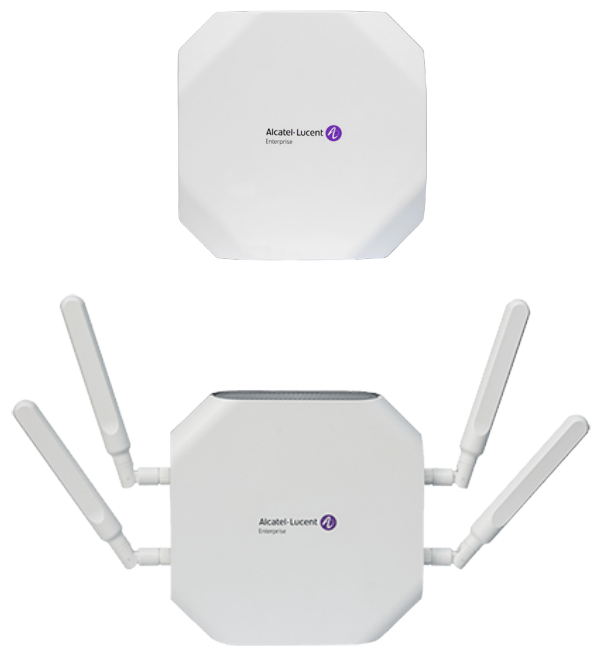


Alcatel-Lucent OmniAccess Stellar AP1320 series

Indoor 802.11 ax (Wi-Fi 6) wireless access point

The [Alcatel-Lucent OmniAccess® Stellar Indoor AP1320](#) series access points with 802.11ax technology enables faster speeds, more capacity, and efficient airtime allocation for clients on both 2.4GHz and 5GHz Wi-Fi bands. This enables Access Points to better service higher density of clients, deliver more capacity for bandwidth hungry and latency sensitive voice and video clients, and provide a dependable secure network for IoT devices while increasing their battery powered lifespan. The OmniAccess® Stellar WLAN brings unparalleled experience for connectivity, coverage and performance for the modern IoT connected Enterprise.



The 802.11ax high performance AP1320 series models are designed to accommodate diverse growing capacity needs of next generation Mobility & IoT enabled networks. These access points are powered with four built-in radios, dual radios 2.4GHz/5GHz band serving high density Wi-Fi clients, one full band radio dedicated for scanning inherently improving network security and Wi-Fi quality, and an integrated Bluetooth/Zigbee radio enabling location and building automation services. The AP1320 series models support maximum aggregate data rate ~ 3Gbps (2.4Gbps in 5 GHz and 573Mbps in 2.4 GHz), and to support this higher capacity the access point is powered by Multigig Ethernet uplink.

OmniAccess® Stellar AP1320 series support all mandatory and several optional 802.11ax features, which include DL OFDMA with up to 37 RUs, UL OFDMA with up to 37 RUs, DL MU-MIMO, UL MU-MIMO, 1024-QAM modulation and more, making tomorrows diverse digital workspaces highly reliable and efficient.

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.

Datasheet

Alcatel-Lucent OmniAccess Stellar AP1320 series

802.11 ax (Wi-Fi 6) high efficiency features

IEEE 802.11ax allows enterprises to deliver high performance wireless LAN services with increased throughput, enabling more clients in dense environments and bringing power efficiency to Internet of Things (IoT) devices, while it remains fully backward compatible with existing 802.11 a/b/g/n/ac deployments. The 802.11ax standard is a dramatic step forward in wireless LAN technology for all organizations. Some of the key 802.11ax features enabled on OmniAccess Stellar AP1320 series are:

