Alcatel-Lucent OmniAccess Stellar AP1201H

Indoor Hospitality high-performance 802.11ac Wave 2 access point

Multi-functional Alcatel-Lucent OmniAccess® Stellar AP1201H access point is a highly versatile, and performance rich access point providing operational simplicity and quality user experience. The OmniAccess Stellar AP1201H indoor WiFi access point provides high-performance Gigabit WiFi for in room applications such as hotels, classrooms, dormitories, clinics, remote/home office and more.
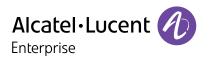
OmniAccess Stellar AP1201H

The efficient 802.11ac AP1201H access point supports a maximum concurrent data rate of 1.2 Gb/s (867 Mb/s in 5 GHz and 300 Mb/s in 2.4 GHz), MU-MIMO and two spatial streams (2SS). They provide simultaneous multicast data transmission to multiple devices, maximizing data throughput and improving network efficiency. The AP1201H offers Gigabit ethernet uplink, 3x Gigabit downlink and one of which support 802.3af PSE to power to the attached device, one pair of RJ-45 passthrough port, 1USB 2.0 port for IoT appliance.

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

Cloud enabled with OmniVista Cirrus

The AP1201H 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.

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OmniVista 2500 managed deployment

The AP1201H 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). OmniVista 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. 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 AP1201H by default operates in a cluster architecture to provide simplified plug-and-play deployment. The access point cluster is an autonomous system that can consist 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.

The AP1201H 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 AP1201H 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 AP1201H 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 AP1201H 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 AP1201H AP 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, dual radio, 5 GHz 802.11ac 2x2:2 MU-MIMO, and 2.4 GHz 802.11n 2x2:2 MIMO
- 5 GHz: Two spatial stream multi user MU-MIMO for up to 867 Mb/s wireless data rate, simultaneous data transmission for up to 2 devices
- 2.4 GHz: Two spatial stream single user (SU) MIMO for up to 300 Mb/s wireless data rate to individual 2x2 HT40 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-AP1201H-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 and 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 MCS15)
  - 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

*160 MHz channel support will be available in the future

Interfaces

- Uplink: 1× 10/100/1000Base-T autosensing (RJ-45) port, Power over Ethernet (PoE)
- Downlink: 1× 10/100/1000Base-T autosensing (RJ-45) port, Power over Ethernet (PoE-PSE) 802.3af compliant
- Downlink: 2× 10/100/1000Base-T autosensing downlink port
- Passive Pass through one pair, back and bottom
- 1× USB 2.0 (Type A):
  - Capable of supplying up to 5V 500mA power to an attached device; Optional BLE
  - 3G/4G cellular modems
- Reset button: Factory reset
- DC48V power jack

Visual Indicators

- For system status (Tri-color LED)
  - 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
- For PSE status
  - Orange on: PSE enabled, PD device online
  - Orange flashing: PSE enabled, PD device offline
  - Off: PSE disabled

Antenna

- AP1201H: Built-in 2×2:2 @ 2.4 GHz, 2x2:2 @ 5 GHz
  - Two integrated dual-band omni-directional antennas for 2x2 MIMO with maximum antenna gain of 4dBi in 2.4GHz and 6.3dBi in 5GHz.

Receive sensitivity (per chain)

	2.4 GHz	5 GHz
1 Mb/s	-96	
11 Mb/s	-88	
6 Mb/s	-91	-92
54 Mb/s	-74	-74
HT20 (MSC 0/8)	-90	-91
HT20 (MSC 7/15)	-71	-70
HT40 (MSC 0/8)	-87	-87
HT40 (MSC 7/15)	-68	-68
VHT20 (MSC 0)		-90
VHT20 (MSC 8)		-67
VHT40 (MSC 0)		-87
VHT40 (MSC 9)		-62
VHT80 (MCS0)		-84
VHT80 (MCS9)		-59

Maximum transmit power (per chain) ±2 dBm

	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	15 dBm	15 dBm
HT20 (MSC 0/8)	18 dBm	18 dBm
HT20 (MSC 7/15)	15 dBm	17 dBm
HT40 (MSC 0/8)	18 dBm	18 dBm
HT40 (MSC 7/15)	14 dBm	14 dBm
VHT20 (MSC 0)		18 dBm
VHT20 (MSC 8)		13 dBm
VHT40 (MSC 0)		18 dBm
VHT40 (MSC 9)		13 dBm
VHT80 (MCS0)		18 dBm
VHT80 (MCS9)		12 dBm

Chile: Regulatory compliance. Maximum transmit power of 150 mW.

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):
  - 48 V DC (nominal) 802.3af/ 802.3at compliant source
- Maximum (worst case) power consumption:
  - 11 W (802.3af PoE with PSE function disabled);
  - 25.5 W (802.3at PoE or DC, USB disabled and full 802.3af PSE);
  - 25.5 W (802.3at PoE, USB enabled and PSE output power max 12 W);

Mounting
- The AP ships with a mounting plate to attach the AP to a single-gang wall-box (most international variations covered).
- Optional mount kit for desk mount.

