ALCATEL-LUCENT
OMNIACCESS 175 SERIES ACCESS POINTS
DUAL RADIO OUTDOOR ACCESS POINTS

The multifunctional 175 series outdoor wireless access points (APs) deliver enterprise-grade Wi-Fi to high-density client environments in campuses, storage yards, warehouses, container and transportation facilities, extreme industrial production areas and other harsh environments.

These high-performance 802.11n APs deliver wireless data rates up to 300 Mbps per radio and ensure peak performance by utilizing channel bonding, block acknowledgement and MIMO radios. Advanced antenna technology also increases RF signal range and reliability.

Able to survive in harsh outdoor environments, 175 series APs withstand exposure to high and low temperatures, persistent moisture and precipitation, and are fully sealed to keep out airborne contaminants. All electrical interfaces include industrial-strength surge protection.

The 175 series outdoor APs feature two dual-band 2.4-GHz and 5-GHz radios with 2x2 MIMO and four external antenna connectors.

BEST-IN-CLASS RF MANAGEMENT

All Alcatel-Lucent APs include Adaptive Radio Management™ technology, which is essential to creating the most reliable, high-performance WLANs. ARM™ manages the 2.4-GHz and 5-GHz radio bands to optimize Wi-Fi client performance and ensures that APs stay clear of RF interference.

The 175 series can be configured to provide part-time or dedicated air monitoring for spectrum analysis and wireless intrusion protection, VPN tunnels to extend remote locations to corporate resources, and wireless mesh connections where Ethernet drops are not available.

CHOOSE YOUR OPERATING MODE

The 175 series offers a choice of operating modes to meet your unique management and deployment requirements.

• **Controller-managed mode:** When managed by Alcatel-Lucent Mobility Controllers, 175 series APs offer centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding. Please refer to the Alcatel-Lucent Mobility Controller data sheets for more details.

• **Alcatel-Lucent Instant™ mode:** In Alcatel-Lucent Instant mode, a single AP is dynamically elected the Virtual Controller, which automatically distributes the network configuration to other Instant APs in the WLAN. Simply power-up one Instant AP, configure it over the air, and plug in the other APs – the entire process takes about five minutes

For large installations, the Alcatel-Lucent Product Activation Service dramatically reduces deployment time by automating Alcatel-Lucent Instant provisioning, firmware upgrades and inventory management. APs are factory-shipped to your deployment site and configure themselves when powered up.

If WLAN and network requirements change, a built-in migration path allows 175 series Instant APs to become part of a WLAN that is centrally managed by a Mobility Controller.

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Enterprise

RF Management

- 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 802.11n channel quality.

Security

- With an OpenDNS service subscription, Alcatel-Lucent Instant delivers integrated web filtering, malware and botnet protection to every device connected to the WLAN
- Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys
- SecureJack-capable for secure tunneling of wired Ethernet traffic

Operating Modes

- 802.11a/b/g/n Alcatel-Lucent Instant AP
- 802.11a/b/g/n Mobility Controller-managed AP
- Air monitor (AM)
- Secure enterprise mesh
- Remote AP (RAP) when used with a Mobility Controller
- Spectrum analyzer when used with a Mobility Controller

Wireless Radio Specifications

- AP type: Dual-radio, dual-band 802.11n indoor
- Software-configurable dual radio supports 2.4 GHz and 5 GHz
- 2x2 MIMO 802.11n with two spatial streams and up to 300 Mbps per radio
- 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: Managed by Virtual Controller or Mobility Controller, dependent upon configured regulatory domain
- Controller-managed, dependent upon configured regulatory domain
- Dynamic frequency selection (DFS) optimizes the use of available RF spectrum
- 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:
  - 2.4GHz: 23 dBm (limited by local regulatory requirements)
  - 5 GHz: 23 dBm (limited by local regulatory requirements)
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic Delay Diversity for improved downlink RF performance
- Space time blocking code (STBC) for increased range and improved reception
- 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 - 300 Mbps)
- 802.11n high-throughput (HT) Support: HT 20/40
- 802.11n packet aggregation: A-MPDU, A-MSDU

Power In

- IAP175P and AP175P: 48-volt DC 802.3at power over Ethernet (PoE+)
- IAP175AC and AP175AC: 100-240-volt AC from external AC power source
- AP-175DC: 12-48 volt DC from external DC power source

- Maximum power consumption: 18 watts; excludes power consumed by any PoE device connected to and powered by the IAP175AC and AP175AC

Power Out

- The AC and DC powered models provide an 802.3af PoE power source (PSE) on the Ethernet interface