- Orthogonal frequency division multiple access (OFDMA) enables more clients to simultaneously operate in the same channel and thereby improving efficiency, latency, and throughput. OFDMA can concurrently address multiple clients in both directions downlink (DL) and uplink (UL), including full 37 OFDMA Resource Units (RUs). OFDMA is very effective in environments where there are many devices with short frames demanding lower latency.
- Multi-user multiple input, multiple output (MU-MIMO) allows more data to be transferred at once and enables an access point to handle a larger number of concurrent clients. This capability was introduced with 802.11ac, but now with 802.11ax the multi-user performance can be concurrently delivered in both directions downlink (DL) and uplink (UL).
- 1024 quadrature amplitude modulation mode (1024-QAM) boosting peak data-rates by as much as 25 percent.
- BSS Coloring improves spatial reuse in dense environments by providing a mechanism for color coding different overlapping BSS's, allowing more simultaneous transmissions.
- Extended Range (ER) provides increased coverage in scenarios where receiving side encounters high path loss and channel delay spread, especially in outdoor environments.
- Target wake time (TWT) makes Wi-Fi CERTIFIED 6 devices more power efficient. This capability lets client devices to sleep much longer, and wake up to less contention, extending the battery life of smart phones, IoT sensors, and other devices.
- Transmit beamforming improves signal power resulting in significantly higher rates at a given range.

Deliver enterprise grade security and scale with simplicity

OmniAccess Stellar enables a visionary distributed Wi-Fi architecture with centralized management and policy control, enforcing security at every step starting at the network edge, and allowing unparalleled scale in network capacity. This architecture is vital for enabling the next generation Digital Enterprise that demands business agility, seamless mobility and secure IoT enabled infrastructure empowering business transformation through continuous innovation.

OmniAccess Stellar provides enhanced security with WPA3, a new security standard for enterprise and public networks, improving Wi-Fi security by using advanced security algorithms and stronger ciphers in Enterprises including 192-bit security suite. Public spaces which provide open non-protected access, can now provide encryption and privacy using OmniAccess Stellar, which supports a new security standard Wi-Fi Enhanced Open based on opportunistic wireless encryption (OWE).

The access points can be deployed in three different modes, all through a single version of software simplifying IT operations.

For mid to large scale Enterprises, **Alcatel-Lucent OmniVista®** provides secure plug and play of Access Points for large scale deployment, with user friendly workflows for wireless services and unified access for end to end security. It comes with integrated unified policy authentication manager (UPAM) which helps define authentication strategy and policy enforcement for employees, guest management and BYOD devices. The AP1320 series has built-in DPI technology providing real-time Application Monitoring and enforcement capabilities. The network administrator can obtain a comprehensive view of applications running in the network and apply adequate controls to optimize the performance of the network for business-critical applications. OmniVista® provides advanced options for RF management,

wIDS/wIPS for intrusion detection and prevention, and heatmap for WLAN site planning. To further simplify IT, the access points can be managed as one or more access point (AP) groups (a logical grouping of one or more access points).

Cloud enabled with OmniVista Cirrus

The OmniAccess Stellar AP1320 series 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.

On Premise deployment with OmniVista® 2500

The OmniAccess Stellar AP1320 series can be managed from the Alcatel-Lucent OmniVista® 2500 on premise Network Management System.

For small to medium size Enterprises, **Wi-Fi Express a secure web managed (HTTPS) cluster deployment**

The OmniAccess Stellar AP1320 series by default can 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 which is managed by one AP elected as primary virtual manager. One AP cluster supports up to 256 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 OmniAccess Stellar AP1320 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.

The W-Fi Express mode 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 AP1320 series also supports a built-in customizable captive portal which enables customers to offer secure and seamless guest access experience.

Quality of service for unified communication apps

The OmniAccess Stellar AP1320 series 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 WLAN. The OmniAccess Stellar AP1320 series can be configured to provide part-time or dedicated scanning for spectrum analysis and wireless intrusion protection.

