ALCATEL-LUCENT OMNIACCESS 200 SERIES ACCESS POINTS
BRINGING 802.11AC TO THE MASSES

Multifunctional and affordable OmniAccesss 200 series 802.11ac wireless access points (APs) maximize mobile device performance in medium-density enterprise Wi-Fi environments.

These compact and cost-effective dual-radio APs deliver wireless data rates of up to 867 Mb/s to 5 GHz devices with 802.11ac technology, leveraging two spatial multiple-input and multiple-output (MIMO) streams while simultaneously supporting 2.4 GHz 802.11n clients with data rates of up to 300 Mb/s.

The AP205 and IAP205 models feature four integrated omnidirectional downtilt antennas, while the AP204 and IAP204 support external detachable dual-band antennas using two RP-SMA antenna connectors.

The 200 series APs enhances unified access portfolio for the mobile enterprise that is able to deliver applications and services along with consistent, high-quality user experience across wired and wireless environments.

The unified access network starts with a wire-rate 10GbE/40GbE network core. The core includes the Alcatel-Lucent OmniSwitch™ 6900 Stackable LAN Switch, OmniSwitch 9000E Chassis LAN Switch, and the OmniSwitch 10K Modular LAN Chassis. The unified access network provides a common set of network services, policy framework, authentication scheme and a single authentication database that applies to users accessing the network with either wired or wireless devices. Wire line access is provided by stackable LAN switches like the Alcatel-Lucent OmniSwitch 6855 Hardened LAN Switch, OmniSwitch 6850E and OmniSwitch 6450 Stackable LAN Switches and OmniSwitch 6250 Stackable Fast Ethernet Switch; wireless access is provided by comprehensive portfolio of 802.11ac, 802.11n OmniAccess™ Wi-Fi access points and Controllers; while BYOD, guest access, onboarding and policy management services are provided by ClearPass Policy Management System.

The 200 series APs offer a choice of operating modes to meet individual management and deployment requirements.
- Controller-managed AP or Remote AP (R AP) running AOS-W. When managed by OmniAccess Mobility Controllers, 200 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, a single AP automatically distributes the network configuration to other Instant APs in the WLAN. Simply power-up an Instant AP, configure it over the air, and plug in the other APs – the entire process takes about five minutes.

If WLAN requirements change, a built-in migration path allows 200 series Instant APs to become part of a WLAN managed by a Mobility Controller.

FEATURES
- ClientMatch dynamically optimizes Wi-Fi client performance as users roam and RF conditions change.
- Remote spectrum analysis to identify sources of RF interference
- Advanced Cellular Coexistence (ACC)
- The 200 series APs support priority handling and policy enforcement for unified communication apps, including Microsoft® Lync™ with encrypted videoconferencing, voice, chat and desktop sharing.

BENEFITS
- Improved WiFi quality and support high densities of mobile devices.
- Delivers best-in-class RF management
- ACC feature enables Alcatel-Lucent WLANs to perform at peak efficiency by minimizing interference with 3G/4G networks.
- Quality of service for unified communication apps

AP200 SERIES SPECIFICATIONS

- AP205 and IAP205
  - ¬ 2.4 GHz (300 Mb/s max rate) and 5 GHz (867 Mb/s max rate) radios, each with 2 x 2 MIMO and four integrated omni-directional downtilt antennas
- AP204 and IAP204
  - ¬ 2.4 GHz (300 Mb/s max rate) and 5 GHz (867 Mb/s max rate) radios, each with 2 x 2 MIMO and two combined, diplexed external RP-SMA antenna connectors

ADVANCED FEATURES

- RF management
  - ¬ Adaptive Radio Management™ (ARM) technology automatically assigns channel and power settings, provides airtime fairness and ensures APs stay clear of all sources of RF interference to deliver reliable, high-performance WLANs
  - ¬ 200 Series APs can be configured to provide part-time or dedicated air monitoring for spectrum analysis and wireless intrusion protection, virtual private network (VPN) tunnels to extend remote locations to corporate resources, and wireless mesh connections where Ethernet drops are not available
- 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
- Security
  - ¬ Integrated Trusted Platform Module (TPM) to securely store credentials and keys
  - ¬ SecureJack-capable to securely tunnel wired Ethernet traffic

