AP500-xx

Cloud-managed, Enterprise-grade Wireless Access Point with IEEE 802.11ac 4ss MU-MIMO dual-band concurrent radios with embedded antenna. Limited lifetime warranty.

Where xx =

- [none] Regulatory Domain: Worldwide (except United States and Canada)
01 Regulatory Domain: United States and Canada Reserved

Related Product

AT-FL-AP-AVC1

AlliedView Cloud subscription license for one AP, 1-year

AT-FL-AP-AVC3

AlliedView Cloud subscription license for one AP, 3-year

AT-FL-AP-AVC5

AlliedView Cloud subscription license for one AP, 5-year

AT-TQ0091

AC/DC power adapter



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