Environmental
- Operating:
  - ¬ Temperature: 0° C to 45° C (+32° F to +113° F)
  - ¬ Humidity: 5% 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:
  - ¬ 95 mm (W) x 34.45 mm (D) x 161.5 mm (H) -3.74" (W) x 1.35" (D) x 6.35" (H)
  - ¬ 239 g/0.53 lb
- Single AP including packing box and accessories:
  - ¬ 115 mm (W) x 54 mm (D) x 182 mm (H) -4.52" (W) x 2.13" (D) x 7.17"(H)
  - ¬ 417 g/0.92 lb

Reliability
- MTBF: 1,393,193h (159 years) at +25° C operating temperature

Capacity
- Up to 8 SSID per radio (total 16 SSID)
- Support for up to 256 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 32 APs per web-managed cluster (only AP1201H)
- Up to 64 APs per web-managed cluster with mixed AP models (min qty of 4 AP12xx required)
- Auto channel selection
- Auto transmit power control
- Bandwidth control per SSID
- L2 roaming
- L3 roaming with OmniVista
- Captive portal (Internal/ External)
- Guest self-registration (optional SMS notification) with OmniVista
- Internal user database
- RADIUSclient
- 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
- SNMPv2
- SNMP Trap Notification with OmniVista
- Wireless attack detection with OmniVista
- Floor plan and heat map with OmniVista
- 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
- Dynamic WEP, Advanced Encryption Standard (AES), Temporal Key Integrity Protocol (TKIP)
- Firewall: ACL, wIPS/wIDS
- 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
- 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
- RoHS, REACH, WEEE
- UL2043 plenum rating
- EMI and susceptibility (Class B)

Ordering information

Item	Description
OAW-AP1201H-RW	OmniAccess Stellar AP1201H. Dual radio 2x2:2 802.11a/b/g/n/ac MU-MIMO AP, integrated antenna, 1x GbE uplink, 3x GbE downlink, 1x RJ45 passthrough, 1x USB (opt BLE) and 1x 48V DC power interface. 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, Israel or Egypt
OAW-AP1201H-US	OmniAccess Stellar AP1201H. Dual radio 2x2:2 802.11a/b/g/n/ac MU-MIMO AP, integrated antenna, 1x GbE uplink, 3x GbE downlink, 1x RJ45 passthrough, 1x USB (opt BLE) and 1x 48V DC power interface. Restricted regulatory domain: United States
OAW-AP1201H-ME	OmniAccess Stellar AP1201H. Dual radio 2x2:2 802.11a/b/g/n/ac MU-MIMO AP, integrated antenna, 1x GbE uplink, 3x GbE downlink, 1x RJ45 passthrough, 1x USB (opt BLE) and 1x 48V DC power interface. Restricted regulatory domain: (Middle East) Israel, Egypt)

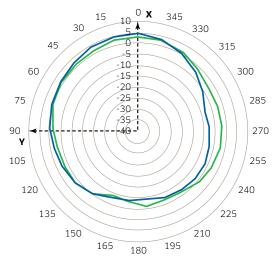| Accessories	Description
OAW-AP-MNT-DSK	OmniAccess desk mounting kit, for AP1201H. Optional for customer ordering.
ADP-30HRBD	48V/30W AC-to-DC Power Adapter with Type A DC plug 2.1*5.5*9.5mm circular, straight. Please order PWR-CORD-XX for country specific power cord.
PD-3501G/AC	1-Port IEEE 802.3af PoE Midspan. Port speed 10/100/1000M PoE power 15W. No power cord included. Please order PWR-CORD-XX for country specific power cord.
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.

Warranty

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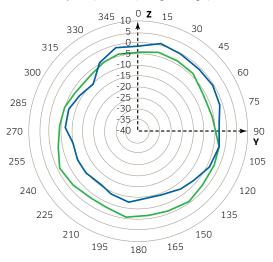
Services and support

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 https://www.al-enterprise.com/en/services
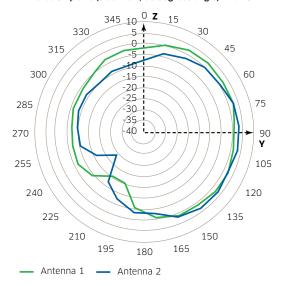
Figure 1. OmniAccess AP1201H antenna pattern plots

Horizontal or Azimuth plane (top view) – 2.4 GHz

Horizontal or Azimuth plane (top view) – 5 GHz

Elevation plane (side view, 0 degrees angle) – 2.4 GHz
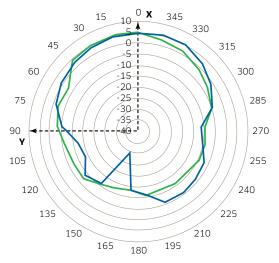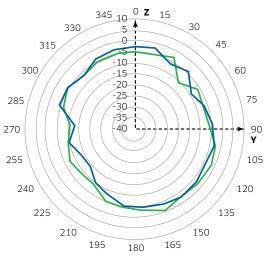
Elevation plane (side view, 0 degrees angle) – 5 GHz

Elevation plane (side view, 90 degrees angle) – 2.4 GHz

Elevation plane (side view, 90 degrees angle) – 5 GHz

— Antenna 1   — Antenna 2

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