

# Alcatel-Lucent OmniAccess 318 Series Access Points

802.11ac Wave 2 for harsh, weather-protected environments

The hardened OmniAccess 318 series access point delivers gigabit Wi-Fi performance to 802.11ac mobile devices in harsh, weather-protected environments such as warehouses, industrial freezers or enclosures in extreme environments such as stadiums. It delivers 4x4:4SS MU-MIMO capability and advanced ClientMatch.



With a maximum concurrent data rate of 1,733 Mbps in the 5 GHz band and 300 Mbps in the 2.4 GHz band (for an aggregate peak data rate of 2.0 Gbps), the OmniAccess 318 APs can quickly add required capacities to your existing or new wireless networks. Hot or cold, dusty and dirty, or baking in an enclosed stadium, the OmniAccess 318 delivers.

With high performance and high density 802.11ac, the OmniAccess 318 APs support 160 MHz channel bandwidth (VHT160), multi-user MIMO (MU-MIMO) and 4 spatial streams (4SS).

Proactive and deterministic, ClientMatch dynamically optimizes Wi-Fi client performance as users roam and RF conditions change. If a mobile device moves away from an AP or RF interference impedes performance, ClientMatch automatically steers it to a better AP.

With ClientMatch, clients load web pages faster, deliver video streams with improved quality and support high densities of mobile devices. An 802.11ac network without ClientMatch performs no different than an 802.11n WLAN.

## Unique benefits

- Dual Radio 802.11ac access point with Multi-User MIMO
  - Supports up to 1,733 Mbps in the 5 GHz band (with 4SS/VHT80 or 2SS/VHT160 clients) and up to 300 Mbps in the 2.4 GHz band (with 2SS/HT40 clients).

- Advanced Cellular Coexistence (ACC)
  - Minimizes interference from 3G/4G cellular networks, distributed antenna systems, and commercial small cell/femtocell equipment.
- Industrial design for harsh, weather-protected environments
  - Extends temperature range for indoor environments that lack heating and cooling.
  - Sealed connector interfaces to lock out dust and moisture.
- Connectorized antenna ports support high gain large public venue antennas
- Designed for enhanced physical security.
- Quality of service for unified communication apps
  - Supports priority handling and policy enforcement for unified communication apps, including Microsoft Skype for Business with encrypted videoconferencing, voice, chat, and desktop sharing.
- Best-in-class RF management
  - Integrated AirMatch technology manages the 2.4-GHz and 5-GHz radio bands and actively optimizes the RF environment including channel width, channel selection and transmit power.
- Spectrum analysis
  - Capable of part-time or dedicated air monitoring, the spectrum analyzer remotely scans the 2.4-GHz and 5-GHz radio bands to identify sources of RF interference.
- Wireless mesh
  - Wireless mesh connections are convenient where Ethernet drops are not available.
- Intelligent app visibility and control
  - AppRF technology leverages deep packet inspection to classify and block, prioritize, or limit bandwidth for thousands of applications in a range of categories.
- Secure Core
  - Device assurance: Use of Trusted Platform Module (TPM) for secure storage of credentials and keys as well as secure boot.
  - Integrated wireless intrusion protection offers threat protection and mitigation and eliminates the need for separate RF sensors and security appliances.
  - IP reputation and security services identify, classify, and block malicious files, URL and IPs, providing comprehensive protection against advanced online threats.
  - Encrypted IPsec VPN tunnels securely connect remote users to corporate network resources.

## Choose your operating mode

As a unified AP, the OmniAccess 318 can be deployed with or without a controller and can be readily switched to accommodate changing network needs.

- Controller mode: When managed by OmniAccess Mobility Controllers, the OmniAccess 318 series APs offer centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding or,
- Controllerless (Instant) mode: In OmniAccess Instant mode, a single AP 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 – Instant Network.

Other functional modes include:

- Remote AP (RAP) mode for branch deployments
- Air monitor (AM) for wireless IDS, rogue detection and containment
- Spectrum analyzer, dedicated or hybrid, for identifying sources of RF interference
- Secure enterprise mesh
- Hybrid AP serves Wi-Fi clients and provides wireless intrusion protection and spectrum analysis

## OmniAccess 318 Series specifications

- 5 GHz 802.11ac 4x4 MU-MIMO (1,733 Mbps max rate)
  - Four RP-SMA connectors for external antenna operation
- 2.4 GHz 802.11n 2x2 MIMO (300 Mbps max rate) radios
  - Two RP-SMA connectors for external antenna operation at 2.4 GHz

## Wi-Fi radio specifications

- AP type: Indoor hardened, dual radio, 5 GHz 802.11ac 4x4 MIMO and 2.4 GHz 802.11n 2x2 MIMO
- Software-configurable dual radio supports 5 GHz (Radio 0) and 2.4 GHz (Radio 1)
- 5 GHz: Four spatial stream Multi User (MU) MIMO for up to 1,733 Mbps wireless data rate to up to three MU-MIMO capable client devices simultaneously
- 5 GHz: Four spatial stream Single User (SU) MIMO for up to 1,733 Mbps wireless data rate to individual 4x4 VHT80 or 2x2 VHT160 client devices
- 2.4 GHz: Two spatial stream Single User (SU) MIMO for up to 300 Mbps wireless data rate to individual 2x2 HT40 client devices
- Support for up to 256 associated client devices per radio, and up to 16 BSSIDs 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: Dependent on configured regulatory domain.
- Dynamic frequency selection (DFS) maximizes 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)
- Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum (conducted) transmit power (limited by local regulatory requirements):
  - 2.4 GHz band: +22 dBm per chain, +25dBm aggregate (2x2)
  - 5 GHz band: +22 dBm per chain, +28dBm aggregate (4x4)

Note: Conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain.