Product specifications

Feature	Description
Radio Specification	• AP type: Indoor, integrated four radios • Dual Radio, 5 GHz 802.11ax 4x4:4 and 2.4 GHz 802.11ax 2x2:2 ↳ 5 GHz: 4x4:4 up to 2.4Gbps wireless data rate to individual 4SS HE80 802.11ax client devices. 2.4 GHz: 2x2:2 up to 573Mbps wireless data rate to individual 2SS HE40 802.11ax 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 • Brazil: Maximum transmit power: 30dBm on 2.4GHz, 30dBm on 5GHz • Maximum (aggregate, conducted total) transmit power (limited by local regulatory requirements): ↳ 21dBm on 2.4GHz (18dBm per chain) ↳ 24dBm on 5GHz (18dBm per chain) • DFA (Dynamic Frequency Adjustment) optimizes available channels and provides proper transmission power • Short guard interval for 20-MHz, 40-MHz, 80-MHz, and 160(80+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 (Mbps): ↳ 802.11b: 1, 2, 5.5, 11 ↳ 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 ↳ 802.11n(2.4GHz): 6.5 to 300 (MCS0 to MCS15, HT20 to HT40) ↳ 802.11n(5GHz): 6.5 to 600 (MCS0 to MCS31, HT20 to HT40) ↳ 802.11ac: 6.5 to 1733 (MCS0 to MCS9, NSS = 1 to 4, VHT20 to VHT80; NSS=2, VHT160(80+80)) ↳ 802.11ax(2.4GHz): 3.6 to 573 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE40) ↳ 802.11ax(5GHz): 3.6 to 2,402 (MCS0 to MCS11, NSS = 1 to 4, HE20 to HE80; NSS=2, HE160(80+80)) • Supported modulation types: ↳ 802.11b: BPSK, QPSK, CCK ↳ 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM ↳ 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM • 802.11n high-throughput (HT) support: HT 20/40 • 802.11ac very high throughput (VHT) support: VHT 20/40/80/160(80+80) • 802.11ax high efficiency (HE) support: HE 20/40/80/160(80+80) • Advanced Cellular Coexistence (ACC) ↳ Minimizes interference from 3G/4G cellular networks, distributed antenna systems, and commercial small cell/ femtocell equipment • Full band 1x1 radio, dedicated for scanning • Bluetooth Low Energy (BLE) 5.1/ Zigbee radio, integrated antenna ↳ Bluetooth 5.1: up to 18dBm transmit power (class 1) and -93dBm receive sensitivity ↳ Zigbee: up to 18dBm transmit power and -102dBm receive sensitivity ↳ Integrated omnidirectional antenna with peak gain of 3.2dBi
Interfaces	• 1x 10BASE-T/100BASE-TX/1000BASE-T/2500BASE-T IEEE 802.3 compliant autosensing (RJ-45) port, ENET0, Power over Ethernet (PoE) 802.3at compliant • 1x 10/100/1000 BASE-T IEEE 802.3 compliant auto-sensing (RJ-45) port, ENET1, Power over Ethernet (PoE) 802.3at compliant • 1x USB 2.0 Type A (5V, 500mA) • Reset button: Factory reset

Feature	Description		
Visual Indicators (Tri-color LED)	- 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 2.0) for secure storage of credentials and keys 802.11i, WPA2, WPA3, Enterprise with CNSA Option, Personal (SAE), Enhanced Open (OWE) 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		
Antenna	- AP1321: 2×2:2 @ 2.4GHz, 4×4:4 @ 5GHz - Integrated omni-directional antennas with maximum antenna gain of 3.5dBi in 2.4 GHz and 3.7dBi in 5 GHz - AP1322: 2×2:2 @ 2.4GHz, 4×4:4 @ 5GHz 4 RP-SMA female external antenna connectors - ANT0-ANT1 are dual band antenna connectors, ANT2-ANT3 are 5GHz antenna connectors		
Receive sensitivity (per chain)		2.4 GHz	5 GHz
	1 Mbps	-99	
	11 Mbps	-90	
	6 Mbps	-93	-93
	54 Mbps	-77	-77
	HT20(MCS 0/8)	-93	-93
	HT20(MCS 7/15)	-76	-74
	HT40(MCS 0/8)	-91	-90
	HT40(MCS 7/15)	-74	-71
	VHT20(MCS 0)	-93	-93
	VHT20(MCS 8)	-72	-70
	VHT40(MCS 0)	-91	-90
	VHT40(MCS 9)	-68	-66
	VHT80(MCS0)		-87
	VHT80(MCS9)		-62
	HE20(MC0)	-94	-93
	HE20(MC11)	-65	-65
	HE40(MC0)	-91	-91
	HE40(MC11)	-62	-62
	HE80(MC0)		-88
	HE80(MC11)		-59
Maximum Transmit power (per chain)		2.4 GHz	5 GHz
	1 Mbps	18 dBm	
	11 Mbps	18 dBm	
	6 Mbps	17 dBm	18 dBm
	54 Mbps	16 dBm	16 dBm
	HT20(MCS 0/8)	17 dBm	17 dBm
	HT20(MCS 7/15)	14 dBm	15 dBm
	HT40(MCS 0/8)	17 dBm	17 dBm
	HT40(MCS 7/15)	14 dBm	15 dBm
	VHT20(MCS 0)	17 dBm	17 dBm
	VHT20(MCS 8)	14 dBm	15 dBm
	VHT40(MCS 0)	17 dBm	17 dBm
	VHT40(MCS 9)	14 dBm	15 dBm
	VHT80(MCS0)		17 dBm
	VHT80(MCS9)		15 dBm
	HE40 (MCS11)	12 dBm	13 dBm
	HE80 (MCS11)		13 dBm

