ALE | Where Everything Connects

Alcatel-Lucent OmniAccess 303H Hospitality Access Point

High-performance 802.11ac Wave 2 access point for hospitality and branch offices

The multi-functional Wave 2 303H access point delivers best-in class Wi-Fi connectivity for hospitality and branch offices, enabling an always-on user experience with low Total Cost of Ownership (TCO).

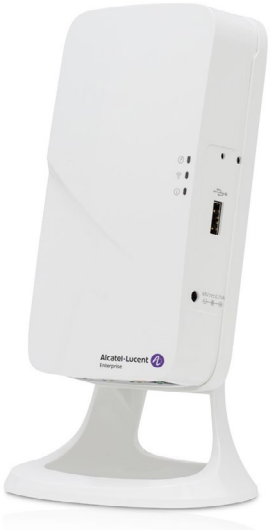
With a maximum concurrent data rate of 867 Mb/s in the 5 GHz band and 400 Mb/s in the 2.4 GHz band, the 303H AP delivers high-performance Gigabit Wi-Fi for hospitality and branch environments at an attractive price point. It supports multi-user MIMO (MU-MIMO) and 2 spatial streams (2SS) to provide simultaneous data transmission for up to 2 devices, maximizing data throughput and improving network efficiency.

The 303H AP can be easily mounted to a standard data wall-box using the existing structured cabling system or converted to a desk mounted AP using an optional mounting kit. It is ideal for schools (dormitories, classrooms), hotels, medical clinics, branch offices and remote workstations which often require flexible and easy deployment options.

The 802.11ac Wave 2 303H AP combines wireless and wired access in a single compact device. Three local Gigabit Ethernet ports are available to securely attach wired devices to your network. One of these ports is also capable of supplying PoE power to the attached device.

Like all other OmniAccess Wave 2 APs, the 303H AP includes the enhanced ClientMatch™ technology that extends the client steering technology with MU-MIMO client awareness. It automatically identifies MU-MIMO capable mobile devices and steers those devices to the closest MU-MIMO capable OmniAccess access point to achieve the best WLAN performance in a mixed device environment during the technology transition period.

Single-gang wall-box
(primary hospitality deployment)



Desk mount (primary remote/ branch deployment, using optional desk mount accessory)

Alcatel·Lucent Enterprise

The integrated Bluetooth Beacon in the 303H AP simplifies the remote management of a large scale network of battery-powered BLE Beacons while also providing advanced location and indoor way finding, and proximity-based push notification capabilities.

Unique benefits

Two devices in one

- The 303H ships with everything you need to deploy as a wall-mounted (hospitality) AP, attaching directly to a standard single-gang data wall-box. The 303H can also be easily converted to a desk mounted (remote) AP, using an optional accessory stand.

Unified AP – deploy with or without controller

- The 303H can be deployed in either controller-based (AOS-W) or controllerless (InstantOS) deployment mode.

Dual Radio 802.11ac access point with Multi-User MIMO (Wave 2)

- Supports up to 867 Mb/s in the 5 GHz band (with 2SS/VHT80 clients) and up to 400 Mb/s in the 2.4 GHz band (with 2SS/VHT40 clients).

Built-in Bluetooth Low-Energy (BLE) radio

- Enables location-based services with BLE-enabled mobile devices receiving signals from multiple Beacons at the same time.
- Enables management of your deployment of battery-powered Beacons.

Advanced Cellular Coexistence (ACC)

- Minimizes the impact from out-of-band interference from sources such as 3G/4G cellular networks.

Intelligent Power Monitoring (IPM)

- Enables the AP to continuously monitor and report its actual power consumption and optionally make autonomous decisions to prioritize capabilities when power budget is limited.
- For the 303H, the IPM power-save feature applies when the unit is powered by an 802.3af or 802.3at POE source. By default, the USB interface will be the first feature to be turned off by IPM if the AP power consumption would otherwise exceed the available power budget. Specific power-saving options are programmable with IPM.

