

Alcatel-Lucent OmniAccess Stellar AP1201

Indoor IoT Ready 802.11ac Wave 2
wireless access point

Multifunctional [Alcatel-Lucent OmniAccess® Stellar AP1201](#) access point is an entry range, affordable, 802.11ac Wave 2 AP for small and large business deployments. The OmniAccess Stellar AP1201 indoor Wi-Fi access point provides high throughput and a seamless user experience.



The efficient 802.11ac AP1201 access point supports a maximum concurrent data rate of 1.2 Gb/s (867 Mb/s in 5 GHz and 400 Mb/s in 2.4 GHz), 80 MHz channels (VHT80), multi-user MIMO (MU-MIMO) and two spatial streams (2SS) per radio. It provides 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.

OmniAccess Stellar AP1201 has integrated support for BLE5.0/Zigbee/Thread, making it ideal for broad scope of IoT end-points and applications.

Cloud enabled with OmniVista Cirrus

The AP1201 access points can be managed by Alcatel-Lucent OmniVista® Cirrus cloud platform. OmniVista® Cirrus powers a secure, resilient and scalable cloud-based network management platform. It offers hassle free network deployment and easy service rollout with advanced analytics for smarter decision making. Offers IT friendly Unified Access with secure authentication and policy enforcement for users and devices.

OmniVista 2500 managed deployment

The AP1201 AP can be managed by Alcatel-Lucent OmniVista® 2500 on premise Network Management System. The access points are managed as one or more access 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 AP1201 has built-in DPI technology providing real-time Application Monitoring and enforcement. 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 heat map for WLAN site planning.

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

The AP1201 by default operates 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 AP cluster can also scale up to 255 access points when mixed with other AP models.

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.

The AP1201 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 AP1201 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 AP1201 access point 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 AP1201 access point support fine tuned, quality of service (QoS) parameters to differentiate and provide appropriate QoS for each application such as voice, video and desktop sharing. OmniAccess Stellar AP is 802.11e (WMM) compliant, also providing marking for RTP/SRTP sessions which include Skype for business, Google Hangout etc.

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 AP1201 AP can be configured to provide part-time or dedicated air monitoring for spectrum analysis and wireless intrusion protection.

Simultaneous BLE beacon and BLE Gateway functionality

The AP1201 has built-in BLE that can act in either BLE beacon mode and BLE gateway mode or both modes simultaneously. This enables a single infrastructure to be used for asset tracking as well as for other Location-Based Services like smart-phone based Way-Finding, Geo-Notification etc. Employing a single infrastructure simplifies the solution deployment and reduces the cost of a total location services solution.

Product specifications

Radio specification

- AP type: Indoor, dual radio, 5 GHz 802.11ac 2x2:2 MU-MIMO and 2.4 GHz 802.11n 2x2:2 MIMO
- 5 GHz: Two spatial stream single user (SU) /multi user (MU) MIMO for up to 867 Mb/s wireless data rate
- 2.4 GHz: Two spatial stream single user (SU) MIMO for up to 400 Mb/s wireless data rate to individual 2x2 VHT40 client devices (300 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
- Frequencies fixed at factory for Middle East models OAW-AP1201-ME 2400 - 2483.5 MHz 5150 - 5350 MHz
- 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 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 300 (MCS0 to MCS31)
 - 802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 2 for VHT20/40/80)
- 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
- Maximum (aggregate, conducted) transmit power (limited by local regulatory settings):
 - 2.4 GHz: +21 dBm (18 dBm per chain)
 - 5GHz: +23dBm (20 dBm per chain)
- BLE5.0: 2.4 GHz, Maximum Transmit power 19 dBm
- Advanced Cellular Coexistence (ACC) Minimizes interference from 3G/4G cellular networks, distributed antenna systems, and commercial small cell/ femtocell equipment

BLE reception

- -103.3 dBm sensitivity at 125 kbit/s GFSK, 2.4 GHz
- -94.8 dBm sensitivity at 1 Mbit/s GFSK, 2.4 GHz
- -91.5 dBm sensitivity at 2 Mbit/s GFSK, 2.4 GHz
- -102.7 dBm sensitivity at 250 kbps DSSS-OQPSK, 2.4 GHz

Interfaces

- 1x 10/100/1000Base-T autosensing (RJ-45) port, Power over Ethernet (PoE)
- 1x Bluetooth Low Energy (BLE) 5.0 radio, integrated antenna. Hardware ready for Zigbee.
- 1x management console port (RJ-45)
- Reset button: Factory reset
- Kensington security slot

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

Antenna

- AP1201: Built-in 2x2:2 @ 2.4 GHz, 2x2:2 @ 5 GHz, BLE antenna
 - Integrated dual-band down tilt omni-directional antennas for 2x2 MIMO with maximum antenna gain of 4.7 dBi in 2.4 GHz and 4.6 dBi in 5 GHz. Built-in antennas are optimized for horizontal ceiling mounted orientation of the AP.
 - Integrated BLE antenna with peak gain 3.7dBi