Note: Maximum transmit power is limited by local regulatory settings.

Feature	Description
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: ↪ 24.8W (input IEEE 802.3at POE); Unrestricted functionality ↪ 11W (input IEEE 802.3af POE); The USB port is disabled, and both Wi-Fi radios will operate in 2x2:2 mode • Maximum power consumption in idle mode: ↪ 9W
Mounting	• Ceiling/Wall mounting (Mount kit needs to be ordered separately)
Environmental	• Operating: ↪ Temperature: 0°C to 50°C (-32°F to +122°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: ↪ 180mm (W) x 180mm (D) x 36mm (H) - 7.08" (W) x 7.08" (D) x 1.41" (H) ↪ 751g / 1.66lb • Single AP including packing box and accessories: ↪ 228mm (W) x 198mm (D) x 66mm (H) - 8.97" (W) x 7.79" (D) x 2.59" (H) ↪ 978g / 2.16lb
Reliability	• MTBF: 1,104,490h (126.08 years) at +25°C operating temperature
Capacity	• Up to 16 SSID per radio (total 32 SSID) • Support for up to 1024 associated client devices

Feature	Description
Software feature	• Up to 4K APs when managed by OV2500. No limit on number of AP groups • Up to 255 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/ External) • Guest self-registration (optional SMS notification) with OmniVista 2500 • Internal user database • RADIUS client • Guest social-login with OmniVista 2500 • RADIUS proxy authentication OmniVista 2500 • LDAP/AD proxy authentication OmniVista 2500 • Wireless QoS • Band steering • Client smart load balance • Client sticky avoidance • User behavior tracking • White/black list • Zero-touch provisioning (ZTP) • NTP Client • ACL • DHCP/DNS/NAT • Wireless MESH P2P/P2MP • Wireless Bridge • Rogue AP location and containment • Dedicated Scanning AP • System log report • SSHv2 • SNMPv2 • Wireless attack detection with OmniVista 2500 • Floor plan and heat map with OmniVista 2500™ • Stanley Healthcare/Aeroscout RTLS support
IEEE standard	• IEEE 802.11a/b/g/n/ac/ax • 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 CERTIFIED Wi-Fi 6, Enhanced Open™, Passpoint®, Agile Multiband (MBO) • FCC • CE Marked • EN 60601-1-1 & EN 60601-1-2 • Bluetooth SIG • RoHS, REACH, WEEE • UL2043 (plenum rated) • 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

