Alcatel-Lucent
OmniAccess Stellar AP1360 series
Outdoor 802.11ax (Wi-Fi 6) wireless access point

The multifunctional Alcatel-Lucent OmniAccess® Stellar Outdoor AP1360 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 and rugged AP1360 series models are designed to accommodate diverse growing capacity needs of next generation Mobility & IoT enabled networks. The access points are powered with four built-in radios, dual radios 2.4GHz/5GHz band serving high density Wi-Fi clients, a full band radio dedicated for scanning, inherently improving network security and Wi-Fi quality. It also has an integrated Bluetooth/Zigbee radio enabling location and building automation services. The access points are IP67 rated for harsh outdoor environments, such as exposure to high and low temperatures, persistent moisture and precipitation, and industrial strength surge protection. The AP1360 series models support maximum aggregate data rate ~ 3Gbps (2.4Gbps in 5 GHz and 574Mbps in 2.4 GHz), and to support this higher capacity the access point is powered by Multigig Ethernet uplink. The AP1360 series models can be connected to the network via SFP for long distance backhaul, provides an additional downlink Ethernet interface for wired IoT device endpoint connection, catering to varied deployment options in today’s demanding outdoor environments.

OmniAccess® Stellar AP1360 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 including outdoor settings 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 AP1360 series
802.11ax (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 AP1360 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 BSSs, 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 AP1360 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).

* The hardware is ready, and will be supported in a future software update.
Cloud enabled with OmniVista Cirrus
The OmniAccess Stellar AP1360 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 AP1360 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 AP1360 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 AP1360 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 Wi-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 AP1360 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 AP1360 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 AP1360 series can be configured to provide part-time or dedicated scanning for spectrum analysis and wireless intrusion protection.
### Product specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Radio Specification**  | • AP type: Outdoor, integrated three radios  
• Tri Radio, 5 GHz 802.11ax 4x4:4 and 2.4 GHz 802.11ax 2x2:2 and dedicated scanning radio  
  - 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 574 Mbps 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: Frequency band 5.150 to 5.350 GHz is disabled. Maximum transmit power: 30dBm on 2.4GHz, 30dBm on 5GHz  
• Maximum (aggregate, conducted total) transmit power (limited by local regulatory requirements):  
  - 25dBm on 2.4GHz (22dBm per chain)  
  - 27dBm on 5GHz (21dBm 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 574 (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, VHT160(80+80))  
• Supported modulation types:  
  - 802.11b: BPSK, QPSK, CCK  
  - 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 256-QAM  
  - 802.11ax: BPSK, QPSK, 16-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 with integrated antenna, dedicated for scanning  
• Bluetooth Low Energy (BLE) 5.1/ Zigbee radio, integrated antenna  
  - Bluetooth 5: up to 18dBm transmit power (class 1) and -93dBm receive sensitivity  
  - Zigbee: up to 18dBm transmit power and -102dBm receive sensitivity  
• Integrated vertically polarized omnidirectional antenna with peak gain of 4.64dBi for AP1361, 3.3dBi for AP1361D and AP1362  
| **Interfaces**          | • 1x 10/100/1000/2500 Mbps IEEE 802.3 compliant autosensing (RJ-45) uplink port, ENET0, Power over Ethernet (PoE) 802.3at/bt compliant, 802.3az Energy Efficient Ethernet (EEE)  
• 1x 10/100/1000 Mbps IEEE 802.3 compliant auto-sensing (RJ-45) downlink port, ENET1, PoE PSE output up to 802.3at power dependent on input PoE, 802.3az Energy Efficient Ethernet (EEE)  
• 1x SFP port  
• 1x USB 2.0 Type C (5V, 1A)  
• Reset button: Factory reset  
| **Visual Indicators (7 LEDs)** | • For system and radio status  
  - SYS ON: Power on and system running  
  - SYS Flashing: Bootloader-OS loading or upgrading  
  - 2.4G ON: 2.4GHz SSID created and running  
  - 5G ON: 5GHz SSID created and running  
  - ENET0 ON: Ethernet0 link UP  
  - ENET1 ON: Ethernet1 link UP  
  - SFP ON: SFP link UP  
  - PSE ON: PSE Enabled |
Feature | Description
--- | ---
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 | • AP1361: 2×2:2 @ 2.4GHz, 4×4:4 @ 5GHz
  - Integrated omni antennas (H and V polarized) with maximum antenna gain of 4.85dBi in 2.4 GHz and 6.48dBi in 5 GHz. Maximum beamforming gain of 7.86dBi in 2.4 GHz and 12.50dBi in 5 GHz.
  - AP1361D: 2×2:2 @ 2.4GHz, 4×4:4 @ 5GHz
  - Integrated directional antennas (H80°x V80°) with maximum antenna gain of 7.5dBi in 2.4 GHz and 7.4dBi in 5 GHz
• AP1362: 2×2:2 @ 2.4GHz, 4×4:4 @ 5GHz
  - 6 N-Type external antenna connectors, integrated 6KA lightning protection, not require additional lightning arrester.
  - ANT0-ANT3 are 5GHz antenna connectors, ANT4-ANT5 are 2.4GHz antenna connectors

