Have feedback on QuickSpecs? We're listening

HPE Aruba Networking 500H Series Unified Hospitality Access Points QuickSpecs

High-performance and cost-effective Wi-Fi 6 (802.11ax) for hospitality, branch, and teleworker deployments

These economical Wi-Fi 6 access points provide high-performance connectivity for any organization experiencing growing mobile, cloud and IoT requirements. With a wireless aggregate data rate of up 1.5 Gbps and gigabit local wired ports, they deliver the range of connectivity options needed for venues such as hotels, residence halls, and remote offices alike.

Overview



HPE Aruba Networking 500H Series Unified Hospitality Access Points

Key Features

- Combine wireless and wired access in a single compact form-factor
- Ideal for organizations with work from home or teleworker initiatives
- Up to 1.5 Gbps of maximum wireless throughput
- 4 wired network ports and 1 Smart Rate uplink port
- WPA3 and Enhanced Open security
- Built-in technology that resolves sticky client issues for Wi-Fi 6 and Wi-Fi 5 devices
- OFDMA and MU-MIMO for enhanced multi-user efficiency
- IoT-ready Bluetooth 5 and Zigbee support
- HPE Aruba Networking Fiber Media Converter optional add-on for seamless fiber backhaul

Standard Features

Incredible Efficiency

The HPE Aruba Networking 500H Series Unified Hospitality Access Points are designed to optimize user experience by maximizing Wi-Fi efficiency and dramatically reducing airtime contention between clients.

Features include Orthogonal frequency-division multiple access (OFDMA), multi-user MIMO and cellular optimization. With up to 4 spatial streams (4SS) and 80MHz channel bandwidth, the HPE Aruba Networking 500H Series provides groundbreaking wireless capabilities for budget-conscious deployments.

Advantages of OFDMA

This capability allows HPE Aruba Networking's APs to handle multiple Wi-Fi 6 capable clients on each channel simultaneously, regardless of device or traffic type. Channel utilization is optimized by handling each transaction via smaller sub-carriers or resource units (RUs), which means that clients are sharing a channel and not competing for airtime and bandwidth.

Wi-Fi 6 and MU-MIMO aware client optimization

HPE Aruba Networking's patented AI-powered ClientMatch technology eliminates sticky client issues by placing Wi-Fi 6 capable devices on the best available AP. Session metrics are used to steer mobile devices to the best AP based on available bandwidth, types of applications being used and traffic type – even as users roam.

Advanced Cellular Coexistence (ACC)

This feature uses built-in filtering to automatically minimize the impact of interference from cellular networks, distributed antenna systems (DAS), and commercial small cell or femtocell equipment.

Intelligent Power Monitoring (IPM)

HPE Aruba Networking APs continuously monitor and report hardware energy consumption. They can also be configured to enable or disable capabilities based on available PoE power–ideal when wired switches have exhausted their power budget (AP-505H).

IoT Platform Capabilties

Like all HPE Aruba Networking Wi-Fi 6 APs, the HPE Aruba Networking 500H Series includes an integrated Bluetooth 5 and 802.15.4 radio (for Zigbee support) to simplify deploying and managing IoT-based location services, asset tracking services, security solutions and IoT sensors. This allows organizations to leverage the HPE Aruba Networking 500H Series as an IoT platform, which eliminates the need for an overlay infrastructure and additional IT resources.

Target Wake Time (TWT)

Ideal for IoTs that communicate infrequently, TWT establishes a schedule for when clients need to communicate with an AP. This helps improve client power savings and reduces airtime contention with other clients.

Advanced IoT Coexistence (AIC)

This feature uses built-in filtering to automatically minimize the impact of interference from IoT wireless radios like Bluetooth and Zigbee.

Standard Features

Secure Infrastructure

The HPE Aruba Networking 500H Series Unified Hospitality Access Points includes components of HPE Aruba Networking's 360 Secure Fabric to help protect user authentication and wireless traffic.

WPA3 and Enhanced Open

Support for stronger encryption and authentication is provided via the latest version of WPA for enterprise protected networks.
Enhanced Open offers seamless new protection for users connecting to open networks where each session is automatically encrypted to protect user passwords and data on guest networks.

WPA2-MPSK

MPSK enables simpler passkey management for WPA2 devices – should the Wi-Fi password on one device or device type change, no additional changes are needed for other devices. This requires ClearPass Policy Manager.