RF Management

- Adaptive Radio Management (ARM) technology automatically assigns channel and power settings, provides airtime fairness and ensures that APs stay clear of all sources of RF interference to deliver reliable, high- performance WLANs
- The 303H can be configured to provide part-time or dedicated air monitoring for spectrum analysis and wireless intrusion protection, VPN tunnels to extend remote locations to corporate resources, and wireless mesh connections where Ethernet drops are not available.

Security

- Integrated wireless intrusion protection offers threat protection and mitigation, and eliminates the need for separate RF sensors and security appliances.
- IP reputation and security services identify, classify, and block malicious files, URLs and IPs, providing comprehensive protection against advanced online threats.
- Integrated Trusted Platform Module (TPM) for secure storage of credentials, certificates and keys.

Intelligent app visibility and control

- AppRF technology leverages deep packet inspection to classify and block, prioritize or limit bandwidth for over 2,500 enterprise apps or groups of apps.

Quality of service for unified communication apps

- Supports priority handling and policy enforcement for unified communication apps, including Microsoft Skype for Business with encrypted video-conferencing, voice, chat and desktop sharing.

Choose your deployment and operating modes

OmniAccess Unified APs offer a choice of deployment and operating modes to meet your unique management and deployment requirements:

- The 303H AP is a unified AP that supports both controller-based and controllerless deployment modes, providing maximum flexibility
- Controller-based mode: When deployed in conjunction with an OmniAccess Mobility Controller, OmniAccess APs offer centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding.
- Controllerless (Instant) mode: The controller function is virtualized in a cluster of APs in Instant mode. As the network grows and/or requirements change, Instant deployments can easily migrate to controller- based mode.
- Remote AP (R AP) mode for branch deployments
- Air monitor (AM) for wireless IDS, rogue detection and containment
- Spectrum analyzer, dedicated or hybrid, for identifying sources of RF interference
- Secure enterprise mesh

303H Access Point specifications

- Unified dual-radio 802.11ac Wave 2 2x2:2 hospitality and branch AP with internal antennas, three local Gigabit Ethernet ports, PoE out and USB host interface
- Supports wall-box and desk mount deployments

Wi-Fi radio specifications

- AP type: Indoor, dual radio, 5 GHz 802.11ac 2x2 MIMO and 2.4 GHz 802.11n 2x2 MIMO1
- Software-configurable dual radio supports 5 GHz (Radio 0) and 2.4 GHz (Radio 1)
- 5 GHz: Two spatial stream Multi User (MU) MIMO for up to 867 Mb/s wireless data rate to up to two (1x1 VHT80) MU-MIMO capable client devices simultaneously
- 5 GHz: Two spatial stream Single User (SU) MIMO for up to 867 Mb/s wireless data rate to individual 2x2 VHT80 client devices
- 2.4 GHz: Two spatial stream Single User (SU) MIMO for up to 400 Mb/s wireless data rate to individual 2x2 VHT40 client devices (300 Mb/s for HT40 802.11n client devices)
- Support for up to 256 associated client devices per radio, 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
- Dynamic frequency selection (DFS) optimizes the use of available RF spectrum
- Supported radio technologies:
  - ¬ 802.11b: Direct-sequence spread-spectrum (DSSS)
  - ¬ 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM)
- Supported modulation types:
  - ¬ 802.11b: BPSK, QPSK, CCK
  - ¬ 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum (conducted) transmit power (limited by local regulatory requirements):
  - ¬ 2.4 GHz band: +18 dBm per chain, +21 dBm aggregate (2x2)
  - ¬ 5 GHz band: +18 dBm per chain, +21 dBm aggregate (2x2)

Note: conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain

- Advanced Cellular Coexistence (ACC) minimizes interference from cellular networks
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance
- Short guard interval for 20 MHz, 40 MHz and 80 MHz channels
- Space-time block coding (STBC) for increased range and improved reception
- Low-density parity check (LDPC) for high-efficiency error correction and increased throughput
- Transmit beam-forming (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 (2.4 GHz): 6.5 to 300 (MCS0 to MCS15)
  - ¬ 802.11n (5 GHz): 6.5 to 450 (MCS0 to MCS23)
  - ¬ 02.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 2 for VHT20/40/80)
- 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: A-MPDU, A-MSDU

Wi-Fi antennas

- Two integrated dual-band moderately directional antennas for 2x2 MIMO with maximum individual antenna gain of 4.2dBi in 2.4 GHz and 5.6dBi in 5 GHz. Built-in antennas are optimized for vertical orientation of the AP.
  - ¬ The horizontal beamwidth is roughly 120 degrees. Combining the patterns of each of the antennas of the MIMO radios, the peak gain of the effective per-antenna pattern is 3.4dBi in 2.4 GHz and 4.5dBi in 5 GHz.