- Advanced Cellular Coexistence (ACC) minimizes interference from cellular networks.
- Maximum ratio combining (MRC) for improved receiver performance.
- Cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance.
- Short guard interval for 20-MHz, 40-MHz, 80-MHz and 160-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.
- Transmit beam-forming (TxBF) for increased signal reliability and range.
- Supported data rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n (2.4GHz): 6.5 to 300 (MCS0 to MCS15)
  - 802.11n (5GHz): 6.5 to 600 (MCS0 to MCS31)
  - 802.11ac: 6.5 to 1,733 (MCS0 to MCS9, NSS = 1 to 4 for VHT20/40/80, NSS = 1 to 2 for VHT160)
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11ac very high throughput (VHT) support: VHT 20/40/80/160
- 802.11n/ac packet aggregation: A-MPDU, A-MSDU

## Power

- Worst-case power consumption from the AP: 23W
- Power sources sold separately
- Power over Ethernet (PoE+): 802.3at-compliant

## Wi-Fi antenna ports

- 5 GHz
  - Four RP-SMA connectors for external antenna operation
- 2.4 GHz
  - Two RP-SMA connectors for external antenna operation

## Other interfaces

- One 10/100/1000BASE-T Ethernet network interfaces (RJ-45)
  - Auto-sensing link speed and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
- One 1000BASE-X SFP Port
- Bluetooth Low Energy (BLE) radio
  - Up to 4 dBm transmit power (class 2) and -91 dBm receive sensitivity
- Visual indicator (multi-color LED): For system and radio status
- Reset button: Factory reset (during device power up)
- Micro USB console interface
- Kensington security slot

## Mounting

- Optional mounting kits:
  - AP-220-MNT-W1 are directly compatible
  - 270 Series outdoor AP mounts (AP-270-MNT-V1, AP-270-MNT-V2, AP-270-MNT-H1, AP-270-MNT-H2) are compatible when the AP-270-MNT-ADP adapter is utilized

## Mechanical

Dimensions/weight (unit, excluding mount accessories):

- 15 cm (W) x 22.2 cm (D) x 7.5 cm (H)  
6" (W) x 8.5" (L) x 2.5" (H)
- 1.225 kg/2.7 lbs

## Environmental

- Operating temperature:
  - Temperature: -40° C to +60° C (-40° F to +140° F)
  - Humidity: 5% to 95% non-condensing
- Storage and transportation:
  - Temperature: -40° C to +70° C (-40° F to +158° F)
- Operating Altitude: 3,000 m
- Water and Dust
  - IP55

## Regulatory

- FCC/ISED
- CE Marked
- RED Directive 2014/53/EU
- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- UL/IEC/EN 60950
- EN 60601-1-1, EN60601-1-2

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

## Regulatory model number

- OAW-AP318 - APIN0318

## Certifications

- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- Wi-Fi Alliance certified 802.11a/b/g/n
- Wi-Fi CERTIFIED™ ac (with Wave 2 features)

## Warranty

- Limited lifetime warranty

## Minimum operating system software

- AOS-W & InstantOS 8.3.0.0

## RF performance table

	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
<b>802.11b 2.4 GHz</b>		
1 Mbps	22	-95
2 Mbps	22	-93
5.5 Mbps	22	-90
11 Mbps	22	-88
<b>802.11g 2.4 GHz and 802.11a 5 GHz 2.4 GHz and 802.11a 5 GHz</b>		
6 Mbps	22	-93
54 Mbps	19	-75
<b>802.11n HT20 2.4 GHz and 5 GHz</b>		
MCS0/8	22	-93
MCS7/15	18	-71
<b>802.11n HT40 2.4 GHz and 5 GHz</b>		
MCS0/8	22	-90
MCS7/15	18	-68
<b>802.11ac VHT20 5 GHz</b>		
MCS0	22	-93
MCS9	16	-68
<b>802.11ac VHT40 5 GHz</b>		
MCS0	22	-90
MCS9	15	-63
<b>802.11ac VHT80 5 GHz</b>		
MCS0	22	-87
MCS9	15	-61
<b>802.11ac VHT160 5 GHz</b>		
MCS0	22	-86
MCS9	15	-57

Maximum capability of the hardware provided (excluding antenna gain). Maximum transmit power is limited by local regulatory settings.

## Ordering information

Part number	Description
<b>OmniAccess 318 Series Unified Hardened Access Points</b>	
OAW-AP318-EG	OmniAccess AP318 (EG) Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened Unified AP. Restricted regulatory domain:Egypt
OAW-AP318-IS	OmniAccess AP318 (IS) Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened Unified AP. Restricted regulatory domain: Israel
OAW-AP318-JP	OmniAccess AP318 (JP) Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened Unified AP. Restricted regulatory domain: Japan
OAW-AP318-RW	OmniAccess AP318 (RW) Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened Unified AP. Restricted regulatory domain:Rest of the world
OAW-AP318-US	OmniAccess AP318 (US) Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened Unified AP. Restricted regulatory domain: US