VPN Tunnels

In Remote AP (RAP) and IAP-VPN deployments, the HPE Aruba Networking 500H Series can be used to establish a secure SSL/IPSec VPN tunnel to a Mobility Controller that is acting as a VPN concentrator.

Trusted Platform Module (TPM)

For enhanced device assurance, all HPE Aruba Networking APs have an installed TPM for secure storage of credentials, keys, and boot code.

Simple and Secure Access

To simplify policy enforcement, the HPE Aruba Networking 500H Series uses HPE Aruba Networking's Policy Enforcement Rirewall (PEF) to encapsulate all traffic from the AP to the mobility controller (or gateway) for end-to-end encryption and inspection. Policies are applied based on user role, device type, applications, and location. This reduces the manual configuration of SSIDs, VLANs and ACLs. PEF also serves as the underlying technology for dynamic segmentation.

High-Density Connectivity

Each HPE Aruba Networking 500H Series AP provides connectivity for a maximum of 256 associated clients per radio (512 in total). In real-world scenarios, the maximum recommended client density is dependent on environmental conditions.

Versatile Installation Options

The APs can be deployed as a wall-mount or for remote teleworker environments, they can be converted to a desk-mount by using an optional accessory stand.

HPE Aruba Networking also offers a Fiber Media Converter that fits snuggly alongside 500H Series Hospitality APs. It can transparently convert fiber to copper Ethernet, convert DC power to PoE, and extend the reach of the AP.

Standard Features

Flexible Operation and Management

Our unified APs can operate as standalone access points or with a gateway for greater scalability, security, and manageability. APs can be deployed using zero touch provisioning–without on-site technical expertise–for ease of implementation in branch offices and for remote work. HPE Aruba Networking APs can be managed using cloud-based or on-premises solutions for any campus, branch, or remote work environment.

HPE Aruba Networking Central provides a single pane of glass for overseeing every aspect of wired and wireless LANs, WANs, and VPNs. AI-powered analytics, end-to-end orchestration and automation, and advanced security features are built natively into the solution.

Small office/home office for hybrid work

For hybrid environments, HPE Aruba Networking EdgeConnect Microbranch extends the WAN to the small office/home office to deliver a consistent employee experience no matter where users are located. EdgeConnect Microbranch offers a suite of SD-WAN capabilities to optimize performance, security, and manageability via cloud-based HPE Aruba Networking Central and the HPE Aruba Networking AP itself. With EdgeConnect Microbranch, organizations can extend existing remote access point (RAP) capabilities to optimize performance, security, and manageability via cloud-based HPE Aruba Networking Central and the HPE Aruba Networking AP itself. With EdgeConnect Microbranch, organizations can extend existing remote access point (RAP) capabilities to benefit from policy-based routing, tunnel and route orchestration, and SASE integration to cloud security services such as Zscaler.

For large installations across multiple sites, APs can be factory-shipped and can be activated with Zero Touch Provisioning through HPE Aruba Networking Central. This reduces deployment time, centralizes configuration, and helps manage inventory.

500H Remote AP bundles

To simplify the ordering and distribution of HPE Aruba Networking 500H access points, we offer a number of AP bundles that combine an AP variant a desk stand, power adapter, and North American or European power cord. This makes it easier to get remote workers and small branches up and running quickly.

Configuration Information

Build To Order: BTO is a standalone unit with no integration. BTO products ship standalone are not part of a CTO or Rack-Shippable solution.

