

ALCATEL-LUCENT OMNIACCESS 100 SERIES ACCESS POINTS DUAL RADIO 802.11N ACCESS POINTS

The Multifunctional and affordable 100 series Access Points deliver enterprise-grade Wi-Fi to high-density client environments in offices, hospitals, schools, retail stores and warehouses.

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.

The 105 series of APs features two 2x2 MIMO dual-band 2.4-GHz/5-GHz radios with two internal omnidirectional downtilt antennas, which make it ideal for warehouses and other high-ceiling facilities. The 104 series of APs features the same radios with 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 100 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 100 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, 100 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 100 series Instant APs to become part of a WLAN that is centrally managed by a Mobility Controller.



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 5.875 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

- 48 V DC 802.3af PoE
- 12 V DC for external AC supplied power (adapter sold separately)
- Maximum power consumption: 12.5 watts

Antenna

- RF interconnect attenuation (between radio and connectors or antennas): 0.5dB
- AP104 and IAP104: Two RP-SMA connectors for external dual-band antennas
- AP105 and IAP105: Four integrated downtilt omni-directional antennas for 2x2 MIMO with maximum antenna gain:
 - 2.4GHz / 3.0dBi
 - 5GHz / 4.5dBi

Interfaces

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

Mounting

- Included with AP:
 - Molded mounting tabs for attaching to 15/16" T-bar drop-tile ceiling
 - Slotted tabs for screw mounting to a wall, ceiling or other flat surface
- Optional mounting kit:
 - OAW-AP105-MNT: OmniAccess AP104/105 Wall/Ceiling Mounting Kit
 - OAW-AP105-MNTD: OmniAccess AP105 Access Point Mounting Kit (contains 2 brackets for flat surface or wall box mounting; DC power connector accessible)
 - OAW-AP105-MNTC: OmniAccess AP104/105 Ceiling Mounting Kit (rail adapters only)

Mechanical

- Dimensions/weight (unit):
 - 132 mm x 135 mm x 45 mm (5.2" x 5.3" x 1.8")
 - 0.3 kg (10.56 oz)
- Dimensions/weight (shipping):
 - 195 mm x 170 mm x 55 mm (7.7" x 6.7" x 2.2")
 - 0.44 kg (15.52 oz)

Environmental

- Operating:
 - Temperature: 0°C to 50°C (+32°F to +122°F)
 - Humidity: 5 to 95% non-condensing
- Storage and transportation temperature range:
 - Temperature: -40°C to +70°C (-40°F to +158°F)

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
- EN 60601-1-1, EN60601-1-2

Certifications

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

Warranty

- Limited lifetime warranty

Minimum AOS version

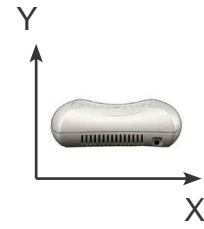
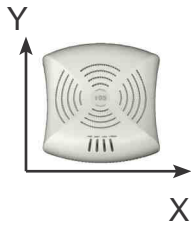
- AP104: AOS 6.1.3.0 on an Alcatel-Lucent Mobility Controller
- AP105: AOS 3.4.1.0 on an Alcatel-Lucent Mobility Controller

100 SERIES AP RF PERFORMANCE TABLE

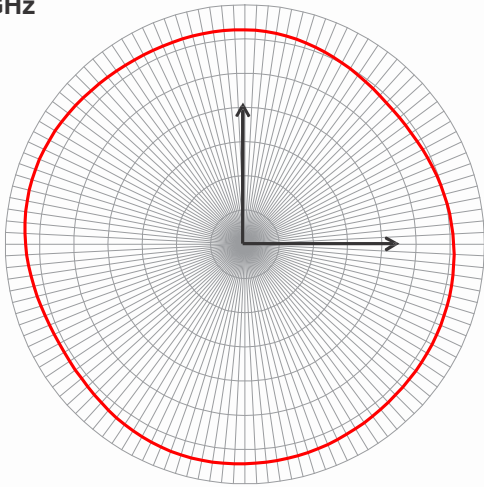
	Max TX power per active TX chain (dBm)	RX Sensitivity (dBm)	Max TX power per active TX chain (dBm)	RX Sensitivity (dBm)
	2.4 GHz		5 GHz	
802.11b				
1Mbps	20	-96		
2Mbps	20	-96		
5.5Mbps	20	-94		
11Mbps	20	-93		
802.11a/g				
6Mbps	20	-96	20	-96
9Mbps	20	-96	20	-96
12Mbps	20	-96	20	-96
18Mbps	20	-95	20	-95
24Mbps	20	-92	20	-91
36Mbps	19	-89	19	-88
48Mbps	18	-85	18	-84
54Mbps	17	-83	17	-83
802.11n HT20				
MCS0	20	-96	20	-96
MCS1	20	-95	20	-94
MCS2	20	-93	20	-92
MCS3	20	-90	20	-89
MCS4	19	-87	19	-86
MCS5	18	-82	18	-82
MCS6	17	-81	17	-80
MCS7	15	-80	15	-79
MCS8	20	-95	20	-95
MCS9	20	-93	20	-92
MCS10	20	-91	20	-90
MCS11	20	-87	20	-87
MCS12	19	-84	19	-84
MCS13	18	-81	18	-80
MCS14	17	-80	17	-78
MCS15	15	-77	15	-77
802.11n HT40				
MCS0	20	-93	20	-92
MCS1	20	-93	20	-92
MCS2	20	-90	20	-89
MCS3	20	-86	20	-86
MCS4	19	-83	19	-83
MCS5	18	-79	18	-80
MCS6	17	-77	17	-77
MCS7	15	-76	15	-76
MCS8	20	-92	20	-92
MCS9	20	-89	20	-90
MCS10	20	-87	20	-87
MCS11	20	-84	20	-84
MCS12	19	-82	19	-81
MCS13	18	-76	18	-77
MCS14	17	-76	17	-75
MCS15	15	-73	15	-73