Ordering information

Access Points	Description
OAW-AP1321-RW	OmniAccess Stellar AP1321. Wi-Fi 6 Indoor AP with four radios – Dual radio 5GHz 4x4:4 / 2.4GHz 2x2:2, dedicated scanning radio, and integrated BLE/Zigbee radio. Integrated Omni Directional antenna, interfaces 2.5GbE RJ-45, 1GbE RJ-45, USB, 48V DC Power. AP mount kit to be ordered separate-ly. Unrestricted Regulatory Domain: Not for use in US, Egypt, Israel, Japan
OAW-AP1321-ME	OmniAccess Stellar AP1321. Wi-Fi 6 Indoor AP with four radios – Dual radio 5GHz 4x4:4 / 2.4GHz 2x2:2, dedicated scanning radio, and integrated BLE/Zigbee radio. Integrated Omni Directional antenna, interfaces 2.5GbE RJ-45, 1GbE RJ-45, USB, 48V DC Power. AP mount kit to be ordered separate-ly. Restricted Regulatory Domain: Egypt, Israel
OAW-AP1321-US	OmniAccess Stellar AP1321. Wi-Fi 6 Indoor AP with four radios – Dual radio 5GHz 4x4:4 / 2.4GHz 2x2:2, dedicated scanning radio, and integrated BLE/Zigbee radio. Integrated Omni Directional antenna, interfaces 2.5GbE RJ-45, 1GbE RJ-45, USB, 48V DC Power. AP mount kit to be ordered separate-ly. Restricted Regulatory Domain: US
OAW-AP1322-RW	OmniAccess Stellar AP1322. Wi-Fi 6 Indoor AP with four radios – Dual radio 5GHz 4x4:4 / 2.4GHz 2x2:2, dedicated scanning radio, and integrated BLE/Zigbee radio. Interfaces 2.5GbE RJ-45, 1GbE RJ-45, USB, 48V DC Power & 6x antenna connectors. AP mount kit and antennas to be ordered separate-ly. Unrestricted Regulatory Domain: Not for use in US, Egypt, Israel, Japan
OAW-AP1322-ME	OmniAccess Stellar AP1322. Wi-Fi 6 Indoor AP with four radios – Dual radio 5GHz 4x4:4 / 2.4GHz 2x2:2, dedicated scanning radio, and integrated BLE/Zigbee radio. Interfaces 2.5GbE RJ-45, 1GbE RJ-45, USB, 48V DC Power & 6x antenna connectors. AP mount kit and antennas to be ordered separate-ly. Restricted Regulatory Domain: Egypt, Israel
OAW-AP1322-US	OmniAccess Stellar AP1322. Wi-Fi 6 Indoor AP with four radios – Dual radio 5GHz 4x4:4 / 2.4GHz 2x2:2, dedicated scanning radio, and integrated BLE/Zigbee radio. Interfaces 2.5GbE RJ-45, 1GbE RJ-45, USB, 48V DC Power & 6x antenna connectors. AP mount kit and antennas to be ordered separate-ly. Restricted Regulatory Domain: US

Accessories	Description
OAW-AP-MNT-B (single pack) OAW-AP-MNT-B-10 (10 pack)	Mounting kit, (Type B19/16 and B215/16) for T shaped spare ceiling rail mounting. Applicable for OmniAccess Stellar Indoor 1101, 12xx and 13xx series.
OAW-AP-MNT-W (single pack) OAW-AP-MNT-W-10 (10 pack)	Mounting kit, Type A wall mount and ceiling mount with screws. Applicable for OmniAccess Stellar Indoor 1101, 12xx and 13xx series.
OAW-AP-MNT-C (single pack)	Mounting kit, Type C1 (Open Silhouette) and C2 Flanged Interlude), for other shaped ceiling rail mounting. Applicable for OmniAccess Stellar Indoor 1101, 12xx and 13xx series.
PD-9001-25GR/AC	1-Port IEEE 802.3at PoE Midspan. Port speed 2.5GbE & 10/100/1000 Mbps and PoE power 30W. 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.
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.
ANT-O-6	Dual band 2.4/5GHz, 1-element, direct mount, omni-directional antenna, 6dBi 4x)
ANT-O-M4-5	Dual band 2.4/5GHz, 4-element, Ceiling-mount, Downtilt omnidirectional antenna, >5dBi 1x) includes 4' 30-35in RF cable
ANT-S-M4-30	Single band 5GHz, 4-element, Wall-mount, sector antenna, 13dBi, H-Plane 37°, E-Plane 37°, includes 4' 30-35in RF cable (SMAJ/ RPSMA-J), includes mount
ANT-S-M4-60	Dual band 2.4/5GHz, 4-element, Wall-mount, sector antenna, >5dBi, 60Hx60V 1x) includes 4' 30-35in RF cable
ANT-S-M4-120	Dual band 2.4/5GHz, 4-element, Wall-mount, sector antenna, 5dBi, H-Plane 120°, E-Plane 70°, includes 4' 30-35in RF cable (SMAJ/ RPSMA-J), includes mount