BTO Models

Description	SKU
HPE Aruba Networking AP-503H	
Notes: Add Mount Kit (not included)	
HPE Aruba Networking AP-503H (EG) Dual Radio 802.11ax 2x2 1+2 Ethernet Unified Hospitality AP	R3V44A
HPE Aruba Networking AP-503H (IL) Dual Radio 802.11ax 2x2 1+2 Ethernet Unified Hospitality AP	R3V42A
HPE Aruba Networking AP-503H (JP) Dual Radio 802.11ax 2x2 1+2 Ethernet Unified Hospitality AP	R3V40A
HPE Aruba Networking AP-503H (RW) Dual Radio 802.11ax 2x2 1+2 Ethernet Unified Hospitality AP	R3V36A
HPE Aruba Networking AP-503H (US) Dual Radio 802.11ax 2x2 1+2 Ethernet Unified Hospitality AP	R3V38A
HPE Aruba Networking AP-503H (ID) Dual Radio 2x2 802.11ax 1+2 Ethernet Hospitality Access Point	S5D82A
HPE Aruba Networking AP-503HR	
Notes: Bundle includes Mount Kit, Power Supply and Power Cord	
HPE Aruba Networking AP-503HR (EU) with Desk Mount Power Adapter EU Power Cord Remote AP Bundle	R7G96A
HPE Aruba Networking AP-503HR (US) with Desk Mount Power Adapter NA Power Cord Remote AP Bundle	R7G97A
HPE Aruba Networking AP-505H	
Notes: Add Mount Kit (not included)	
HPE Aruba Networking AP-505H (EG) Dual Radio 802.11ax 2x2 1+4 Ethernet PSE USB Hospitality AP	R3V54A
HPE Aruba Networking AP-505H (IL) Dual Radio 802.11ax 2x2 1+4 Ethernet PSE USB Hospitality AP	R3V52A
HPE Aruba Networking AP-505H (JP) Dual Radio 802.11ax 2x2 1+4 Ethernet PSE USB Hospitality AP	R3V50A
HPE Aruba Networking AP-505H (RW) Dual Radio 802.11ax 2x2 1+4 Ethernet PSE USB Hospitality AP	R3V46A
HPE Aruba Networking AP-505H (US) Dual Radio 802.11ax 2x2 1+4 Ethernet PSE USB Hospitality AP	R3V48A
HPE Aruba Networking AP-505H (ID) Dual Radio 2x2 802.11ax 1+4 Ethernet PSE USB Hospitality AP	S5D84A
HPE Aruba Networking AP-505HR	
Notes: Bundle includes Mount Kit, Power Supply and EU Power Cord	
HPE Aruba Networking AP-505HR (EU) Remote AP Bundle Desk Mount and Power Hospitality Access Point	R3V56A
Notes: Bundle includes Mount Kit, Power Supply and US Power Cord	
HPE Aruba Networking AP-505HR (US) Remote AP Bundle Desk Mount and Power Hospitality Access Point	R3V57A

Configuration Information

HPE Aruba Networking AP-503H TAA

Notes: Add Mount Kit (not included)

HPE Aruba Networking AP-503H (EG) Dual Radio 802.11ax 2x2 1+2 Ethernet Unified TAA Hospitality AP	R3V45A
HPE Aruba Networking AP-503H (IL) Dual Radio 802.11ax 2x2 1+2 Ethernet Unified TAA Hospitality AP	R3V43A
HPE Aruba Networking AP-503H (JP) Dual Radio 802.11ax 2x2 1+2 Ethernet Unified TAA Hospitality AP	R3V41A
HPE Aruba Networking AP-503H (RW) Dual Radio 802.11ax 2x2 1+2 Ethernet Unified TAA Hospitality AP	R3V37A
HPE Aruba Networking AP-503H (US) Dual Radio 802.11ax 2x2 1+2 Ethernet Unified TAA Hospitality AP	R3V39A

HPE Aruba Networking AP-505H TAA

Notes: Add Mount Kit (not included)

HPE Aruba Networking AP-505H (EGF1) Dual Radio 802.11ax 2x2 1+4 Ethernet PSE USB TAA Hospitality AP	R3V55A
HPE Aruba Networking AP-505H (ILF1) Dual Radio 802.11ax 2x2 1+4 Ethernet PSE USB TAA Hospitality AP	R3V53A
HPE Aruba Networking AP-505H (JPF1) Dual Radio 802.11ax 2x2 1+4 Ethernet PSE USB TAA Hospitality AP	R3V51A
HPE Aruba Networking AP-505H (RWF1) Dual Radio 802.11ax 2x2 1+4 Ethernet PSE USB TAA Hospitality AP	R3V47A
HPE Aruba Networking AP-505H (USF1) Dual Radio 802.11ax 2x2 1+4 Ethernet PSE USB TAA Hospitality AP	R3V49A

Mount Accessories

HPE Aruba Networking AP-Mount Kits

HPE Aruba Networking AP-500H-MNTD2 RJ45 Ethernet Jack Desk Mount	S0J41A

Notes: For desk

Power Options

Description	SKU
Power Options	

Notes: Most devices are PoE powered from switch so these are optional

HPE Aruba Networking AP-AC2-12B 12V/48W AC/DC Desktop Style Power Adapter with 2.1/5.5mm Connector	R3K00A
HPE Aruba Networking AP-AC18-12B 12V/18W Worldwide Wall-Wart 2.1/5.5mm Connector Power Adapter	R9D91A
HPE Aruba Networking AP-AC2-48C 48V/50W AC/DC Desktop Style Power Adapter with 1.35/3.5mm Connector	R3K01A

