ALCATEL-LUCENT
OMNIACCESS 130 SERIES ACCESS POINTS
DUAL RADIO 802.11N 3X3:3 ACCESS POINTS

The multifunctional 130 series wireless access points (APs) maximize mobile device performance in extremely high density Wi-Fi environments and ensure strong threat protection using integrated MACSec security.

These ultra-high-performance 802.11n APs deliver wireless data rates up to 450 Mbps per radio and employ three spatial streams to support 50% more throughput and mobile devices than previous-generation APs.

MACSec authentication and encryption on Ethernet ports enable secure AP deployment by interoperating with the MACSec capability on Alcatel-Lucent Mobility Access Switches and other wiring closet equipment.

The 135 series of APs features two dual-band 2.4-GHz and 5-GHz radios with 3x3 MIMO and four integrated omni-directional downtilt antennas. The 134 series 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 130 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 130 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, 130 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 130 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

- MACSec security for authorization and data encryption between the AP ports and the wired access layer (requires MACSec support on the wired edge switch)
- 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
- 3x3 MIMO 802.11n with two spatial streams and up to 450 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: 3x3 MIMO with three 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
- Short guard interval for 20-MHz and 40-MHz channels
- Low-density parity check (LDPC) for high-efficiency error correction and increased throughput
- Space time blocking code (STBC) for increased range and improved reception
- Transmit beam-forming (TxBF) for increased reliability in signal delivery
- Association rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n: MCS0 – MCS23 (6.5 Mbps – 450 Mbps)
- 802.11n high-throughput (HT) Support: HT 20/40
- 802.11n packet aggregation: A-MPDU, A-MSDU

Power

- 48 volts DC 802.3af power over Ethernet (PoE) or 802.3at PoE+
  - Note: when using 802.3af POE, the second Ethernet port is disabled. It is enabled when using an 802.3at POE power source (or direct DC power).
- 12 volts DC external AC supplied power (adapter sold separately)
- Maximum power consumption: 12.5 watts

Antenna

- AP134 and IAP134: Three RP-SMA connectors for external dual-band antennas
- AP135 and IAP135: Six integrated downtilt omni-directional antennas for 3x3 MIMO with maximum antenna gain of 3.5 dBi in 2.4 GHz and 4.5 dBi in 5 GHz

Interfaces

- Network: Two 10/100/1000BASE-T Ethernet (RJ-45), auto-sensing link speed and MDI/MDX
- Ethernet ports support MACSec encryption and 802.3az EEE
- 48 volts DC 802.3af PoE or 802.3at PoE+ interoperable with intellisource power sourcing equipment (both ports)
- Other: One RJ-45 console interface

Mounting

- Included with AP:
  - Molded mounting tabs for attaching to 15/16” T-bar drop-tile ceiling
  - Kensington security lock point
- Optional mounting kit:
  - OAW-AP130-MNT: OmniAccess AP130 Series wall/ceiling mounting kit.
  - OAW-AP-130-MNTC2: Alcatel-Lucent 130 series AP mount kit contains two ceiling-grid rail adapters for interlude and silhouette style rails
  - OAW-AP-130-MNTW2: Alcatel-Lucent 130 series AP mount kit contains one flat-surface wall/ceiling secure mount cradle.

Mechanical

- Dimensions/weight (unit):
  - 170 mm x 170 mm x 45 mm (6.69” x 6.69” x 1.77”)
  - .76 kg (1.68 lb)
- Dimensions/weight (shipping):
  - 285 mm x 240 mm x 70 mm (11.22” x 9.45” x 2.76”)
  - 1.05 kg (2.31 lb)

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 +15 8°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

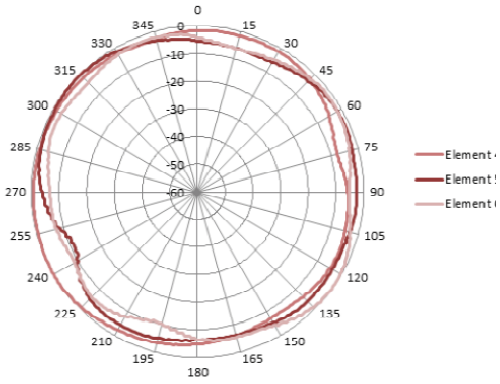
- 6.1.1.0 on an Alcatel-Lucent Mobility Controller