Datasheet

Alcatel-Lucent OmniAccess Stellar AP1320 series

Warranty

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

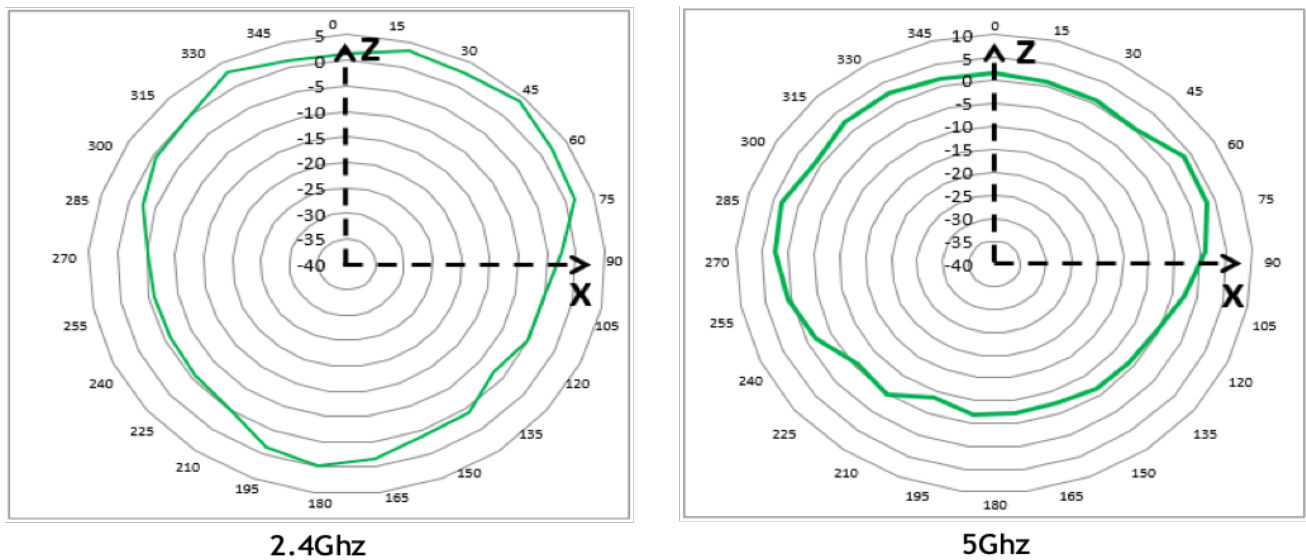
Services and support

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

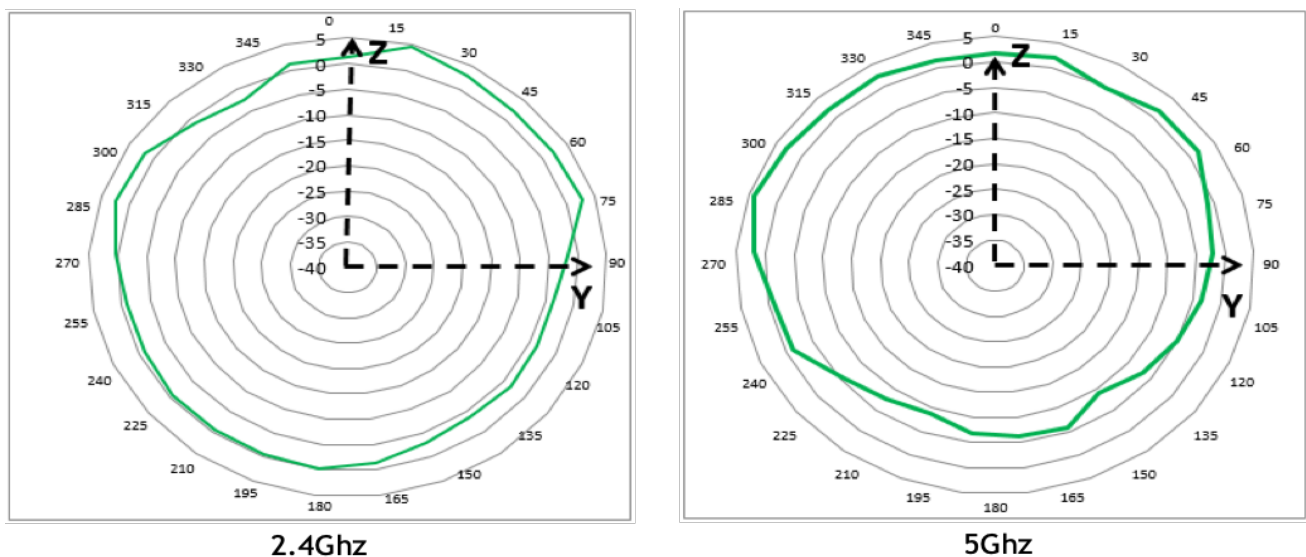
<http://enterprise.alcatel-lucent.com/?services=EnterpriseServices&page=directory>