Receive sensitivity (per chain) | 2.4 GHz | 5 GHz
--- | --- | ---
1 Mbps | -99 | -91
11 Mbps | -89 | -90
6 Mbps | -93 | -72
54 Mbps | -76 | -88
HT20(MCS 0/8) | -92 | -91
HT20(MCS 7/15) | -74 | -70
HT40(MCS 0/8) | -91 | -88
HT40(MCS 7/15) | -74 | -70
VHT20(MCS 0) | -92 | -90
VHT20(MCS 8) | -70 | -68
VHT40(MCS 0) | -91 | -88
VHT40(MCS 9) | -68 | -64
VHT80(MCS0) | -86 | -61
VHT80(MCS9) | -61 | -92
HE20(MC0) | -94 | -64
HE20(MC11) | -63 | -62
HE40(MC0) | -91 | -89
HE40(MC11) | -62 | -60
HE80(MC0) | -87 | -68
HE80(MC11) | -58 | -58

Maximum Transmit power (per chain) | 2.4 GHz | 5 GHz
--- | --- | ---
1 Mbps | 22 dBm | 21 dBm
11 Mbps | 22 dBm | 21 dBm
6 Mbps | 22 dBm | 21 dBm
54 Mbps | 21 dBm | 20 dBm
HT20(MCS 0/8) | 22 dBm | 21 dBm
HT20(MCS 7/15) | 21 dBm | 19 dBm
HT40(MCS 0/8) | 22 dBm | 21 dBm
HT40(MCS 7/15) | 21 dBm | 19 dBm
VHT20(MCS 0) | 22 dBm | 21 dBm
VHT20(MCS 8) | 20 dBm | 18 dBm
VHT40(MCS 0) | 22 dBm | 21 dBm
VHT40(MCS 9) | 20 dBm | 18 dBm
VHT80(MCS0) | 21 dBm | 17 dBm
VHT80(MCS9) | 18 dBm | 17 dBm
HE20 (MCS0) | 22 dBm | 21 dBm
HE20 (MCS11) | 20 dBm | 17 dBm
HE40 (MCS0) | 22 dBm | 21 dBm
HE40 (MCS11) | 20 dBm | 17 dBm
HE80 (MCS0) | 21 dBm | 17 dBm
HE80 (MCS11) | 17 dBm | 17 dBm

Note: Maximum transmit power is limited by local regulatory settings.
**Power**
- Maximum (worst case) power consumption:
  - 64W (802.3bt Type4 PoE in) with ENET1 802.3at PSE enabled.
  - 46W (802.3bt Type3 PoE) with ENET1 802.3af PSE enabled.
  - 24W (802.3at) with disabled ENET1 PSE, USB.
- Maximum power consumption in idle mode: 10W
- Power over Ethernet (PoE): 48 V DC (nominal) 802.3bt/at compatible source

**Mounting**
- Hang mounting for AP1361 (Mount kit needs to be ordered separately)
- Pole/Wall mounting for AP1361D and AP1362 (Mount kit needs to be ordered separately)

**Environmental**
- Operating:
  - Temperature: -40°C to 65°C (-40°F to +149°F)
  - Humidity: 10% to 90% non-condensing
- Storage and transportation:
  - Temperature: -40°C to +85°C (-40°F to +185°F)
- Wind resistance:
  - Up to 100MPH sustained winds
  - Up to 165MPH wind gusts

**Dimensions/Weight**
- Single AP excluding packing box and accessories:
  - 243mm (W) x 243mm (D) x 85mm (H) - 9.56” (W) x 9.56” (D) x 3.34” (H)
  - 2500g / 5.51lb for AP1361 and AP1361D, 2684g / 5.91lb for AP1362
- Single AP including packing box and accessories:
  - 320mm (W) x 300mm (D) x 135mm (H) - 12.6” (W) x 11.81” (D) x 5.31” (H)
  - 3121g / 6.88lb for AP1361 and AP1361D, 3286g / 7.24lb for AP1362

