Alcatel-Lucent OmniAccess Stellar AP1230 Series

Indoor ultra high performance 802.11ac Wave 2 wireless access points

Multifunctional Alcatel-Lucent OmniAccess® Stellar AP1230 series access points are high end, high density, multi-gig Ethernet 802.11ac Wave 2 APs for high density and key IT applications for high density and large business deployments. The OmniAccess Stellar AP1230 series indoor Wi-Fi access point provides high throughput and a seamless user experience.

AP1231

AP1232

The high performance 802.11ac AP1230 series supports a maximum concurrent data rate of 4.266 Gb/s (dual 1733 Mb/s in 5 GHz and 800 Mb/s in 2.4 GHz), dual uplinks with 2.5 GbE and 1 GbE, 160 MHz channels (VHT160), multi-user MIMO(MU-MIMO) and four spatial streams(4SS). They provide simultaneous multicast data transmission to multiple devices, maximizing data throughput and improving network efficiency.

Featuring enhanced WLAN technology with RF Radio Dynamic Adjustment, a distributed control Wi-Fi architecture, secure network admission control with unified access, built in application intelligence and analytics, making it ideal for enterprises of all sizes demanding a simple, secure and scalable wireless solution.

OmniVista 2500 managed deployment

The OmniAccess Stelllar AP1230 series APs can be managed from the Alcatel-Lucent OmniVista® 2500 Network Management System. The access points are managed as one or more acccess point (AP) groups (a logical grouping of one or more access points). The OmniVista 2500 next generation management suite embeds a visionary controller-less architecture, providing user friendly workflows for unified access together with an integrated unified policy authentication manager (UPAM) which helps define authentication strategy and policy enforcement for employees, guest management and BYOD devices. The AP1230 series has built-in DPI technology providing real-time classification of flows at the application level. The network administrator can obtain a comprehensive view of applications running in the network and apply adequate control to optimize the performance of the network for business critical applications. OmniVista 2500 provides advanced options for RF management, WIDS/WIPS for intrusion detection and prevention, and a heatmap for WLAN site planning.

Plug and Play: Secure Web managed (HTTPS) cluster deployment

The AP1230 series APs by default operate in a cluster architecture to provide simplified plug-and-play deployment. The access point cluster is an autonomous system that consists of a group of OmniAccess Stellar APs and a virtual controller, which is a selected access point, for cluster management. One AP cluster supports up to 64 APs.

The access point cluster architecture ensures simplified and quick deployment. Once the first AP is configured using the configuration wizard, the remaining APs in the network will come up automatically with an updated configuration. This ensures the whole network is up and functional within a few minutes.

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The OmniAccess Stellar AP1230 series also supports secure zero-touch provisioning with Alcatel-Lucent OXO Connect R2, a mechanism by which all access points in a cluster will obtain bootstrap data securely from an on premise OXO Connect.

Integrated guest management

The OmniAccess Stellar AP1230 series supports role based management access to the AP cluster which includes Admin, Viewer and GuestOperator access. GuestOperator access simplifies guest account creation and management, and can be used by any non-IT person such as a front desk worker or receptionist. The OmniAccess Stellar AP1230 series access points also support a built-in customizable captive portal which enables customers to offer unique guest access.

Quality of service for unified communication apps

The OmniAccess Stellar AP1230 series access points support fine tuned, quality of service (QoS) parameters to differentiate and provide appropriate QoS for each application such as voice, video and desktop sharing. Application aware RF scanning avoids interruption of real-time applications.

RF management

Radio Dynamic Adjustment (RDA) technology automatically assigns channels and power settings, provides DFS/TPC, and ensures that access points stay clear of all radio frequency interference (RFI) sources to deliver reliable, high-performance wireless LANs. The OmniAccess Stellar AP1230 series APs can be configured to provide part-time or dedicated air monitoring for spectrum analysis and wireless intrusion protection.

Product specifications

Radio specification
- AP type: Indoor, tri radio, dual 5 GHz 802.11ac 4x4:4 MU-MIMO and 2.4 GHz 802.11n 4x4:4 MIMO
- 5 GHz: Four spatial stream multi user (MU) MIMO for up to 1733 Mb/s 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 Mb/s wireless data rate to individual 4x4 VHT80 or 2x2 VHT160 client devices

- 2.4 GHz: Four spatial stream single user (SU) MIMO for up to 800 Mb/s wireless data rate to individual 4x4 VHT40 client devices (600 Mb/s for HT40 802.11n client devices)
- 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
- DFA (dynamic frequency adjustment) optimizes available channels and provides proper transmission power
- Short guard interval for 20 MHz, 40 Mhz, 80 Mhz and 160 Mhz channels
- Transmit beam forming (TxBF) for increased signal reliability and range
- 802.11n/ac packet aggregation: Aggregated Mac Protocol Data Unit (A-MPDU), Aggregated Mac Service Data Unit (A-MSDU)
- 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 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)
- Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
  - 802.11n high-throughput (HT) support: HT 20/40
  - 802.11ac very high throughput (VHT) support: VHT 20/40/80/160
- Advanced Cellular Coexistence (ACC) Minimizes interference from 3G/4G cellular networks, distributed antenna systems, and commercial small cell/femtocell equipment