OPERATING MODES

- Instant AP
- Mobility Controller-managed AP
- RAP for branch deployments
- Air monitor (AM) for wireless intrusion detection system (WIDS), rogue detection and containment
- Spectrum analyzer, dedicated or hybrid
- Secure enterprise mesh

WIRELESS RADIO SPECIFICATIONS

- AP type: Indoor, dual radio, 5 GHz 802.11ac and 2.4 GHz 802.11n 2 x 2:2
- Software-configurable dual radio supports 5 GHz (Radio 0) and 2.4 GHz (Radio 1)
- 2 x 2 MIMO with two spatial streams and up to 867 Mb/s wireless data rate
- 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 5.850 GHz
- Available channels: Dependent on configured regulatory domain
- Dynamic frequency selection (DFS) optimizes available RF spectrum use
- 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: Binary phase-shift keying (BPSK), quadrature phase shift keying (QPSK), Complementary Code Keying (CCK)
  - ¬ 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum (aggregate, conducted total) transmit power (limited by local regulatory requirements):
  - ¬ 2.4 GHz band: +21 dBm (18 dBm per chain)
  - ¬ 5 GHz band: +21 dBm (18 dBm per chain)
- 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 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
- Transmit beamforming (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 300 (MCS0 to MCS15)
  - ¬ 802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 2)
- 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

Antennas

- AP204/IAP204: Two RP-SMA connectors for external dual-band antennas. Internal loss between radio interface and external antenna connectors (due to diplexing circuitry): 1.5 dB in 2.4 GHz and 3.0 dB in 5 GHz
- AP205/IAP205: Four integrated down-tilt omni- directional antennas for 2 x 2 MIMO with maximum antenna gain of 4.0 dBi in 2.4 GHz and 6.0 dBi in 5 GHz. built-in antennas are optimized for horizontal ceiling-mounted orientation of the AP

OTHER INTERFACES

- 10/100/1000BASE-T Ethernet network interface (RJ-45)
  - ¬ Auto-sensing link speed and MDI/MDX
  - ¬ 802.3az Energy-Efficient Ethernet (EEE)
  - ¬ Power over Ethernet (PoE)-PD: 48-V DC (nominal) 802.3af PoE
- DC power interface, accepts 1.7 mm/ 4.0 mm center-positive circular plug with 9.5 mm length
- Visual indicators (LEDs):
  - ¬ Power/system status
  - ¬ Ethernet link status (ENET)
  - ¬ Radio status (two; RAD0, RAD1)
- Reset button: factory reset (during device power up)
- Serial console interface (RJ-45)
- Kensington security slot

POWER

- Maximum (worst-case) power consumption: 12.5 W (PoE) or 11.7 W (DC)
- Maximum (worst-case) power consumption in idle mode: 8.4 W (PoE) or 7.7 W (DC)
- Direct DC source: 12-V DC nominal, +/- 5%
- PoE: 48-V DC (nominal) 802.3af-compliant source
- Power sources sold separately
- When both power sources are available, DC power takes priority

MOUNTING

- Included with AP:
  - ¬ Mounting brackets (2) for attaching to 9/16 inch or 15/16 inch T-bar drop-tile ceiling
- Spare mounting kit:
  - ¬ AP220-MNT-C1: Access Point Mount Kit (ceiling grid).