130 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	18	-97		
11Mbps	18	-92		
802.11a/g				
6Mbps	18	-94	18	-94
54Mbps	16	-81	16	-82
802.11n HT20				
MCS0/8/16	17	-94	17	-94
MCS7/15/23	12	-78	12	-78
802.11n HT40				
MCS0/8/16	17	-92	17	-92
MCS7/15/23	11	-75	11	-74

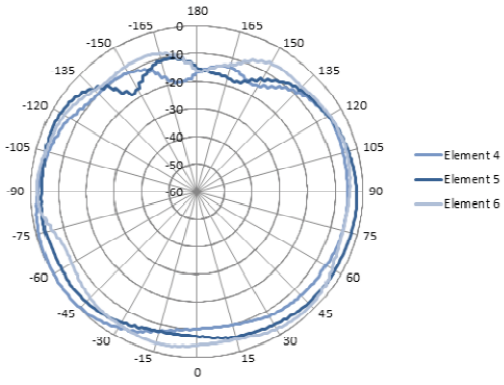
IAP135 and AP135 ANTENNA PATTERN PLOTS

2.450 GHz, H-Plane, 20 degrees down-tilt



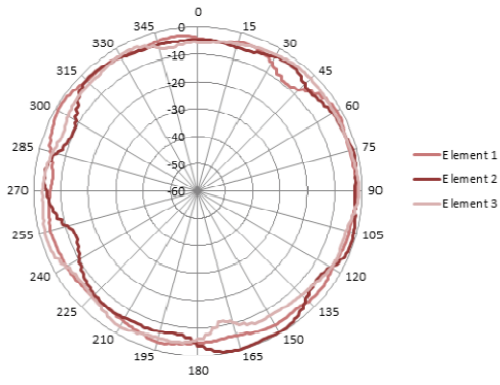
H-plane

2.450 GHz, E-plane, AP facing down



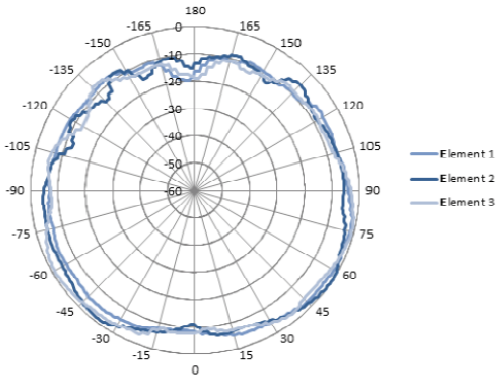
E-plane

5.500 GHz, H-Plane, 20 degrees down-tilt



H-plane

5.500 GHz, E-plane, AP facing down



E-plane

ORDERING INFORMATION

PART NUM BER	DESCRI PTI ON
OAW-IAP134	OmniAccess Instant AP134 Wireless Access Point, 802.11abgn, 3x3:3, dual radio,antenna connectors. Requires external antenna. Unrestricted Regulatory Domain. These products should be considered as `Rest of World` products and MUST NOT be used for deployments in the United States, Japan or Israel
OAW-IAP135	OmniAccess Instant AP135 Wireless Access Point, 802.11abgn, 3x3:3, dual radio, integrated antennas. Unrestricted Regulatory Domain. These products should be considered as `Rest of World` products and MUST NOT be used for deployments in the United States, Japan or Israel
OAW-AP134	OmniAccess AP134 Wireless Access Point, 802.11a/b/g/n, 3x3:3, dual radio, external antenna connectors
OAW-AP135	OmniAccess AP135 Wireless Access Point, 802.11a/b/g/n, 3x3:3, dual radio, integrated antennas
OAW-AP-AC-UN	Universal AC Power Adapter Kit for OmniAccess AP and IAP 135, 134, 105, 104, 92, 92 - North America, Japan, United Kingdom, Italy, EC (Shuko), Australia, China, India, Korea.
OAW-AP130-MNT	OmniAccess AP130 Series Access Point wall/ceiling mounting kit
OAW-MS-3501G	1 Port 802.3af PoE Midspan 10/100/1000 15.4 W
OAW-MS-9001G	1 Port 802.3at PoE Midspan 10/100/1000 30 W

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