Other interfaces

- Uplink: 10/100/1000BASE-T Ethernet (RJ-45, back)
  - ¬ Auto-sensing link speed and MDI/MDX
  - ¬ 802.3az Energy Efficient Ethernet (EEE)
  - ¬ PoE-PD (input): 48 Vdc (nominal) 802.3af/at PoE
- Local: Three 10/100/1000BASE-T Ethernet (RJ-45, bottom)
  - ¬ Auto-sensing link speed and MDI/MDX
  - ¬ 802.3az Energy Efficient Ethernet (EEE)
  - ¬ One port: PoE-PSE (output): 48 Vdc (nominal) 802.3af PoE
- Passive pass-through interface (two RJ-45, back and bottom)
  - ¬ Bluetooth Low Energy (BLE) radio
    - – p to 4dBm transmit power (class 2) and -93dBm receive sensitivity
    - – ntegrated antenna with moderately directional pattern and peak gain of 0.9dBi
- USB 2.0 host interface (Type A connector)
  - ¬ 3G/4G cellular modems
  - ¬ Device battery charging port
  - ¬ Capable of supplying up to 1A/5 watts of power to an attached device
- DC power interface, accepts 1.35/3.5-mm center-positive circular plug with 9.5-mm length
- Visual indicators (LEDs):
  - ¬ Power/system status
  - ¬ Radio status
  - ¬ PoE-PSE status
  - ¬ Local network port status (3x)
- Reset/LED control button (“paperclip access”)
  - ¬ Factory reset (when activated during device power up)
  - ¬ LED control: toggle off/normal
- Serial console interface (custom, uUSB physical jack)

Encrypted throughput

- Maximum IPsec encrypted wired throughput: 100 Mb/s

Power sources and consumption

- The AP supports direct DC power and Power over Ethernet (PoE)
- When both power sources are available, DC power takes priority over PoE
- Power sources are sold separately
- Direct DC power source: 48Vdc nominal, ± 5%
- Power over Ethernet (PoE): 48 Vdc (nominal) 802.3af/802.3at compliant source
  - ¬ Unrestricted functionality with direct DC power.

    When using an 802.3af PoE source, the PoE out (PSE) capability of the 303H is always disabled.
  - ¬ Without IPM, both the USB port and PoE out (PSE) capability are disabled when the AP is powered by an 802.3af PoE source, and either the USB port or the PoE out (PSE) capability is disabled when powered by an 802.3at PoE source (PSE capability is disabled by default).
  - ¬ When using IPM, the AP may enter power-save mode with reduced functionality when powered by a PoE source
- Maximum (worst-case) power consumption: 9.7W
  - ¬ Excludes power consumed by external USB and/or PoE-PD device (and internal losses); this could add up to 6.1W (PoE) for a 5W/1A USB device and up to 15.6W for a max load (15.4W) 802.3af PoE-PD device
- Maximum (worst-case) power consumption in idle mode: 4.9W (PoE) or 4.8W (DC)

Mounting

- The AP ships with a mounting plate to attach the AP to a single-gang wall-box (most international variations covered). A security screw (T8H) is provided to ensure that the AP cannot (easily) be removed from its mount without a specialized tool.
- Several optional mount kits are available to attach the AP to a dual-gang wall-box, directly to the wall, or to support desk mounting.