    Contains two ceiling grid rail adapters (for basic flat rails)
- Optional mounting kits:
  - ¬ OAW-AP220-MNTC2: OmniAccess AP220 Series Access Point Mount Kit (ceiling grid). Contains two ceiling grid rail adapters (for Interlude and Silhouette style rails)
  - ¬ OAW-AP220-MNTW1: OmniAccess AP220 Series Access Point Mount Kit (basic, flat surface). Contains on flat surface wall/ceiling mount bracket
  - ¬ OAW-AP220-MNTW2: OmniAccess AP220 Series Access Point Mount Kit (box style, secure, flat surface). Contains on flat surface wall/ceiling secure mount cradle

MECHANICAL

- Dimensions/weight (unit, excluding mount accessories):
  - ¬ 150 mm x 150 mm x 41.5 mm (W x D x H)
  - ¬ 380 g
- Dimensions/weight (shipping):
  - ¬ 190 mm x 187 mm x 57 mm (W x D x H)
  - ¬ 550 g

ENVIRONMENTAL

- Operating:
  - ¬ Temperature: 0°C to +40°C (+32°F to +104°F)
  - ¬ Humidity: 5% to 95% non-condensing
- Storage and transportation:
  - ¬ Temperature: -40°C to +70°C (-40°F to +158°F)

REGULATORY

- FCC/Industry 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
- EN 60601-1-1 and EN 60601-1-2

RELIABILITY

Mean time between failures (MTBF): 711,187 hours (81.2 years) at +25°C operating temperature

REGULATORY MODEL NUMBER

- OAW-AP204 and OAW-IAP204: APIN0204
- OAW-AP205 and OAW-IAP205: APIN0205

CERTIFICATIONS

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

WARRANTY

- Limited lifetime warranty

MINIMUM SOFTWARE VERSIONS

- AOS-W 6.4.1.0
- InstantOS™ 4.2.0.0

RF performance table

	MAXIMUM TRANSMIT POWER (DBM) PER TRANSMIT CHAIN	RECEIVER SENSITIVITY (DBM) PER RECEIVE CHAIN
2.4 GHz		
802.11b		
1 Mb/s	18.0	-95.0
11 Mb/s	18.0	-88.0
802.11g		
6 Mb/s	18.0	-92.0
54 Mb/s	16.0	-74.0
802.11n HT20		
MCS0/8	18.0	-91.0
MCS7/15	16.0	-71.0
802.11n HT40		
MCS0/8	18.0	-88.0
MCS7/15	16.0	-68.0

	MAXIMUM TRANSMIT POWER (DBM) PER TRANSMIT CHAIN	RECEIVER SENSITIVITY (DBM) PER RECEIVE CHAIN
5 GHz		
802.11a		
6 Mb/s	18.0	-93.0
54 Mb/s	16.0	-75.0
802.11n HT20		
MCS0/8	18.0	-91.0
MCS7/15	15.0	-71.0
802.11n HT40		
MCS0/8	18.0	-89.0
MCS7/15	15.0	-68.0
802.11ac VHT20		
MCS0	18.0	-91.0
MCS9	12.0	-64.0
802.11ac VHT40		
MCS0	18.0	-88.0
MCS9	12.0	-62.0
802.11ac VHT80		
MCS0	18.0	-85.0
MCS9	12.0	-59.0

Maximum capability of the hardware provided. Maximum transmit power is limited by local regulatory settings.
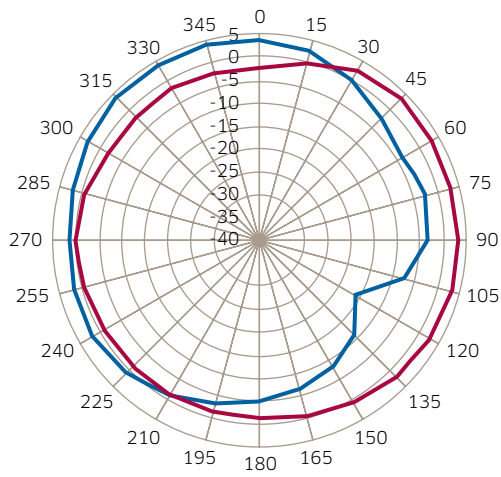
ANTENNA PATTERN PLOTS