Figure 1. OmniAccess AP1321 antenna pattern plots

Horizontal or Azimuth plane (top view)



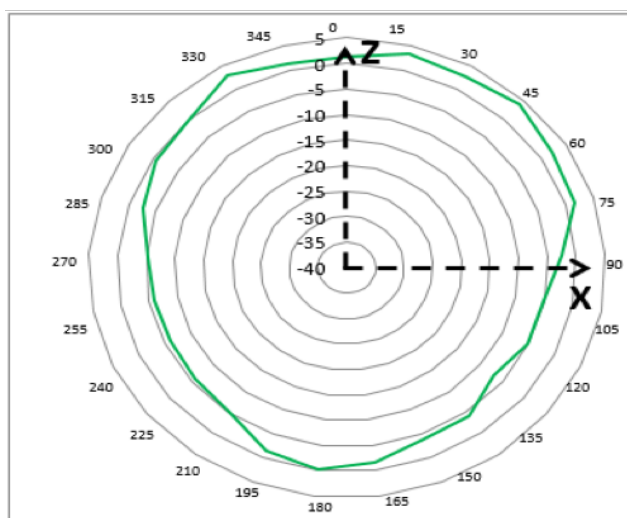
Elevation plane (side view, 0 degrees angle)



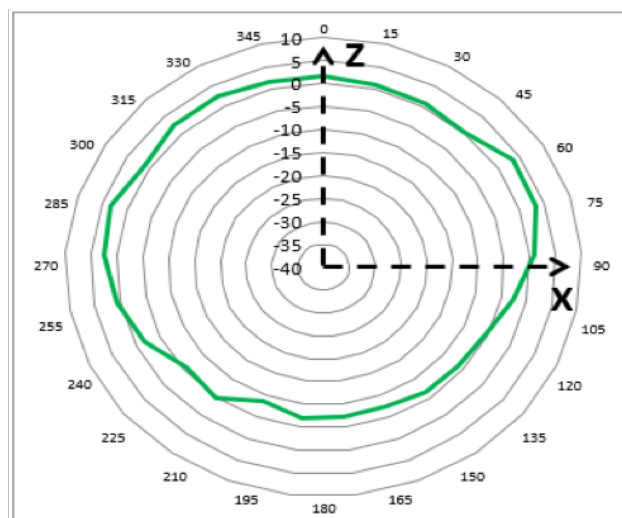
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Alcatel-Lucent OmniAccess Stellar AP1320 series

Elevation plane (side view, 90 degrees angle)



2.4Ghz



5Ghz

BLE radiation pattern