Antenna

- Four N-type female interfaces (two 2.4 GHz and two 5 GHz) for external MIMO antennas
- Feeder cable may be used for external antenna deployments

Interfaces

- Network: One 10/100/1000BASE-T Ethernet (RJ-45),auto-sensing link speed and MDI/MDX
- Power: One AC power connector (IAP-175AC and AP-175AC) and one DC power connector (IAP-175DC and AP-175DC)
- Other: One USB console interface

Mounting

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

Mechanical

- Dimensions/weight (unit):
  - 225 mm x 225 mm x 105 mm (8.9" x 8.9" x 4.1"), excluding connectors
  - 3.5 kg (7.7 lb): IAP175P and AP175P
  - 4.25 kg (9.4 lb): IAP-175AC, AP175AC and AP175DC
- Dimensions/weight (shipping):
  - 395 mm x 348 mm x 375 mm (15.6" x 13.7" x 14.8")
  - 8.25 kg (18.2 lb): IAP175P and AP175P
  - 9 kg (19.8 lb): IAP175AC, AP175AC and AP175DC

Environmental

- Operating Temprature:
  - -30°C to 60°C (-22°F to 140°F): IAP175P and AP175P
  - -40°C to 55°C (-40°F to 131°F): IAP175A C, AP175AC and AP175DC
- Operating humidity: 5% to 95% non-condensing
- Operating altitude: Up to 3,000 meters (9,850 feet)
- Storage and transportation temperature range:
  - Temperature: -40°C to +70°C (-40°F to +15 8°F)
- Weather rating: IP66
- Wind survivability: Up to 165 mph
- Shock and vibration: ETSI 300-19-2-4 spec T41.E class 4M3

Regulatory

- FCC/Industry of Canada
- CE Marked
- R&TTE Directive 1995/5/EC
- Low Voltage Directive 72/23/EEC
- EN 300 328
- EN 301 489
- EN 301 893
- UL/IEC/EN 60950

Certifications

- CB Scheme Safety, cTUVus
- Wi-Fi certified 802.11a/b/g/n

Warranty

- One year parts and labor

Minimum AOS version

- 5.0.2.1 on an Alcatel-Lucent Mobility Controller

175 SERIES AP RF PERFORMANCE TABLE

	Max TX powerper active TX chain (dBm)	RX Sensitivity (dBm)	Max TX power per active TX chain (dBm)	RX Sensitivity (dBm)
	2.4 GHz		5 GHz	
802.11b				
1Mbps	20	-96		
2Mbps	20	-96		
5.5Mbps	20	-94		
11Mbps	20	-93		
802.11a/g				
6Mbps	20	-96	22	-97
9Mbps	20	-96	22	-96
12Mbps	20	-96	22	-96
18Mbps	20	-95	22	-94
24Mbps	19	-92	22	-88
36Mbps	18	-89	20	-86
48Mbps	17	-85	19	-82
54Mbps	17	-83	18	-80
802.11n HT20				
MCS0	22	-94	21	-97
MCS1	22	-93	20	-94
MCS2	22	-92	19	-91
MCS3	22	-89	18	-87
MCS4	21	-85	17	-86
MCS5	20	-81	16	-81
MCS6	19	-80	15	-79
MCS7	18	-78	15	-77
MCS8	22	-94	21	-97
MCS9	22	-93	20	-94
MCS10	22	-92	19	-91
MCS11	22	-89	18	-87
MCS12	21	-85	17	-86
MCS13	20	-81	16	-81
MCS14	19	-80	15	-79
MCS15	18	-78	15	-77
802.11n HT40				
MCS0	21	-92	19	-92
MCS1	21	-91	19	-90
MCS2	21	-89	18	-88
MCS3	20	-86	17	-85
MCS4	19	-83	16	-83
MCS5	18	-79	15	-79
MCS6	18	-77	14	-77
MCS7	17	-75	14	-73
MCS8	21	-92	19	-92
MCS9	21	-91	19	-90
MCS10	21	-89	18	-88
MCS11	20	-86	17	-85
MCS12	19	-83	16	-83
MCS13	18	-79	15	-79
MCS14	18	-77	14	-77
MCS15	17	-75	14	-73

Maximum capability of the hardware provided. Maximum transmit power will be limited by local regulatory settings.

ORDERING INFORMATION

PART NUM BER	DESCRI PTI ON
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-IAP175POE	Outdoor Instant 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-IAP175AC	Outdoor Instant 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-ACONGEUSB00	1.5m USB-DB9 console cable
OAW-AINS2KKIT00	OmniAccess AP175 installation kit
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.

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