

Alcatel-Lucent OmniAccess Stellar AP1101

Indoor wireless access point

Multifunctional Alcatel-Lucent OmniAccess® Stellar AP1101 is an entry level access point (AP) for medium density and small business deployments. The OmniAccess AP1101 Indoor Wi-Fi access point provides a high throughput and seamless user experience. It is ideal for enterprises of all sizes demanding a simple, secure and scalable wireless solution. The OmniAccess AP1101 features enhanced WLAN technology with RF Radio Dynamic Adjustment, a distributed control Wi-Fi architecture, and secure network admission control with unified access.



OmniAccess AP1101 is a dual-radio, 802.11ac 2x2 MIMO, indoor wireless access point. Powered by multi-core CPU processor, the OmniAccess AP1101 has fast encoding and decoding capabilities and provides reliable multiuser access. It supports up to a 1.2 Gb/s wireless data rate and up to 64 simultaneous clients association.

Alcatel-Lucent OmniVista 2500 managed deployment

The AP1101 can be managed by Alcatel-Lucent OmniVista® 2500 Network Management System. The access points are managed as one or more 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 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 heatmap for WLAN site planning.

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

The OmniAccess AP1101 works in a fully redundant cluster architecture to provide simplified plug-and-play deployments.

The access point cluster is an autonomous system that consists of a group of OmniAccess AP1101s and a virtual controller, which is a selected access point, for cluster management. One AP cluster of only AP1101 can scale up to 32 access points. The AP cluster can also scale up to 64 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 that the whole network is up and functional within a few minutes.

The OmniAccess AP1101 also supports 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.

Quality of service for unified communication apps

The OmniAccess AP1101 supports 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 AP1101 can be configured to provide part-time or dedicated air monitoring for spectrum analysis and wireless intrusion protection.

Integrated guest management

The OmniAccess AP1101 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 therefore can be used by any non-IT person, such as a front desk or receptionist. The OmniAccess AP1101 also supports a built-in customizable captive portal which enables customers to offer unique guest access.

Product specifications

Dimensions/weight

- Single AP excluding packing box and accessories:
 - 155 mm (W) X 155 mm (D) X 28 mm (H)
 - 6.10 in (W) X 6.10 in (D) X 1.10 in (H)
 - 270 g (0.6 lb)
- Including AP, packing box and accessories:
 - 185mm (W) x 172mm (D) x 57mm (H)
 - 7.28" in (W) x 6.77 in (D) x 2.24 in (H)
 - 467 g (1.0 lb)

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)

Mounting

- Wall mount, ceiling tile and desktop

Power

- Maximum (worst case) power consumption:
 - 10 W (802.3at PoE or DC)
- Direct DC source:
 - 48 V DC nominal, +/- 5%

- Power over Ethernet (PoE):
 - 48 V DC (nominal) 802.3af/802.3at compliant source
 - When both power sources are available, DC power takes priority

Interfaces

- 1× 10/100/1000 Mb/s full/half-duplex Ethernet (RJ-45)
- PoE-PD: 48 V DC (nominal) 802.3af or 802.3at PoE
- Security lock slot
- Reset button: Factory reset

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

- Built-in 2×2:2, 3.4 dBi @ 2.4 GHz, 2.55 dBi @ 5 GHz

IEEE standard

- IEEE 802.11a/b/g/n/ac wave1
- IEEE 802.11e WMM
- IEEE 802.11i, 802.11e QoS, 802.11r fast roaming
- 802.11k Radio Resource Management
- 802.11v BSS Transition Management

Reliability

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

Capacity

- Up to 8 SSID per radio (total 16 SSID)
- Support for up to 64 associated client devices per AP

Radio specification

- Supported frequency bands are as below and available channels depend on configured regulatory.

- 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 model OAW-AP1101-ME:
 - 2400 - 2483.5 MHz
 - 5150 - 5350 MHz
- 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 beamforming (TxBF) for increased signal reliability and range
- 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)
 - 802.11n high-throughput (HT) support: HT 20/40
 - 802.11ac very high throughput (VHT) support: VHT 20/40/80
 - 802.11n/ac packet aggregation: Aggregated Mac Protocol Data Unit (A-MPDU), Aggregated Mac Service Data Unit (A-MSDU)
- Advanced Cellular Coexistence (ACC) Minimizes interference from 3G/4G cellular networks, distributed antenna systems, and commercial small cell/femtocell equipment

Software feature

- Scale up to 512 APs when OV2500 managed, no limit on number of AP groups
- Scale up to 32 APs per web-managed cluster (only AP1101)
- Scale up to 64 APs per web-managed cluster with mixed AP models (min qty of 4 AP12xx required)
- Bandwidth capping per user
- L2 roaming
- L3 roaming with OmniVista 2500
- Wireless QoS
- Rogue AP detection and containment
- White/black list
- System log report
- NTP server client
- User based load balance
- Zero-touch provisioning (ZTP)
- Band steering
- SNMP Trap Notification with OmniVista
- Wireless Attack Detection with OmniVista
- Floor plan & heat map with OmniVista