Horizontal or azimuth plane (top view), 0 degeree downtilt
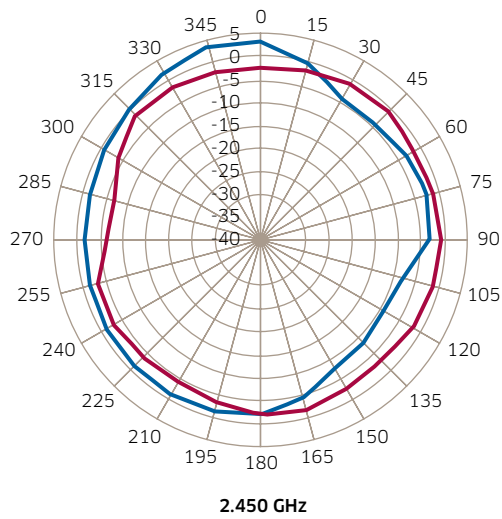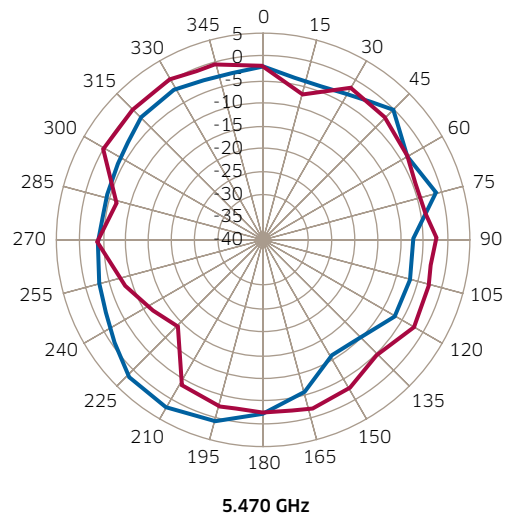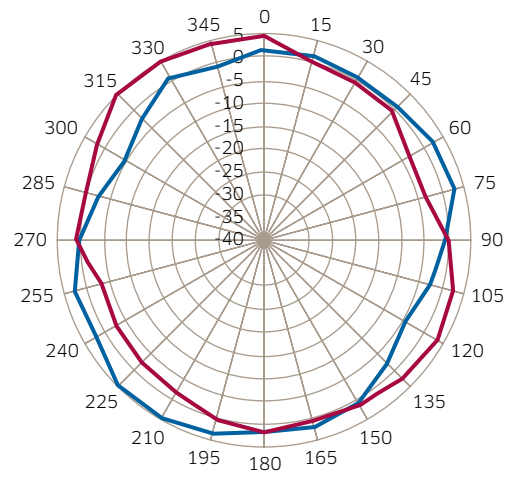

2.450 GHz

5.470 GHz

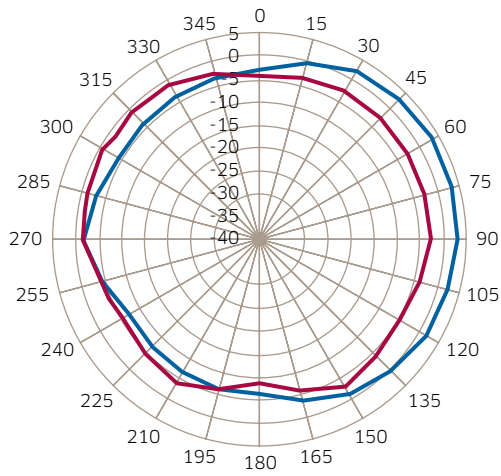**Horizontal or azimuth plane (top view), 30 degree downtilt**