**Reliability**
- MTBF: 1,003,257h (114.5 years) at +25°C operating temperature

**Capacity**
- Up to 16 SSID per radio (total 32 SSID)
- Support for up to 1024 associated client devices

**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, SNMPv3
- Wireless attack detection with OmniVista 2500
- Floor plan and heat map with OmniVista 2500™
- Stanley Healthcare/Aeroscout RTLS support
### Feature Description

**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)
- IEEE 802.1W Protected Management Frame
- IEEE 802.11k Radio Resource Management
- IEEE 802.11v BSS Transition Management
- IEEE 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
- Bluetooth SIG
- RoHS, REACH, WEEE
- ASTM B117-07A, Salt spray testing per UL50 NEMA 4x
- 2014/35/EU Low Voltage Directive
- 2014/30/EU EMC Directive
- 2011/65/EU RoHS Directive
- EN 55032
- IEC/EN 60950
- EN 300 328
- EN 301 893
- EN 301 489-1
- EN 301 489-17
- Common Criteria/EAL2

### Ordering information

<table>
<thead>
<tr>
<th>Access Points</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OAW-AP1361-ME</td>
<td>OmniAccess Stellar AP1361. Tri radio 5GHz 4x4:4 / 2.4GHz 2x2:2 and full band scanning radio Wi-Fi 6 Outdoor AP, integrated Omni Directional Antenna. Integrated BLE/Zigbee radio. Interfaces 2.5GbE Rj-45, 1GbE Rj-45, SFP, USB. AP mount kit to be ordered separately. Restricted Regulatory Domain: Egypt, Israel</td>
</tr>
<tr>
<td>OAW-AP1361D-ME</td>
<td>OmniAccess Stellar AP1361D. Tri radio 5GHz 4x4:4 / 2.4GHz 2x2:2 and full band scanning radio Wi-Fi 6 Outdoor AP, integrated Directional Antenna. Integrated BLE/Zigbee radio. Interfaces 2.5GbE Rj-45, 1GbE Rj-45, SFP, USB. AP mount kit to be ordered separately. Restricted Regulatory Domain: Egypt, Israel</td>
</tr>
<tr>
<td>OAW-AP1362-RW</td>
<td>OmniAccess Stellar AP1362. Tri radio 5GHz 4x4:4 / 2.4GHz 2x2:2 and full band scanning radio Wi-Fi 6 Outdoor AP, Integrated BLE/Zigbee radio. Interfaces 2.5GbE Rj-45, 1GbE Rj-45, SFP, USB, 6x antenna connectors. AP mount kit and antennas to be ordered separately. Unrestricted Regulatory Domain: Not for use in US, Egypt, Japan</td>
</tr>
<tr>
<td>OAW-AP1362-ME</td>
<td>OmniAccess Stellar AP1362. Tri radio 5GHz 4x4:4 / 2.4GHz 2x2:2 and full band scanning radio Wi-Fi 6 Outdoor AP, Integrated BLE/Zigbee radio. Interfaces 2.5GbE Rj-45, 1GbE Rj-45, SFP, USB, 6x antenna connectors. AP mount kit and antennas to be ordered separately. Restricted Regulatory Domain: Egypt, Israel</td>
</tr>
</tbody>
</table>

**Datasheet**
Alcatel-Lucent OmniAccess Stellar AP1360 series
## Accessories

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AP-MNT-OUT</strong></td>
</tr>
<tr>
<td><strong>AP-MNT-OUT-H</strong></td>
</tr>
<tr>
<td><strong>PD-9001GO-ET/AC</strong></td>
</tr>
<tr>
<td><strong>PD-OUT/MBK/ET</strong></td>
</tr>
<tr>
<td><strong>ANT-O-M2-5</strong></td>
</tr>
<tr>
<td><strong>ANT-O-M4-9</strong></td>
</tr>
<tr>
<td><strong>ANT-O-M6-8</strong></td>
</tr>
<tr>
<td><strong>ANT-O-M6-8</strong></td>
</tr>
</tbody>
</table>

## 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 AP1361 antenna pattern plots
Horizontal or Azimuth plane (top view)

Elevation plane (side view, 0 degrees angle)

Elevation plane (side view, 90 degrees angle)
Figure 2. OmniAccess AP1361D antenna pattern plots

Horizontal or Azimuth plane (top view)

Elevation plane (side view, 0 degrees angle)

Elevation plane (side view, 90 degrees angle)
Figure 3: BLE radiation pattern