

# ALCATEL-LUCENT OMNIACCESS 270 SERIES OUTDOOR ACCESS POINT

## SETTING A HIGHER STANDARD FOR 802.11AC

The innovative Alcatel-Lucent OmniAccess™ 270 series outdoor wireless access points (APs) are aesthetically designed to deliver gigabit Wi-Fi performance to 802.11ac mobile devices under any weather conditions. The OmniAccess 270 series is also the only outdoor AP that enables 802.11n clients to operate three times faster at greater distances.



Purpose-built to survive in the harshest outdoor environments, OmniAccess 270 series APs withstand exposure to extreme 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.

With a maximum data rate of 1.3 Gb/s in the 5-GHz band and 600 Mb/s in the 2.4-GHz band, OmniAccess 270 series outdoor APs support concurrent dual-radio operation at speeds that greatly exceed Fast Ethernet.

To eliminate sticky client behavior and ensure consistently high performance, every OmniAccess 270 AP includes ClientMatch™ technology, which gathers session performance metrics that steer mobile devices to the best AP and radio on the WLAN in real time.

### FEATURES

- Reliable and predictable Wi-Fi performance
  - Patented ClientMatch™ technology ensures that roaming clients associate with the best AP to maximize performance
  - AppRF™ technology identifies and prioritizes applications on the network
- Spectrum analysis
  - Capable of part-time or dedicated spectrum analysis, which scans the 2.4-GHz and 5-GHz radio bands to identify sources of RF interference

- Integrated Adaptive Radio Management™ technology manages the 2.4-GHz and 5-GHz radio bands and ensures that APs stay clear of RF interference
- Air monitoring: Dedicated scan mode provides wireless intrusion protection
- Hybrid AP: Serves Wi-Fi clients and simultaneously provides wireless intrusion protection and spectrum analysis

### BENEFITS

- Innovative industrial design
  - Eliminates installation complexity
  - Inconspicuous design that improves aesthetics
  - Delivers IP66- and IP67-rated protection from the elements
- Best-in-class RF management
- Limited lifetime warranty - an industry first for outdoors

### OPERATING MODES

The 270 series of outdoor APs offers a choice of operating modes to meet your unique management and deployment requirements.

#### **Controller-managed AP or Remote AP (RAP) running AOS-W**

When managed by OmniAccess Mobility Controllers, the OmniAccess 270 series APs offer centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding.

## Alcatel-Lucent Instant™ AP running InstantOS™

In Instant mode, one AP automatically distributes the network configuration to other APs. Just power-up one Instant AP, configure it over the air, and plug in the other APs – the entire process takes about five minutes.

If WLAN and network requirements change, a built-in migration path allows OmniAccess 270 series Instant APs to become part of a WLAN that is centrally managed by a Mobility Controller.

## TECHNICAL SPECIFICATIONS

### OmniAccess 270 series AP model specifications

- OAW-AP274 and OAW-IAP274
  - 2.4-GHz and 5-GHz radios, each with 3x3 MIMO and three combined, diplexed external antenna connectors
- OAW-AP275 and OAW-IAP275
  - 2.4-GHz and 5-GHz radios, each with 3x3 MIMO and three integrated omnidirectional antennas