Security

- 802.1X/WPA/WPA2 PSK
- TKIP, AES, CCMP encryption
- EAP types: EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC
- Firewall: ACL, wIPS/wIDS and DPI application policy enforcement with OmniVista
- Portal page authentication

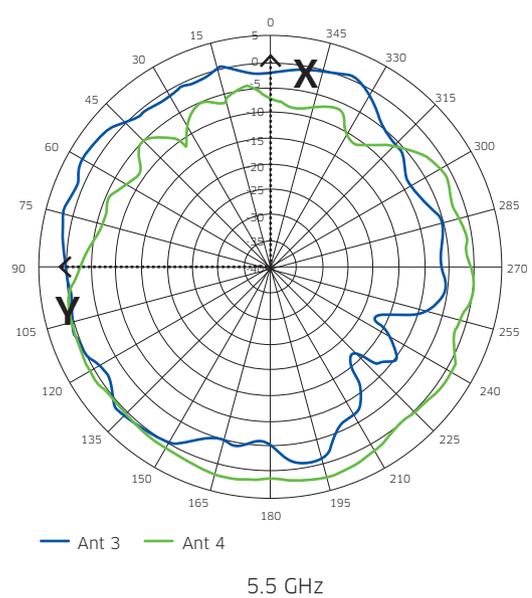
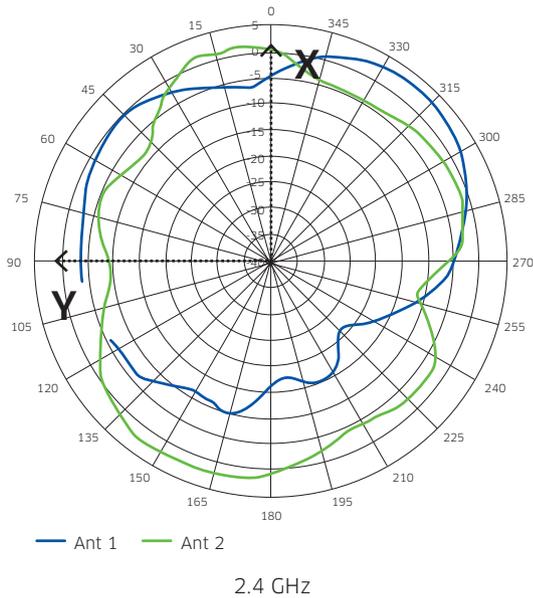
Regulatory & certification

- CE & RoHS, REACH, WEEE, CB Scheme Safety, NRTL
- UL2043 plenum rating,
- FCC and IC approval and certificates,
- China RoHS
- EMI and susceptibility (Class B)
- EN 60601-1-2 EMC requirements for the Medical Directive 93/42/EEC
- VCCI (Japan)

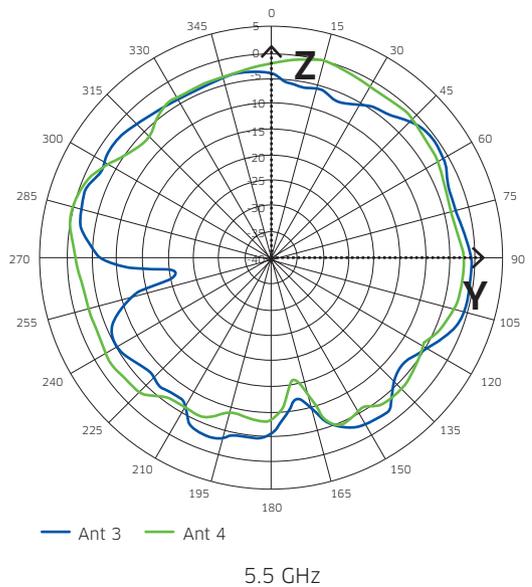
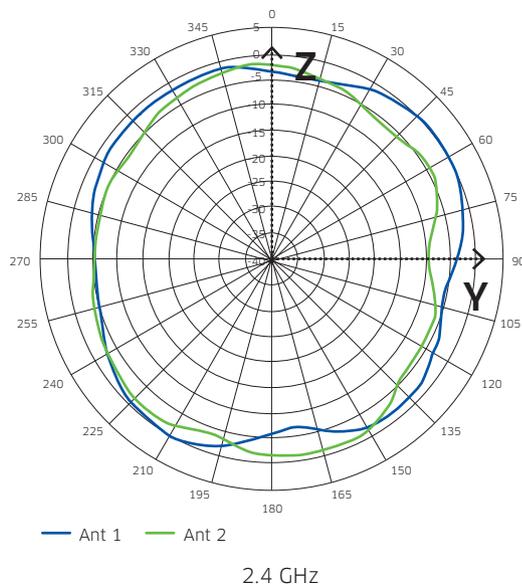
- ARIB-STD 66 (Japan)
- ARIB-STD T71 (Japan)
- Wi-Fi Alliance (WFA) certified 802.11a/b/g/n/ac