Receive sensitivity (per chain)

| | 2.4 GHz | 5 GHz |
|-----------------|---------|-------|
| 1 Mb/s | -98 | |
| 11 Mb/s | -89 | |
| 6 Mb/s | -92 | -91 |
| 54 Mb/s | -75 | -74 |
| HT20 (MCS 0/8) | -91 | -90 |
| HT20 (MCS 7/15) | -72 | -71 |
| HT40 (MCS 0/8) | -89 | -88 |
| HT40 (MCS 7/15) | -70 | -69 |
| VHT20 (MCS 0) | -91 | -90 |
| VHT20 (MCS 8) | -68 | -67 |
| VHT40 (MCS 0) | -89 | -88 |
| VHT40 (MCS 9) | -64 | -63 |
| VHT80 (MCS0) | | -84 |
| VHT80 (MCS9) | | -59 |

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 | 20 dBm |
| 54 Mb/s | 15 dBm | 18 dBm |
| HT20 (MCS 0/8) | 18 dBm | 20 dBm |
| HT20 (MCS 7/15) | 15 dBm | 18 dBm |
| HT40 (MCS 0/8) | 18 dBm | 20 dBm |

| | | |
|-----------------|--------|--------|
| HT40 (MCS 7/15) | 15 dBm | 18 dBm |
| VHT20 (MCS0) | 18 dBm | 20 dBm |
| VHT20 (MCS8) | 15 dBm | 15 dBm |
| VHT40 (MCS0) | 18 dBm | 20 dBm |
| VHT40 (MCS9) | 13 dBm | 14 dBm |
| VHT80 (MCS0) | | 20 dBm |
| VHT80 (MCS9) | | 14 dBm |

Chile: Regulatory compliance. Maximum transmit power of 150 mW including antenna gain.

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
- Direct DC source:
 - 48 V DC nominal, ± 5%
- Power over Ethernet (PoE):
 - IEEE 802.3af/at compliant source
- Maximum (worst case) power consumption:
 - 11 W (PoE or DC)
 - 4.1 W in idle mode

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 45° C (+32° F to +113° F)
 - Humidity: 10% to 90% 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:
 - 155 mm (W) x 155 mm (D) x 28 mm (H) -6.10" (W) x 6.10" (D) x 1.10" (H)
 - 310 g/0.68 lb

- Single AP including packing box and accessories:
 - 185 mm (W) x 172 mm (D) x 57 mm (H) -7.28" (W) x 6.77" (D) x 2.24" (H)
 - 500 g/1.10 lb

Reliability

- MTBF: 1,143,213h (130.5 years) at +25°C operating temperature

Capacity

- Up to 16 SSID per radio (total 32 SSID)**
- Support for up to 512 associated client devices per AP

Software features

- Up to 4K APs when managed by OV2500. There is no limit on the number of AP groups
- Up to 64 APs per web-managed (HTTP/ HTTPS) cluster
- Scale up to 255 APs per web-managed cluster with mixed AP models (min qty of 8 AP122x, AP123x or AP1251 required)
- Auto channel selection
- Auto transmit power control
- Bandwidth control per SSID
- L2 roaming
- L3 roaming with OmniVista 2500
- Captive portal (Internal/ External)
- Guest self-registration (optional SMS notification) with OmniVista
- Internal user database
- RADIUS client
- Guest social-login with OmniVista
- RADIUS proxy authentication OmniVista
- LDAP/AD proxy authentication OmniVista
- Wireless QoS
- Band steering
- Client smart load balance
- Client sticky avoidance
- User behavior tracking
- White/black list
- Zero-touch provisioning (ZTP)
- NTP server client
- ACL
- DHCP/DNS/NAT
- Wireless MESH P2P/P2MP
- Wireless Bridge
- Rogue AP location and containment
- Dedicated Scanning AP
- System log report
- SSHv2

- SNMPv2
- SNMP Trap Notification with OmniVista 2500
- Wireless attack detection with OmniVista 2500
- Floor plan and heat map with OmniVista 2500
- Stanley Healthcare/Aeroscout RTLS support

Note: Some features are limited by local regulatory settings

Security

- 802.11i, Wi-Fi Protected Access 2 (WPA2), WPA, AES 128-256 bits
- 802.1X
- WEP, Temporal Key Integrity Protocol (TKIP)
- Firewall: ACL, wIPS/wIDS and DPI application policy enforcement with OmniVista™
- Portal page authentication
- Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys

IEEE standard

- IEEE 802.11a/b/g/n/ac Wave 2
- IEEE 802.11e WMM, U-APSD
- IEEE 802.11h, 802.11i, 802.11e QoS
- IEEE 802.1Q (VLAN tagging)
- 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
- CE marked
- VCCI (Japan)
- RoHS, REACH, WEEE
- UL2043 plenum rating
- EN 60601-1-1 & EN 60601-1-2
- EMI and susceptibility (Class B)
- 2014/35/EU Low Voltage Directive
- 2014/30/EU EMC Directive
- 2011/65/EU RoHS Directive
- 2014/53/EU Radio Equipment Directive
- EN 55032
- IEC/EN 60950
- EN 300 328
- EN 301 893
- EN 301 489-1
- EN 301.489-17

Datasheet

[Alcatel-Lucent OmniAccess Stellar AP1201](#)

Ordering information

| Item | Description |
|-----------------|---|
| OAW-AP1201-RW | Indoor Entry range Enterprise 802.11ac MU-MIMO AP, Dual-Radio, 11n 2x2:2 + 11ac 2x2:2, 1x GbE, BLE radio, 1x Console, and 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-AP1201-US | Indoor Entry range Enterprise 802.11ac MU-MIMO AP, Dual-Radio, 11n 2x2:2 + 11ac 2x2:2, 1x GbE, BLE radio, 1x Console, and integrated antennas. Restricted regulatory domain: United States |
| OAW-AP1201-ME | Indoor Entry range Enterprise 802.11ac MU-MIMO AP, Dual-Radio, 11n 2x2:2 + 11ac 2x2:2, 1x GbE, BLE radio, 1x Console, and integrated antennas. Restricted regulatory domain: Middle East (Israel, Egypt) |
| Accessories | Description |
| OAW-AP-MNT-B | OmniAccess indoor mounting kit, for AP1X01, 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 AP1X01, AP122X, AP123X, Type W wall and ceiling mounting with screws. Optional for customer ordering |
| OAW-AP-MNT-C | OmniAccess indoor mounting kit, for AP1X01, AP122X, AP123X, Type C1 (Open Silhouette) and C2 (Flanged Interlude), for other shaped ceiling rail mounting. Optional for customer ordering |
| PD-9001GR/AT/AC | 1-Port IEEE 802.3at PoE Midspan. Port speed 10/100/1000M PoE power 30W. No power cord included. Please order PWR-CORD-XX for country specific power cord. |
| ADP-30HRBD | 48V/30W AC-to-DC Power Adapter with Type A DC plug 2.1*5.5*9.5mm circular, straight. Please order PWR- CORD-XX for country specific power cord. |

Warranty

OmniAccess Stellar Access Points come with Hardware Limited Lifetime Warranty (HLLW).

Services and support

OmniAccess Stellar Access Points include 1 year of complementary SUPPORT Software for partners. For more information about our Professional services, Support services, and Managed services, please go to <http://enterprise.alcatel-lucent.com/?services=EnterpriseServices&page=directory>

Figure 1. OmniAccess AP1201 BLE antenna pattern

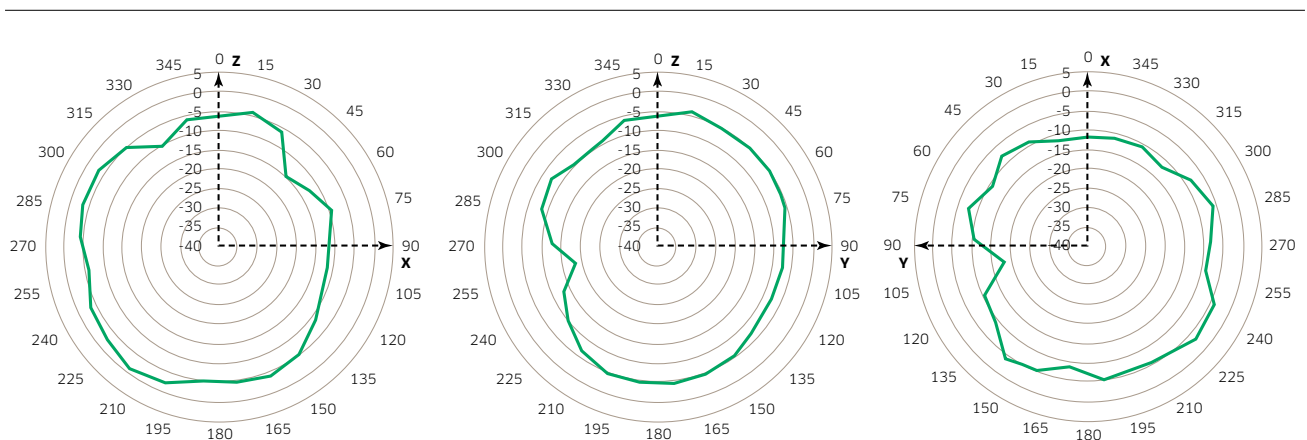


Figure 2. OmniAccess AP1201 antenna pattern plots

