Alcatel-Lucent OmniAccess AP175 Access Points

DUAL RADIO MIMO OUTDOOR ACCESS POINT

Alcatel-Lucent OmniAccess™ AP175 are outdoor access points that deliver high performance, versatility and management controls to meet the needs of today's enterprise wireless networks. Three product models are fully hardened and outdoor rated for durability and offer dual-radio, multi-band support (concurrent 802.11a/n plus b/g/n) for faster data rates. Capable of delivering advanced network functions, these access points offer wireless LAN (WLAN) access, Remote AP (RAP) functionality, air monitoring/wireless intrusion detection and prevention, spectrum analysis, high-performance secure outdoor enterprise mesh, and LAN bridging the 2.4 GHz to 2.5 GHz and 5 Ghz RF spectrum.

Overview

Alcatel-Lucent OmniAccess AP175 access points are designed to operate with various power sources to fit to any network requirement. For example, OAW-AP175POE functions from standard 802.3 at Power-over-Ethernet (PoE+) sources; OAW-AP175AC requires a 100-240 volt AC power source; and OAW-AP175DC uses a 12-48 volt DC power supply or solar and plant bus power source. Also designed to suit a variety of outdoor locations, the series is ideal for campuses, indoor and outdoor warehouses, storage yards, extreme industrial production environ-ments and metro city environments. Enterprises looking to offer users the highest performance network service and applications will benefit from data rates up to 300 Mb/s per radio.

A key benefit to network operators looking for maximum control over their environments is the centrally managed wireless switch. Enjoy unparalleled control over services, security and deployment models, as well as the opportunity to increase performance using techniques such as channel bonding, block acknow-ledgement and MIMO radios. Alcatel-Lucent OmniAccess AP175 access points offer advanced antenna technology to increase range and reliability using Alcatel-Lucent's unique Adaptive Radio Management (ARM). ARM also includes spectrum analysis* capabilities that manage the 2.4 GHz and 5 GHz radio bands and help to mitigate RF interference while maximizing Wi-Fi® client performance.

* This feature is available in Alcatel-Lucent OmniAccess AP175 v. 6.0 and beyond.

Designed to meet rugged conditions, the Alcatel-Lucent OmniAccess AP175 can withstand exposure to extreme temperatures, humidity and precipitation; they are also fully sealed against airborne contaminants. Ideal for multiple outdoor locations,they support AC or DC power from street lights, solar or plant bus power sources. The Alcatel-Lucent OmniAccess AP175 feature two 2x2 MIMO dual-band 2.4 GHz to 5 GHz radios with quad antenna interfaces for connecting external antennas. They can be street light, wall, pole or mast mounted for maximum convenience.

Key features

- Dual high-powered radios with high performance
- Flexible power options
- Advanced wireless network functions
- Flexible mounting options
- Rugged construction

Key benefits

- Multi-service 802.11a/b/g/n WLAN. High-performance secure enterprise mesh and LAN bridging across the 2.4 to 2.5 GHz and 5 GHz RF spectrums. Dual-band concurrent 802.11a/n plus b/g/n, delivering data rates up to 300 Mb/s per radio.

- Choose from a standard 802.3 at power-over-Ethernet (PoE+) sources (Model OAW-AP175POE), a 100-240 volt AC power source (Model OAW-AP175AC), or a 12-48 volt DC power supply or solar and plant bus power sources (Model OAW-AP175DC).
- WLAN access, RAP functionality, mobility services delivery, air monitoring/wireless intrusion detection and prevention, spectrum analysis and RF management.
- Wall, pole or mast mounting options.
- Outdoor rated construction with the capability to function in extreme high or low temperatures. Enclosure is sealed to protect against moisture and airborne contaminants.

Technical specifications

Application

- 802.11n outdoor AP provides maximum deployment flexibility in high-density campuses, storage yards, warehouses, container/ transportation facilities, extreme industrial production areas and other harsh environments

Operating mode

- 802.11a/b/g/n AP, air monitor (AM) and Remote AP (RAP)
- Spectrum monitor, AM and RAP
- AM and RAP
- RAP
- Secure enterprise mesh

Radios

- Software-configurable dual radio capable of supporting 2.4 GHz and 5 GHz
- 802.11n capable, implementing 2x2 MIMO with two spatial streams, providing up to 300 Mbps data rate per radio

RF management

- Automatic transmit-power and channel-management control with auto coverage-hole correction via Adaptive Radio Management (ARM)

- Spectrum analysis* remotely scans the 2.4-GHz and 5-GHz radio bands to identify sources of RF interference. This provides visibility into non-802.11 RF interference sources and their effect on 802.11 channel quality.

Advanced features

- Integrated RAP, secure enterprise mesh point or portal, wireless intrusion detection and prevention

Power

- OAW-AP175P: 48-volt DC 802.3 at power over Ethernet (PoE+)
- OAW-AP175AC: 100-240 volt AC from external AC power source
- OAW-AP175DC: 12-48 volt DC from external DC power source
- Maximum power consumption: 15 watts

Wireless radio specifications

- AP type: Dual-radio, dual-band 802.11n outdoor
- Supported frequency bands (country-specific restrictions apply):
  - ¬ 2.400 to 2.4835 GHz
  - ¬ 5.150 to 5.250 GHz
  - ¬ 5.250 to 5.350 GHz
  - ¬ 5.470 to 5.725 GHz
  - ¬ 5.725 to 5.850 GHz

