

ALCATEL-LUCENT OMNIACCESS AP1101 INDOOR WIRELESS ACCESS POINT

Multifunctional Alcatel-Lucent OmniAccess® 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. Featuring enhanced RF RDA technology, AP-Group architecture design, and a management mechanism based on a user's role, the OmniAccess AP1101 enables high capacity, excellent performance, and simplicity for small wireless LAN (WLAN) deployments. It also provides plug-and-play WLAN deployment making it ideal for small to medium-sized enterprises.



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 1.2Gb/s wireless data rate and up to 64 simultaneous clients association.

Plug-and-play deployment

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

The access point group is an autonomous system that consists of a group of OmniAccess AP1101s and a virtual controller, which is a selected access point, for AP-Group management. One AP-Group supports up to 16 OmniAccess AP1101s, 256 concurrent clients, and 16 WLANs (SSID).

The AP-Group 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 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 OmniPCX® Office, a mechanism by which all access points in a cluster will obtain bootstrap data securely from an on-premise OmniPCX Office.

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-Group 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: 155mm (W) X 155mm (D) X 28mm (H) -6.10" (W) X 6.10" (D) X 1.10" (H) / 270g (0.6lb)
- Including AP, packing box and accessories: 185mm (W) x 172mm (D) x 57mm (H) -7.28" (W) x6.77" (D) x2.24 (H) / 467g (1.03lb)

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

- 1x 10/100/1000Mb/s full/half-duplex Ethernet (RJ-45)
- PoE-PD: 48 V DC (nominal) 802.3af or 802.3at PoE
- Security lock slot
- Flexible LED to indicate
 - Power and system status
 - Radio and interface status
 - AP location
- Reset button: Factory reset

ANTENNA

- Built-in 2x2:2, 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, and up to 16 basic service set identifiers (BSSIDs) per AP.
- 16 APs per AP-Group

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
- 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)

SOFTWARE FEATURE

- Bandwidth capping per user
- L2 roaming
- Wireless QoS
- Rogue AP location and containment
- White/black list
- System log report
- NTP server client
- User based load balance
- Zero-touch provisioning (ZTP)
- Band steering

SECURITY

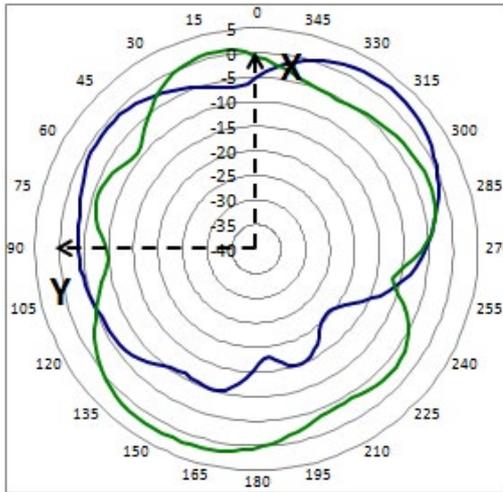
- 802.1X/WPA/WPA2 PSK
- TKIP, AES, CCMP encryption
- EAP types: EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC
- Portal page authentication

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

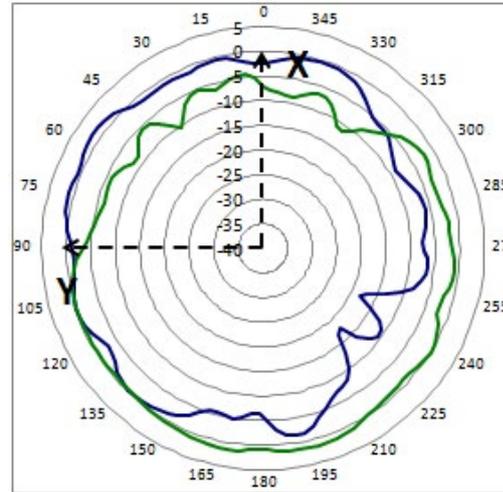
Figure 1. OmniAccess AP1101 antenna pattern plots

Horizontal or Azimuth plane (top view)