2.450 GHz
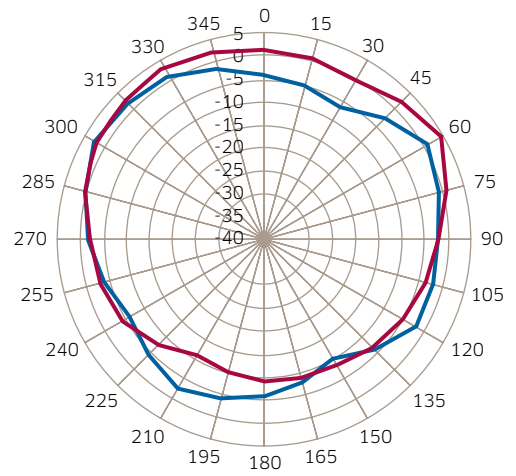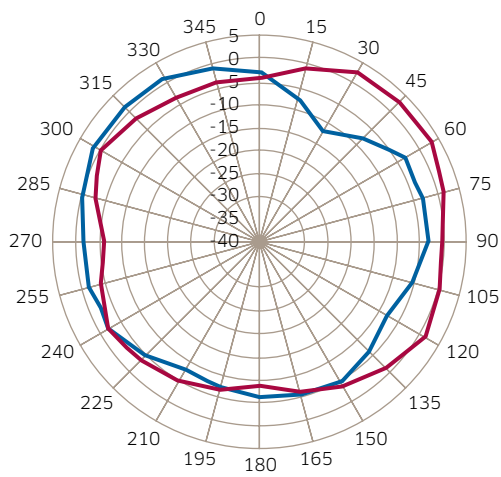

5.470 GHz
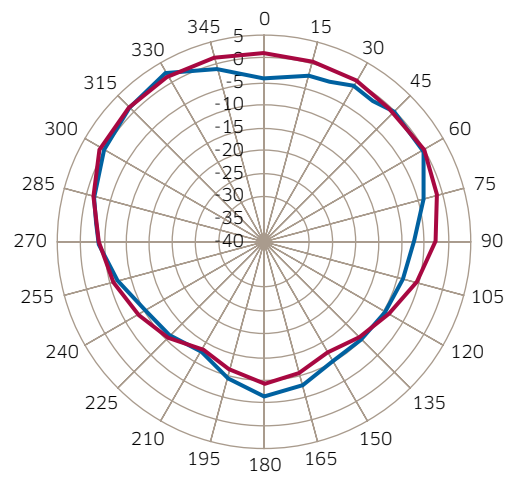
Elevation plane (side view, 0 degree angle)

2.450 GHz

5.470 GHz

Elevation plane (side view, 90 degree angle)