### Wireless radio specifications

- AP type: Outdoor, dual radio, 5-GHz 802.11ac and 2.4-GHz 802.11n
  - In addition to 802.11n data rates, the 2.4-GHz radio supports 802.11ac 256-QAM modulation. This gives TurboQAM-enabled clients a 33% boost to deliver up to 600 Mb/s.
- Supported frequency bands (country-specific restrictions apply):
  - 2.4000 GHz to 2.4835 GHz
  - 5.150 GHz to 5.250 GHz
  - 5.250 GHz to 5.350 GHz
  - 5.470 GHz to 5.725 GHz
  - 5.725 GHz to 5.875 GHz
- Available channels: 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/ac: Orthogonal frequency-division multiplexing (OFDM)
  - 802.11n/ac: 3x3 MIMO with up to three spatial streams
- Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM (with TurboQAM clients)
  - 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
- Transmit power: Configurable in increments of 0.5 dBm
  - 2.4-GHz band: +28 dBm (23 dBm per chain)
  - 5-GHz bands: +28 dBm (23 dBm per chain)
- Maximum (aggregate, conducted total) transmit power (limited by local regulatory requirements):
  - 2.4-GHz band: +28 dBm (23 dBm per chain)
  - 5-GHz bands: +28 dBm (23 dBm per chain)
- Advanced cellular coexistence (ACC) feature to minimize interference from cellular systems
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay diversity (CDD) for improved downlink RF performance
- Short guard interval for 20-MHz, 40-MHz and 80-MHz channels
- Space-time block coding (STBC) for increased range and improved reception
- Low-density parity check (LDPC) for high-efficiency error correction and increased throughput
- Explicit transmit beam-forming (TxBF) for increased reliability in signal delivery
- Supported data rates (Mb/s):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n: 6.5 to 450 (MCS0 to MCS23, 1 to 3 spatial streams)
  - 802.11ac: 6.5 to 1,300 (MCS0 to MCS9, 1 to 3 spatial streams)
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11ac very high throughput (VHT) support: VHT 20/40/80
- 802.11n/ac packet aggregation: A-MPDU, A-MSDU

### Power

- Maximum power consumption: 23 W
- Direct AC source: 100 V to 240 V AC
- Power over Ethernet (PoE): 48 V DC (nominal) 802.3at-compliant source

### Antennas

- OAW-AP274: Six N-type female connectors for external antennas
- OAW-AP275: Six integrated omnidirectional antennas for 3x3 MIMO with maximum antenna gain of 5 dBi in 2.4 GHz and 5 dBi in 5 GHz. Built-in antennas are optimized for horizontal mounted orientation of OAW-AP275.

### Other Interfaces

- One PoE+ PD port 10/100/1000Base-T Ethernet network interface (RJ-45)
- One port 10/100/1000Base-T Ethernet network interface (RJ-45)
- AC power interface, power cords sold separately
- Serial console interface (micro USB)
- Reset button
- Visual indicator (LED):
  - Power/system status; automatically disabled after initial operation period

### Mounting

- Must be ordered separately
- Optional mounting kits:
  - OAW-AP270-MNTV1: OmniAccess 270 series AP long mount kit for pole/wall mounting. Reduces impact of obstruction by pole or extends away from corner
  - OAW-AP270-MNTV2: OmniAccess 270 series AP short mount kit for pole/wall mounting

### Physical dimensions

#### OAW-AP274

- Excluding mount; with aesthetic cover:
  - Width: 23 cm (9.0 in)
  - Depth: 24 cm (9.4 in)
  - Height: 19 cm (7.5 in)
  - Weight: 2.7 kg (6 lb)
- Excluding mount; without aesthetic cover
  - Width: 23 cm (9 in)
  - Depth: 24 cm (9.4 in)
  - Height: 14 cm (5.5 in)
  - Weight: 2.4 kg (5.3 lb)

#### OAW-AP275

- Excluding mount:
  - Width: 23 cm (9.0 in)
  - Depth: 24 cm (9.4 in)
  - Height: 27 cm (10.6 in)
  - Weight: 2.4 kg (5.3 lb)

### Environmental specifications

- Operating:
  - Temperature: -40°C to +65°C (-40°F to +150°F)
  - Humidity: 5% to 95% non-condensing
- Storage and transportation:
  - Temperature: -40°C to +70°C (-40°F to +158°F)
- Operating altitude: 3000 m
- Chassis rating: IP66 and IP67
- Wind survivability: Up to 165 mph
- Shock and vibration: ETSI 300-19-2-4 spec T41.E 4M3

## Regulatory

- FCC/Industry Canada (IC)
- 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
- EN 60601-1-1, EN60601-1-2