Interfaces
- 1x 100/1000/2500Base-T autosensing (RJ-45) port, Power over Ethernet (PoE)
- 1x 10/100/1000Base-T autosensing (RJ-45) port, Power over Ethernet (PoE)
- 1x Bluetooth Low Energy (BLE) radio, integrated antenna
  - 9.5 dBm transmit power (typical, basic rate)
  - -92.5 dBm(Typical) receive sensitivity

- 1x USB 2.0 (Type A connector)
- 1x management console port (RJ-45)
- Reset button: Factory reset
- Kensington security slot
- AP1232: 8x RP-SMA Antenna connectors

Visual Indicators (Tri-color LEDs)
- For system and radio status
  - Red flashing: System abnormal, link down
  - Red light: System startup
  - Red and blue rotate flashing: System running, OS upgrading
  - Blue light: System running, dual bands working
  - Green flashing: System running, no SSID created
  - Green light: System running, single band working
  - Red, blue and green rotate flashing: System running, use for location of an AP

Security
Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys

Antenna
- AP1231: Built-in 4×4:4 @ 2.4GHz, dual 4x4:4 @ 5GHz
  - Integrated dual-band tri-radio down tilt omni-directional antennas for 4x4 MIMO with maximum antenna gain of 3.9dBi in 2.4 GHz and 5.9dBi in 5 GHz. Built-in antennas are optimized for horizontal ceiling mounted orientation of the AP.
- AP1232: External 4×4:4 @ 2.4 GHz, dual 4x4:4 @ 5 GHz 8 RP-SMA connectors for external dual band antennas.
- Optional external antenna(sold separately)
  - Offers broad selection of antennas, delivering optimal coverage for a variety of deployment scenarios

Receive sensitivity (per chain)

	2.4 GHz	5 GHz
1 Mb/s	-96	
11 Mb/s	-88	
6 Mb/s	-92	-89
54 Mb/s	-74	-72
HT20 (MSC 0/8)	-91	-89
HT20 (MSC 7/15)	-71	-68
HT40 (MSC 0/8)	-88	-86
HT40 (MSC 7/15)	-68	-66
VHT20 (MSC 0)	-91	-89
VHT20 (MSC 8)	-67	-65
VHT40 (MSC 0)	-88	-86
VHT40 (MSC 9)	-63	-61
VHT80 (MCS0)		-83
VHT80 (MCS9)		-56
VHT160 (MCS0)		-82
VHT160 (MCS9)		-56

Maximum Transmit power (per chain)

	2.4 GHz	5 GHz
1 Mb/s	18 dBm	
11 Mb/s	18 dBm	
6 Mb/s	18 dBm	18 dBm
54 Mb/s	17 dBm	17 dBm
HT20 (MSC 0/8)	18 dBm	18 dBm
HT20 (MSC 7/15)	16 dBm	17 dBm
HT40 (MSC 0/8)	18 dBm	18 dBm
HT40 (MSC 7/15)	16 dBm	17 dBm
VHT20 (MSC 0)	18 dBm	18 dBm
VHT20 (MSC 8)	16 dBm	17 dBm
VHT40 (MSC 0)	18 dBm	18 dBm
VHT40 (MSC 9)	15 dBm	15 dBm
VHT80 (MCS0)		18 dBm
VHT80 (MCS9)		15 dBm
VHT160 (MCS0)		18 dBm
VHT160 (MCS9)		15 dBm

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

Power

- Supports direct DC power and Power over Ethernet (PoE)
- When both power sources are available, DC power takes priority over PoE
- Maximum (worst case) power consumption:
  - ¬ 36 W (PoE or DC)
- Direct DC source: 48 V DC nominal, ±5%
- Power over Ethernet (PoE):
  - ¬ 48 V DC (nominal) 802.3at compliant source
  - ¬ Unrestricted functionality with 802.3 at High PoE (4-pair)
  - ¬ The USB port is disabled and all the three radio will operate in 2x2:2 mode when the AP is powered by 30W 802.3at PoE source.

Mounting

- The AP ships with two (white) mounting clips to attach to a 9/16-inch or 15/16-inch flat T-bar drop-tile ceiling.
- Optional mount kits for Open Silhouette and Flanged Interlude.
- Optional mount kits for flat-surface (wall).