- Available channels: Controller-managed, dependent upon configured regulatory domain
- Supported radio technologies:
  - ¬ 802.11b: Direct-sequence spread-spectrum (DSSS)
  - ¬ 802.11a/g/n: Orthogonal frequency division multiplexing (OFDM)
  - ¬ 802.11n: 2x2 MIMO with two spatial streams
- Supported modulation types:
  - ¬ 802.11b: BPSK, QPSK, CCK
  - ¬ 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum transmit power:
  - ¬ 2.4 GHz: 25 dBm (limited by local regulatory requirements)
  - ¬ 5 GHz: 25 dBm (limited by local regulatory requirements)
- Maximum ratio combining (MRC) for improved receiver performance
- Association rates (Mbps):
  - ¬ 802.11b: 1, 2, 5.5, 11
  - ¬ 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - ¬ 802.11n: MCS0 - MCS15 (6.5 Mbps to 300 Mbps)

- 802.11n high-throughput (HT) support: HT 20/40
- 802.11n packet aggregation: A-MPDU, A-MSDU

* This feature is available in Alcatel-Lucent OmniAccess AP175 v. 6.0 and beyond.

Antenna

- Quad, N-type female interfaces (2 x 2.4 GHz, 2 x 5 GHz) for external antenna support (supports MIMO)
- Feeder cable may be used for external antenna deployments

Mounting

- Wall or mast mounted using the mounting bracket supplied with the unit; solar shield included

Interfaces

Network
- 1 x 10/100/1000BASE-T Ethernet (RJ-45), auto-sensing link speed and MDI/MDX

Power
- 1 x DC power connector (in OAW-AP175DC model only)
- 1 x AC power connector (in OAW-AP175AC model only)

Antenna
- 4 x N-Type female antenna interfaces

Other
- 1 x USB console interface

Mechanical
- Dimensions/weight (unit)
  - ¬ 260 mm x 240 mm x 105 mm (10.2" x 9.4" x4.1")
  - ¬ 3.25 kg (7 lb)

Environmental
- Operating:
  - ¬ Temperature: -30°C to +55°C (-22°F to +131°F)
  - ¬ Relative humidity: 5% to 95% non-condensing
  - ¬ Altitude: Up to 3,000 meters (9,850 feet)

- Storage and transportation temperature range: -40°C to +70°C (-40°F to +158°F)
- Weather rating: IP66
- Wind survivability: Up to 165 mph
- Shock and vibration: ETSI 300-19-2-4 spec T41.E class 4M3
- Transportation: ISTA 2A

Regulatory
- FCC/Industry of Canada
- R&TTE Directive 1995/5/EC
- EN 300 328
- EN 301 893
- CB Scheme Safety, cTUVus
- Korea KCC
- Mexico NOM/COFETEL
- IEC 60529 IP66, NEMA 4X
- ATEX Zone 2

- CE Marked
- Low Voltage Directive 72/23/EEC
- EN 301 489
- UL/IEC/EN 60950
- Japan MIC/VCCI
- Brazil ANATEL
- China SRRC/CCC
- AS/NZS 4260, 4771, 3548

For more country-specific regulatory information, and approvals, please see your Alcatel-Lucent representative.

Certifications
- Wi-Fi certified: 802.11a/b/g/n

Warranty
- One year warranty.

Table 1. Ordering Information

PART NUMBER	DESCRIPTION
OAW-AP175POE	Outdoor access point designed for high-density applications. Supports 802.11a/n and 802.11b/g/n duel-radio (320mW). 2x2 MIMO with two spatial streams, providing up to 300 Mbps data rate per radio. Supports one 10/100 Base-T (RJ-45) Ethernet interface supporting 48-volt DC 802.3at power over Ethernet (PoE+). 4 N-type female interfaces (2 x 2.4 GHz, 2 x 5 GHz) for external antenna support. Wall or poll mounted using the mounting bracket supplied with the unit; solar shield included.
OAW-AP175AC	Outdoor access point designed for high-density applications. Supports 802.11a/n and 802.11b/g/n duel-radio (320mW). 2x2 MIMO with two spatial streams, providing up to 300 Mbps data rate per radio. Supports one 10/100 Base-T (RJ-45) Ethernet interface. Requires 100-240 volt AC from external AC power source. 4 N-type female interfaces (2 x 2.4 GHz, 2 x 5 GHz) for external antenna support. Wall or poll mounted using the mounting bracket supplied with the unit; solar shield included.
OAW-AP175DC	Outdoor access point designed for high-density applications. Supports 802.11a/n and 802.11b/g/n duel-radio (320mW). 2x2 MIMO with two spatial streams, providing up to 300 Mbps data rate per radio. Supports one 10/100 Base-T (RJ-45) Ethernet interface. Requires 12-48 volt DC from external DC power source. 4 N-type female interfaces (2 x 2.4 GHz, 2 x 5 GHz) for external antenna support. Wall or poll mounted using the mounting bracket supplied with the unit; solar shield included.
OAW-AINS2KKIT00	OmniAccess AP175 installation kit
OAW-ACONGEUSB00	1.5m USB-DB9 console cable
OAW-AETHGEL0500	5m shielded Ethernet cable with RJ-45 connectors
OAW-AP-LAR-1	Outdoor Antenna Lightning Arrestor. Lightning Surge Arrestor for the OAW-AP80/AP85/AP175 Access Points: Single, In-line lightening arrester with N-type Male to N-type Female interface. Supports RF frequency pass through of 2 – 6 GHz.
OAW-AP-CBL-1	Outdoor Antenna Cable Extension. 10 ft long low-loss LMR 400 antenna extension cable for use with the OAW-AP80 Outdoor Access Points, interfaces OAW-AP80/AP85/AP175 N-Type Female interface to N-Type Male on antenna.
AP-ANT-80 to AP-ANT-90 and other outdoor antenna options	Detachable Antennas

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