Figure 1. OmniAccess AP1101 antenna pattern plots

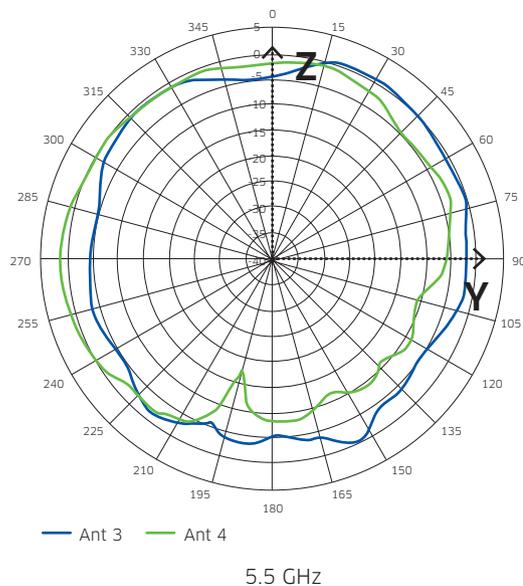
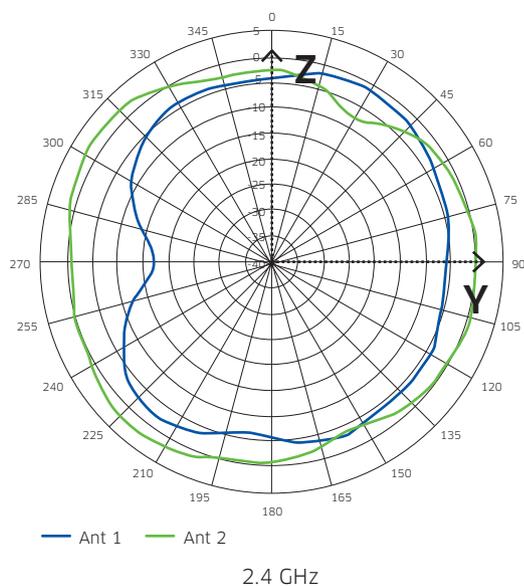
Horizontal or azimuth plane (top view)



Elevation plane (side view, 0 degrees angle)



Elevation plane (side view, 90 degrees angle)



RF Performance Table

Receiver sensitivity (dBm) per receive chain		
	2.4 GHz	5 GHz
1 Mb/s	-91	
11 Mb/s	-85	
6 Mb/s	-87	-87
54 Mb/s	-70	-70
HT20(MSC 0/8)	-85	-83
HT20(MSC 7/15)	-67	-65
HT40(MSC 0/8)	-82	-80
HT40(MSC 7/15)	-64	-62
VHT80(MCS0)		-59
VHT80(MCS9)		-57

Transmit power (per chain)		
	2.4 GHz	5 GHz
1 Mb/s	17 dBm	
11 Mb/s	17 dBm	
6 Mb/s	17 dBm	20 dBm
54 Mb/s	15 dBm	18 dBm
HT20(MSC 0/8)	17 dBm	20 dBm
HT20(MSC 7/15)	15 dBm	18 dBm
HT40(MSC 0/8)	17 dBm	20 dBm
HT40(MSC 7/15)	15 dBm	18 dBm
VHT80(MCS0)		20 dBm
VHT80(MCS9)		16 dBm

Ordering information

PART NUMBER	DESCRIPTION
OmniAccess AP1101	
OAW-AP1101-RW	OmniAccess Stellar AP1101 wireless access point. Dual radio 2x2 802.11a/b/g/n/ac wireless access point with support for 802.11 b/g/n and 802.11 a/n/ac operation, dual-band integral antenna, 1 x 10/100/1000Base-T (RJ-45) Ethernet interface (supports 802.3af Power over Ethernet), 1 x 48V DC power interface, console port. Unrestricted regulatory domain. These products should be considered rest of world products and MUST NOT be used for deployments in the United States, Japan or Israel.
OAW-AP1101-US	OmniAccess Stellar AP1101 wireless access point. Dual radio 2x2 802.11a/b/g/n/ac wireless access point with support for 802.11 b/g/n and 802.11 a/n/ac operation, dual-band integral antenna, 1 x 10/100/1000Base-T (RJ-45) Ethernet interface (supports 802.3af Power over Ethernet), 1 x 48V DC power interface, console port. Restricted regulatory domain: United States
OAW-AP1101-ME	OmniAccess Stellar AP1101 wireless access point. Dual radio 2x2 802.11a/b/g/n/ac wireless access point with support for 802.11 b/g/n and 802.11 a/n/ac operation, dual-band integral antenna, 1 x 10/100/1000Base-T (RJ-45) Ethernet interface (supports 802.3af Power over Ethernet), 1 x 48V DC power interface, console port. Restricted regulatory domain: Middle East
Accessories	
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.
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>