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

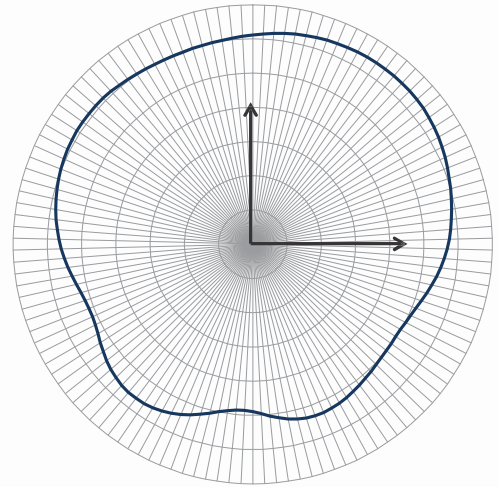
AP105 and IAP105 ANTENNA PATTERN PLOTS



2.45 GHz

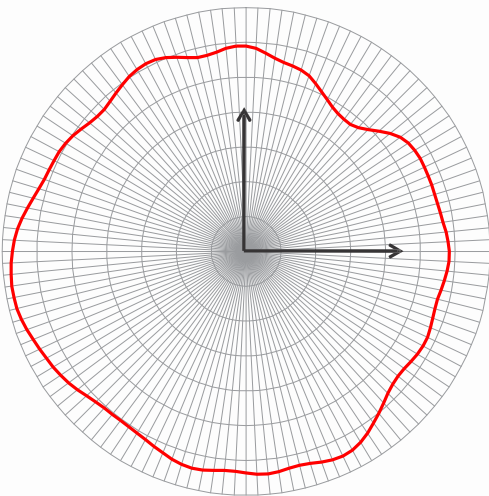


Horizontal (azimuth) plane

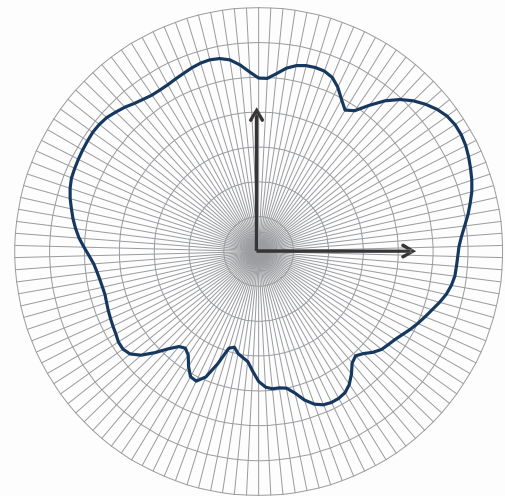


Vertical (elevation) plane

5.5 GHz



Horizontal (azimuth) plane



Vertical (elevation) plane

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
OAW-IAP105	OmniAccess IAP105 wireless AP, dual-radio IEEE 802.11a/b/g/n wireless AP with support for 802.11B/G/N and 802.11A /N operation, dual-band integral antenna, 1 x 10/100/1000Base-T (RJ-45) Ethernet interface (supports 802.3af PoE), 1 x 12-V DC power interface; AC power adapter kit (OAW-AP-AC-UN) sold separately
OAW-IAP104	OmniAccess AP104 Wireless AP (802.11abgn 2x2:2, dual radio, antenna connectors) - need external antenna
OAW-AP105	OmniAccess IAP105 wireless access point. Dual radio IEEE 802.11a/b/g/n wireless access point with support for 802.11B/G/N and 802.11A/N operation, dual-band integral antenna, 1 x 10/100/1000Base-T (RJ-45) Ethernet Interface (Supports 802.3af Power over Ethernet), 1 x 12V DC power interface. AC power adapter kit (OAW-AP-AC-UN) sold separately
OAW-AP104	OmniAccess AP104 Wireless Access Point (802.11abgn 2x2:2, dual radio, antenna connectors) - need external antenna
OAW-AP-AC-UN	Universal AC Power Adapter Kit for OmniAccess AP and IAP 105, 104, 92, 92 - North America, Japan, United Kingdom, Italy, EC (Shuko), Australia, China, India, Korea.
OAW-AP105-MNT	OmniAccess AP105 Wall/Ceiling Mounting Kit
OAW-AP105-MNTC	OmniAccess AP105 Ceiling Mounting Kit (rail adapters only)
OAW-AP105-MNTD	OmniAccess AP105 Access Point Mounting Kit (contains 2 brackets for flat surface or wall box mounting; DC power connector accessible)