Environmental

- Operating:
  - ¬ Temperature: 0°C to 40°C (+32°F to +104°F)
  - ¬ Humidity: 10% to 95% non-condensing
- Storage and transportation:
  - ¬ Temperature: -40°C to +70°C (-40°F to +158°F)

Dimensions/Weight

- Single AP excluding packing box and accessories:
  - ¬ 230 mm (W) x 230 mm (D) x 47 mm (H) -9.05" (W) x 9.05" (D) x 1.85" (H)
  - ¬ 1400 g / 3.08 lb
- Single AP including packing box and accessories:
  - ¬ 228 mm (W) x 198 mm (D) x 66 mm (H) -8.97" (W) x 7.79" (D) x 1.85"(H)
  - ¬ 700 g / 1.54 lb

Reliability

MTBF: 739,935h (84.5 years) at +25ºC operating temperature

Capacity

- Up to 8 SSID per radio (total 24 SSID)
- Support for up to 768 associated client devices

Software features

- Up to 512 APs when managed by OmniVista 2500 managed. No limit on the number of AP groups
- Up to 64 APs per web managed (HTTP/HTTPS) cluster
- Auto channel selection
- Auto transmit power control
- Bandwidth control per SSID
- L2 roaming

- L3 roaming with OmniVista 2500
- Captive portal
- Internal user database
- Radius client
- Wireless QoS
- Band steering
- Client based smart load balance
- White/black list
- Zero-touch provisioning (ZTP)
- NTP server client
- ACL
- Rogue AP location and containment
- System log report
- SNMP Trap Notification with OmniVista 2500
- Wireless attack detection with OmniVista 2500
- Floor plan and heat map with OmniVista 2500

Security

- 802.11i, Wi-Fi Protected Access 2 (WPA2), WPA
- 802.1X
- WEP, Advanced Encryption Standard (AES), Temporal Key Integrity Protocol (TKIP)
- Firewall: ACL, wIPS/wIDS and DPI application policy enforcement with OmniVista™
- Portal page authentication

IEEE standard

- IEEE 802.11a/b/g/n/ac Wave 2
- IEEE 802.11e WMM
- IEEE 802.11h, 802.11i, 802.11e QoS
- 802.11k Radio Resource Management
- 802.11v BSS Transition Management
- 802.11r Fast Roaming

Regulatory & certification

- CB Scheme Safety, cTUVus
- Wi-Fi Alliance (WFA) certified 802.11a/b/g/n/ac
- FCC/Industry of Canada
- CE marked
- RoHS, REACH, WEEE
- UL2043 plenum rating
- EMI and susceptibility (Class B)

Ordering information

Item	Description
OAW-AP1231-RW	Indoor high-end Enterprise 802.11ac MU-MIMO AP, Tri-Radio, 11n 4x4:4 + 11ac 4x4:4 + 11ac 4x4:4, 2.5 GbE+1 GbE, integrated BLE, 1x USB, 1x console, integrated antennas. Restricted regulatory domain: Rest of world product, and MUST NOT be used for deployments in the United States, Japan or Israel.
OAW-AP1231-US	Indoor high-end Enterprise 802.11ac MU-MIMO AP, Tri-Radio, 11n 4x4:4 + 11ac 4x4:4 + 11ac 4x4:4, 2.5 GbE+1 GbE, integrated BLE, 1x USB, 1x console, integrated antennas. Restricted regulatory domain: United States.
OAW-AP1232-RW	Indoor high end Enterprise 802.11ac MU-MIMO AP, Tri-Radio, 11n 4x4:4 + 11ac 4x4:4 + 11ac 4x4:4, 2.5 GbE+1 GbE, integrated BLE, 1x USB, 1x console, antenna connectors. Restricted regulatory domain: Rest of world product, and MUST NOT be used for deployments in the United States, Japan or Israel.
OAW-AP1232-US	Indoor high end Enterprise 802.11ac MU-MIMO AP, Tri-Radio, 11n 4x4:4 + 11ac 4x4:4 + 11ac 4x4:4, 2.5 GbE+1 GbE, integrated BLE, 1x USB, 1x console, antenna connectors. Restricted regulatory domain: United States.
OAW-AP-MNT-B	OmniAccess Indoor mounting kit for AP1101, AP122X, AP123X, Type B1(9/16") and B2(15/16") for T shaped ceiling rail mounting. Standard configuration in the product packaging. Optional for customer ordering
OAW-AP-MNT-W	OmniAccess Indoor mounting kit for AP1101, AP122X, AP123X, Type W wall and ceiling mounting with screws. Optional for customer ordering
OAW-AP-MNT-C	OmniAccess Indoor mounting kit for AP1101, AP122X, AP123X, Type C1(Open Silhouette) and C2 (Flanged Interlude), for other shaped ceiling rail mounting. Optional for customer ordering

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