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

## Regulatory model numbers

- OAW-AP274 and OAW-IAP274: APEX0101
- OAW-AP275 and OAW-IAP275: APEX0100

## Certifications

- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- Wi-Fi Alliance certified 802.11a/b/g/n/ac



## Warranty

- Limited lifetime warranty

## Minimum operating system software versions

- AOS-W 6.4
- Instant 4.1 (planned availability mid-2014)

**Table 1. RF performance**

	<b>MAXIMUM TRANSMIT POWER (DBM) PER TRANSMIT CHAIN</b>	<b>RECEIVER SENSITIVITY (DBM) PER RECEIVE CHAIN</b>
<b>IEEE 802.11b 2.4 GHz</b>		
1 Mb/s	23.0	-92.0
2 Mb/s	23.0	-92.0
5.5 Mb/s	23.0	-90.0
11 Mb/s	23.0	-88.0
<b>IEEE 802.11g 2.4 GHz and 802.11a 5 GHz</b>		
6 Mb/s	23.0	-88.0
54 Mb/s	18.0	-75.0
<b>IEEE 802.11n HT20 2.4 GHz and 5 GHz</b>		
MCS0/8	23.0	-88.0
MCS7/15	17.0	-71.0
<b>IEEE 802.11n HT40 2.4 GHz and 5 GHz</b>		
MCS0/8	23.0	-85.0
MCS7/15	17.0	-68.0
<b>802.11ac VHT20 5 GHz</b>		
MCS0	23.0	-88.0
MCS9	16.0	-65.0
<b>IEEE 802.11ac VHT40 5 GHz</b>		
MCS0	23.0	-85.0
MCS9	16.0	-62.0
<b>IEEE 802.11ac VHT80 5 GHz</b>		
MCS0	23.0	-82.0
MCS9	16.0	-59.0

## ORDERING INFORMATION

PART NUMBER	DESCRIPTION
<b>AP270 series Access Points</b>	
OAW-AP274	OmniAccess AP274: Outdoor access point designed for gigabit Wi-Fi performance. Supports 802.11b and 802.11a/g/n/ac. 3x3 MIMO with three spatial streams, providing up to 1.3 Gb/s data rate. Supports two 10/100/1000 Base-T (RJ-45) Ethernet interfaces. Supports 802.3at Power over Ethernet. Six N-type female interfaces for external antenna support. Horizontal, wall or pole-mounted using the mounting bracket (ordered separately)
OAW-AP275	OmniAccess AP275: Outdoor access point designed for gigabit Wi-Fi performance. Supports 802.11b and 802.11a/g/n/ac. 3x3 MIMO with three spatial streams, providing up to 1.3 Gb/s data rate. Supports two 10/100/1000Base-T (RJ-45) Ethernet interfaces. Supports 802.3at Power over Ethernet. Six integrated omni-directional antennas. Horizontal, wall or pole-mounted using the mounting bracket (ordered separately)
<b>AP270 series accessories</b>	
PD-9001GR-AC	OAW WLAN 1 Port 802.3at PoE Midspan 10/100/1000 30W. US power cord included. Power cords for other countries should be ordered separately.
PD-9001GO-DC	PD-9001GO-DC 30W 802.3at Outdoor PoE Midspan injector, 12 V to 24 V DC in, 10/100/1000Base-T Ethernet, surge protected, North America power cord
OAW-PD9001GO-NA	OmniAccess 1 Port 802.3at PoE Midspan 10/100/1000 30W Outdoor; North America power cord
OAW-PD9001GOINT	OmniAccess 1 Port 802.3at PoE Midspan 10/100/1000 30W Outdoor; EU/International power cord
OAW-AP270-MNTV1	OAW-AP270 Series Access Point Long Mount Kit. Pole/Wall Mount for OAW-AP270 300 mm from vertical mounting asset
OAW-AP270-MNTV2	OAW-AP270 Series Access Point Short Mount Kit. Pole/Wall Mount for OAW-AP270 75 mm from vertical mounting asset