Configuration Information

HPE Aruba Networking AP-POE-AFGE 1-Port GbE 802.3af 15.4W Midspan Injector	R6P68A
HPE Aruba Networking AP-POE-ATSR 1-Port Smart Rate 802.3at 30W Midspan Injector	R6P67A
HPE Aruba Networking AP-POE-BTSR 1-Port Smart Rate 802.3bt 60W Midspan Injector	R1C73A
HPE Aruba Networking AP-POE-BT10 1-port 10G 60W Midspan 802.3bt PoE Injector	S3J26A

Accessories

Other Accessories

For HPE Aruba Networking 503H/505H Series Std (Min 0//max 99) User Selection (min 0//max 99)

For HPE Aruba Networking 503HR/505HR Series Std (Min 0//max 99) User Selection (min 0//max 99)

HPE Aruba Networking AP-CBL-SERU Micro-USB TTL3.3V to USB2.0 AP Console Adapter Cable	JY728A
HPE Aruba Networking AP-MOD-SERU Micro-USB TTL3.3V to RJ45 RS232 AP Console Adapter Module	R6Q99A
HPE Aruba Networking AP-MC-SFP Media Converter Module for WLAN Access Points	R8F89A
HPE Aruba Networking USB LTE Modem for Access Points and Gateways	R8F34A
HPE Aruba Networking USB Extender Cable Kit	R8G76A

Notes: Drivers available on the HPE Aruba Networking Support Center

Software

Central

Cloud Services / Access Point Foundation Subscriptions

HPE Aruba Networking Central AP Foundation 1-year Subscription E-STU	Q9Y58AAE
HPE Aruba Networking Central AP Foundation 3 year Subscription E-STU	Q9Y59AAE
HPE Aruba Networking Central AP Foundation 5 year Subscription E-STU	Q9Y60AAE
HPE Aruba Networking Central AP Foundation 7 year Subscription E-STU	Q9Y61AAE
HPE Aruba Networking Central AP Foundation 10 year Subscription E-STU	Q9Y62AAE

Cloud Services / Access Point Advanced Subscriptions

HPE Aruba Networking Central AP Advanced 1 year Subscription E-STU	Q9Y63AAE
HPE Aruba Networking Central AP Advanced 3 year Subscription E-STU	Q9Y64AAE
HPE Aruba Networking Central AP Advanced 5 year Subscription E-STU	Q9Y65AAE
HPE Aruba Networking Central AP Advanced 7 year Subscription E-STU	Q9Y66AAE
HPE Aruba Networking Central AP Advanced 10 year Subscription E-STU	Q9Y67AAE

On-Prem Services / Access Point Foundation Subscriptions

HPE Aruba Networking Central on Prem AP Foundation 1 year Subscription E-STU	R6U63AAE
HPE Aruba Networking Central on Prem AP Foundation 3 year Subscription E-STU	R6U64AAE
HPE Aruba Networking Central on Prem AP Foundation 5 year Subscription E-STU	R6U65AAE
HPE Aruba Networking Central on Prem AP Foundation 7 year Subscription E-STU	R6U66AAE
HPE Aruba Networking Central on Prem AP Foundation 10 year Subscription E-STU	R6U67AAE

Configuration Information

On-Prem Services / Access Point Advanced Subscriptions

HPE Aruba Networking Central On-Premises AP Advanced 1-year Subscription E-STU	R6U68AAE
HPE Aruba Networking Central On-Premises AP Advanced 3-year Subscription E-STU	R6U69AAE
HPE Aruba Networking Central On-Premises AP Advanced 5-year Subscription E-STU	R6U70AAE
HPE Aruba Networking Central On-Premises AP Advanced 7-year Subscription E-STU	R6U71AAE
HPE Aruba Networking Central On-Premises AP Advanced 10 year Subscription E-STU	R6U72AAE