2.4Ghz

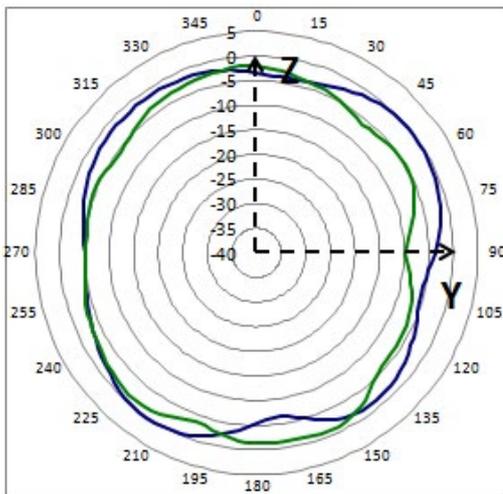
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— Ant 2



5Ghz

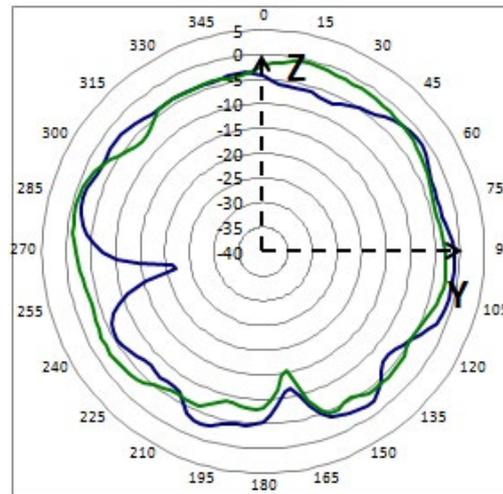
— Ant 3
— Ant 4

Elevation plane (side view, 0 degrees angle)



2.4Ghz

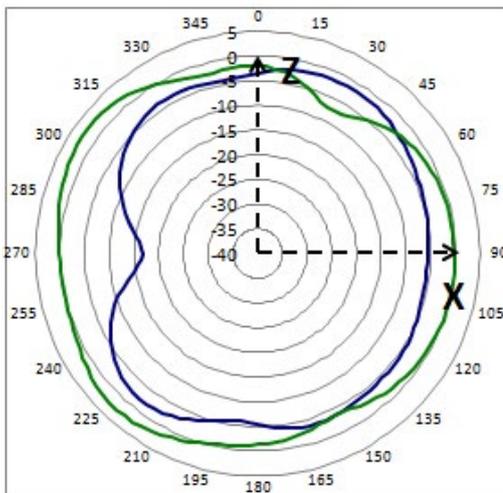
— Ant 1
— Ant 2



5Ghz

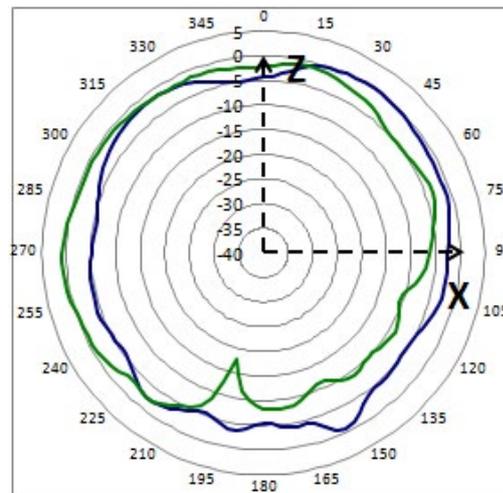
— Ant 3
— Ant 4

Elevation plane (side view, 90 degrees angle)



2.4Ghz

— Ant 1
— Ant 2



5Ghz

— Ant 3
— Ant 4

	Receiver sensitivity (per 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 AP1101 wireless access point for SMB. 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 AP1101 wireless access point for SMB. 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-AP-MNT-B	OmniAccess AP1101 mount kit, type B1(9/16") and B2(15/16") for T shaped spare ceiling rail mounting. Standard configuration in the product packaging.
OAW-AP-MNT-W	OmniAccess AP1101 mount kit, type A wall mounting and ceiling mounting with screws.
OAW-AP-MNT-C	OmniAccess AP1101 mount kit, type C1 (open silhouette) and C2 (flanged interlude), for other shaped ceiling rail mounting

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