2.450 GHz

5.470 GHz

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
200 series access points	
OAW-AP204	OmniAccess AP204 Dual radio IEEE 802.11ac (2 x 2:2) wireless access point with support for 802.11'B' and 802.11'A/G/N/AC' operation, RP-SMA external antenna connectivity, 1 x 10/100/1000Base-T (RJ-45) Ethernet Interface (supports 802.3af Power over Ethernet), 1 x 12-V DC power interface
OAW-IAP204-RW	OmniAccess Instant AP204 Dual radio IEEE 802.11ac (2x2:2) wireless access point with support for 802.11'B' and 802.11'A/G/N/AC' operation, RP-SMA external antenna connectivity, 1 x 10/100/1000Base-T (RJ-45) Ethernet Interface (Supports 802.3af Power over Ethernet), 1 x 12V DC power interface. Rest of the world - Not to be used in US.
OAW-IAP204-US	OmniAccess Instant AP204 Dual radio IEEE 802.11ac (2x2:2) wireless access point with support for 802.11'B' and 802.11'A/G/N/AC' operation, RP-SMA external antenna connectivity, 1 x 10/100/1000Base-T (RJ-45) Ethernet Interface (Supports 802.3af Power over Ethernet), 1 x 12V DC power interface. Restricted regulatory domain: United States.
OAW-IAP204-IS	OmniAccess Instant AP204 Dual radio IEEE 802.11ac (2x2:2) wireless access point with support for 802.11'B' and 802.11'A/G/N/AC' operation, RP-SMA external antenna connectivity, 1 x 10/100/1000Base-T (RJ-45) Ethernet Interface (Supports 802.3af Power over Ethernet), 1 x 12V DC power interface. Restricted regulatory domain: Israel.
OAW-IAP204-JP	OmniAccess Instant AP204 Dual radio IEEE 802.11ac (2x2:2) wireless access point with support for 802.11'B' and 802.11'A/G/N/AC' operation, RP-SMA external antenna connectivity, 1 x 10/100/1000Base-T (RJ-45) Ethernet Interface (Supports 802.3af Power over Ethernet), 1 x 12V DC power interface. Restricted regulatory domain: Japan.
OAW-AP205	OmniAccess AP205 Dual radio IEEE 802.11ac (2x2:2) wireless access point with support for 802.11'B' and 802.11'A/G/N/AC' operation, integral antenna, 1 x 10/100/1000Base-T (RJ-45) Ethernet Interface (supports 802.3af Power over Ethernet), 1 x 12-V DC power
OAW-IAP205-RW	OmniAccess Instant AP205 Dual radio IEEE 802.11ac (2x2:2) wireless access point with support for 802.11'B' and 802.11'A/G/N/AC' operation, integral antenna, 1 x 10/100/1000Base-T (RJ-45) Ethernet Interface (Supports 802.3af Power over Ethernet), 1 x 12V DC power. Rest of the world - Not to be used in US.
OAW-IAP205-US	OmniAccess Instant AP205 Dual radio IEEE 802.11ac (2x2:2) wireless access point with support for 802.11'B' and 802.11'A/G/N/AC' operation, integral antenna, 1 x 10/100/1000Base-T (RJ-45) Ethernet Interface (Supports 802.3af Power over Ethernet), 1 x 12V DC power. Restricted regulatory domain: United States.
OAW-IAP205-IS	OmniAccess Instant AP205 Dual radio IEEE 802.11ac (2x2:2) wireless access point with support for 802.11'B' and 802.11'A/G/N/AC' operation, integral antenna, 1 x 10/100/1000Base-T (RJ-45) Ethernet Interface (Supports 802.3af Power over Ethernet), 1 x 12V DC power. Restricted regulatory domain : Israel.
OAW-IAP205-JP	OmniAccess Instant AP205 Dual radio IEEE 802.11ac (2x2:2) wireless access point with support for 802.11'B' and 802.11'A/G/N/AC' operation, integral antenna, 1 x 10/100/1000Base-T (RJ-45) Ethernet Interface (Supports 802.3af Power over Ethernet), 1 x 12V DC power. Restricted regulatory domain: Japan.
Mounting spares	
AP-220-MNT-C1	OmniAccess Access Point Mount Kit (ceiling grid). Contains two ceiling grid rail adapters (for flat rails). Color: black. Spare
Mounting accessories	
OAW-AP220-MNTC2	OmniAccess AP220 Series Access Point Mount Kit (ceiling grid). Contains two ceiling grid rail adapters (for Interlude and Silhouette style rails). Color: black
OAW-AP220-MNTW1	OmniAccess AP220 Series Access Point Mount Kit (basic, flat surface). Contains one flat surface wall/ceiling mount bracket. Color: black
OAW-AP220-MNTW2	OmniAccess AP220 Series Access Point Mount Kit (box style, secure, flat surface). Contains one flat surface wall/ceiling secure mount cradle
Generic Indoor AP accessories	
OAW-AP-AC-UN	Universal AC Power Adapter Kit for OmniAccess AP and IAP 105, 92, 92 – North America, Japan, United Kingdom, Italy, EC (Shuko), Australia, China, India, Korea
OAW-AP-AC-12V18	OmniAccess12VDC/18W AC Power Adapter for compatible indoor AP models. Does not include country-specific power cord.
OAW-MS-3501G	1 Port 802.3af PoE Midspan 10/100/1000 15.4W. No power cord included

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