On-Prem Services / Access Point Foundation Government Subscriptions

HPE Aruba Networking COP AP Foundation Government 1-year Subscription E-STU	S1P56AAE
HPE Aruba Networking COP AP Foundation Government 3-year Subscription E-STU	S1P57AAE
HPE Aruba Networking COP AP Foundation Government 5-year Subscription E-STU	S1P58AAE
HPE Aruba Networking COP AP Foundation 7-year Government Subscription E-STU	S1P59AAE
HPE Aruba Networking COP AP Foundation 10-year Government Subscription E-STU	S1P60AAE

On-Prem Services / Access Point Advanced Government Subscriptions

HPE Aruba Networking Central On-Premises Access Point Advanced 3-year Government Subscription E-STU	S1P97AAE
HPE Aruba Networking Central On-Premises Access Point Advanced 5-year Government Subscription E-STU	S1P98AAE

As-a-Service

Cloud Services / Access Point Foundation Subscriptions

HPE Aruba Networking Central AP Foundation 1 year Subscription SaaS	Q9Y58AAS
HPE Aruba Networking Central AP Foundation 3 year Subscription SaaS	Q9Y59AAS
HPE Aruba Networking Central AP Foundation 5 year Subscription SaaS	Q9Y60AAS
HPE Aruba Networking Central AP Foundation 7 year Subscription SaaS	Q9Y61AAS
HPE Aruba Networking Central AP Foundation 10 year Subscription SaaS	Q9Y62AAS

Cloud Services / Access Point Advanced Subscriptions

HPE Aruba Networking Central AP Advanced 1 year Subscription SaaS	Q9Y63AAS
HPE Aruba Networking Central AP Advanced 3 year Subscription SaaS	Q9Y64AAS
HPE Aruba Networking Central AP Advanced 5 year Subscription SaaS	Q9Y65AAS
HPE Aruba Networking Central AP Advanced 7 year Subscription SaaS	Q9Y66AAS
HPE Aruba Networking Central AP Advanced 10 year Subscription SaaS	Q9Y67AAS

Technical Specifications

Hardware Variants	
AP type	AP-503H: Mid-range dual radio Wi-Fi 6 Hospitality AP with 1+2 Ethernet ports AP-505H: High-end dual radio Wi-Fi 6 Hospitality AP with 1+4 Ethernet ports, PSE, USB
Wi-Fi Radio and Platform Specifications	
5 GHz radio	Two spatial stream (SU) MIMO for up to 1.2 Gbps wireless data rate (HE80)
2.4 GHz radio	Two spatial stream (SU) MIMO for up to 287 Mbps wireless data rate (HE20) Notes: HE40 operation is supported in 2.4 GHz, but uncommon and not recommended for enterprise deployments
Maximum number of associated client devices	Up to 256 associated client devices per radio
Maximum number of BSSIDs	16 BSSIDs per radio
Supported frequency bands (country-specific restrictions apply)	2.400 to 2.4835GHz ISM 5.150 to 5.250GHz U-NII-1 5.250 to 5.350GHz U-NII-2A 5.470 to 5.725GHz U-NII-2C 5.725 to 5.850GHz U-NII-3/ISM 5.850 to 5.895GHz U-NII-4
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) 802.11ax: Orthogonal frequency-division multiple access (OFDMA) with up to 8 resource units
Supported modulation types:	802.11b: BPSK, QPSK, CCK 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM (proprietary extension) 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM (proprietary extension) 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM
802.11n high-throughput (HT) support	HT20/40
802.11ac very high throughput (VHT) support:	VHT20/40/80
802.11ax high efficiency (HE) support:	HE20/40/80
Supported data rates (Mbps):	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, HT20 to HT40), 400 with 256-QAM 802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 2, VHT20 to VHT80), 1,083 with 1024-QAM 802.11ax (2.4GHz): 3.6 to 574 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE40)

Technical Specifications

	802.11ax (5GHz): 3.6 to 1,201 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE80)
802.11n/ac/ax packet aggregation:	A-MPDU, A-MSDU
Transmit power	Configurable in increments of 0.5 dBm
Maximum (aggregate, conducted total) transmit power (limited by local regulatory requirements):	2.4 GHz band: +20 dBm (17 dBm per chain) 5 GHz band: +21 dBm (18 dBm per chain) Notes: conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain
Minimum configurable transmit power level	0dBm (conducted, per chain)
VPN IPSec throughput performance	100 Mbps (AP-503H) and 500 Mbps or better (AP-505H)