Mechanical

- Dimensions/weight (unit, including single-gang wall box mount plate):
  - ¬ 86mm (W) x 40mm (D) x 150mm (H)
  - ¬ 310g
- Dimensions/weight (shipping):
  - ¬ 128mm (W) x 63mm (D) x 168mm (H)
  - ¬ 470g

Environmental

- Operating:
  - ¬ Temperature: 0° C to +40° C (+32° F to +104° F)
  - ¬ Humidity: 5% to 93% non-condensing
- Storage and transportation:
  - ¬ Temperature: -40° C to +70° C (-40° F to +158° F)

Regulatory

- FCC/Industry of Canada
- CE Marked
- R&TTE Directive 1995/5/EC
- Low Voltage Directive 72/23/EEC
- EN 300 328
- EN 301 489
- EN 301 893
- UL/IEC/EN 60950
- EN 60601-1-1 and EN 60601-1-2

For more country-specific regulatory information and approvals, please see your ALE representative.

Reliability

- MTBF: 1,090,000 hours (124 years) at +25C operating temperature

Regulatory model number

- AW-AP303H-xx (all variants): APINH303

Certifications

- B Scheme Safety, cTUVus
- L2043 plenum rating
- i-Fi Alliance (WFA) certified

  802.11a/b/g/n/ac

Warranty

- Limited lifetime warranty

Minimum Software Versions

- OS-W: 6.5.2.0/8.2.0.0
- InstantOS: 6.5.2.0/8.2.0.0

RF performance table

	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
2.4 GHz		
802.11B		
1 Mb/s	18.0	-96.0
11 Mb/s	18.0	-88.0
802.11g		
6 Mb/s	18.0	-92.0
54 Mb/s	16.0	-75.0
802.11n HT20		
MCS0/8	18.0	-90.0
MCS7/15	14.0	-71.0
802.11n HT40		
MCS0/8s	18.0	-87.0
MCS7/15	14.0	-69.0
5 GHz		
802.11a		
6 Mb/s	18.0	-90.0
54 Mb/s	16.0	-73.0
802.11n HT20		
MCS0/8	18.0	-90.0
MCS7/15	14.0	-71.0
802.11n HT40		
MCS0/8	18.0	-87.0
MCS7/15	14.0	-68.0
802.11ac VHT20		
MCS0	18.0	-90.0
MCS8	13.0	-67.0
802.11ac VHT40		
MCS0	18.0	-87.0
MCS9	12.0	-62.0
802.11ac VHT80		
MCS0	18.0	-84.0
MCS9	12.0	-59.0

Table shows the maximum capability of the hardware provided (excluding antenna gain). Maximum transmit power is limited by local regulatory settings.

Ordering information

Part number	Description
303H Series Access Points	
OAW-AP303H-IS	OmniAccess AP303H Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas. Restricted regulatory domain: Israel
OAW-AP303H-JP	OmniAccess AP303H Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas. Restricted regulatory domain: Japan
OAW-AP303H-RW	OmniAccess AP303H Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas. Restricted regulatory domain: Rest of World
OAW-AP303H-US	OmniAccess AP303H Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas. Restricted regulatory domain: United States
OAW-AP303H-EG	OmniAccess AP303H Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas. Restricted regulatory domain: Egypt

Part number	Description
Mount kits	
AP-303H-MNT1	Access Point Mount Kit spare-for single gang wall-box mount for for 303H Series AP
AP-303H-MNT2	Access Point Mount Kit (dual) – Kit with optional dual gang wall-box mount adapter for 303H Series AP
AP-303H-MNTW	Access Point Mount Kit (wall) – Kit with optional wall mount adapter for 303H Series AP
AP-303H-MNTD	Access Point Mount Kit (desk) – Kit with optional desk mount adapter for 303H Series AP
Cosmetic covers	
AP-303H-CVR-20	20-pk for AP-303H with Holes for LED Indicators White Non-glossy Snap-on Covers
Power accesories	
PD-3501G/AC	1-Port IEEE 802.3af PoE Midspan. Port speed 10/100/1000M PoE power 15.4W. 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.
AP-AC-48V36C	OmniAccess 48V/36W AC-to-DC Desktop Style Power Adapter with Type C DC plug 1.35/3.5/9.5mm circular, 90-degree angled). Note does not include country specific AC power cord PC-AC-xx).
Other accessories	
AP-CBL-SERU	Micro-USB TTL3.3V to USB2.0 AP Console Adapter Cable
AP-CBL-ETH10	10-pk Short Ethernet Cable

Alcatel·Lucent Enterprise