- Advanced Cellular Coexistence (ACC) minimizes the impact of interference from cellular networks
- Advanced IOT Coexistence (AIC) allows concurrent operation of multiple radios in the 2.4 GHz band (AP-505H)
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance
- 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
- 802.11ax Target Wait Time (TWT) to support low-power client devices
- 802.11mc Fine Timing Measurement (FTM) for precision distance ranging

Wi-Fi Antennas

AP-503H

Two integrated semi-directional antennas for 2x2 MIMO with peak single antenna gain of 2.5 dBi in 2.4 GHz and 5.6 dBi in 5 GHz. Built-in antennas are optimized for vertical wall or desk mounted orientation of the AP. Combining the patterns of each of the antennas of the MIMO radios, the peak gain of the combined, average pattern is 1.7 dBi in 2.4 GHz and 5.0 dBi in 5 GHz.

AP-505H

Two integrated semi-directional antennas for 2x2 MIMO with peak single antenna gain of 5.2dBi in 2.4GHz and 5.4dBi in 5GHz. Built-in antennas are optimized for vertical wall or desk mounted orientation of the AP. Combining the patterns of each of the antennas of the MIMO radios, the peak gain of the combined, average pattern is 3.3 dBi in 2.4 GHz and 2.9 dBi in 5 GHz

Technical Specifications

Other Interfaces

Uplink (E0)

AP-503H: Ethernet wired network port (RJ45)
Auto-sensing link speed (10/100/1000BASE-T) and MDI/MDIX
802.3az Energy Efficient Ethernet (EEE)
PoE-PD: 802.3af PoE (class 3)

AP-505H: Smart Rate Ethernet wired network port (RJ45)
Auto-sensing link speed (100/1000/2500BASE-T) and MDI/MDIX
2.5 Gbps speed complies with NBase-T and 802.3bz specifications
802.3az Energy Efficient Ethernet (EEE)
PoE-PD: 48Vdc (nominal) 802.3af/at/bt PoE (class 3, 4 or 6)

Local

AP-503H (E1-E2): Two Ethernet wired network ports (RJ45)
Auto-sensing link speed (10/100/1000BASE-T) and MDI/MDIX
802.3az Energy Efficient Ethernet (EEE)

AP-505H (E1-E4): Four Ethernet wired network ports (RJ45)
Auto-sensing link speed (10/100/1000BASE-T) and MDI/MDIX
802.3az Energy Efficient Ethernet (EEE)
E1 & E2: PoE-PSE: 802.3af/at PoE output; dual 802.3af (both ports) or single 802.3at (E1 only)

DC power interface

AP-503H:
12Vdc (nominal, +/- 5%), accepts 2.1mm/5.5mm center-positive circular plug with 9.5mm length

AP-505H
48Vdc (nominal, +/- 5%), accepts 1.35mm/3.5mm center-positive circular plug with 9.5mm length

USB 2.0 host interface (Type A connector)

AP-505H
Cellular modems
IOT or other plug-in accessories
Device battery charging port
Capable of sourcing up to 1A / 5W to an attached device

Bluetooth Low Energy (BLE5.0) and Zigbee (802.15.4) radio

BLE: up to 7 dBm transmit power (class 1) and -100 dBm receive sensitivity (125 kbps)
Zigbee: up to 7 dBm transmit power and -97 dBm receive sensitivity (250 kbps)
Integrated semi-directional antenna with peak gain of 2.5 dBi (AP-503H) or 1.2dBi (AP-505H)

Visual indictors (two multi-color LEDs):

Power/System status
Radio status
Local network port status (2x on AP-503H, 4x on AP-505H)
PoE-PSE status (2x) (applies to AP-505H only)

Reset button:

Factory reset, LED mode control (normal/off)

Technical Specifications

Serial console interface
Proprietary, micro-B USB physical jack
Crypto performance
Up to 500 Mbps

Power sources and power consumption

Power Sources: The AP supports direct DC power and Power over Ethernet
The AP supports direct DC power and Power over Ethernet (PoE) When both DC and PoE power sources are available, DC power takes priority over PoE1 Power sources are sold separately; see the HPE Aruba Networking 500H Series Ordering Guide for details **AP-505H** When powered by DC or 802.3bt (class 6) PoE, the AP will operate without restrictions When powered by 802.3at (class 4) PoE and with the IPM feature disabled, the AP will disable the USB port (only) if PoE-PSE is enabled, and support (802.3af) PoE-PSE power on E1 only (no PSE on E2) When powered by 802.3af (class 3) PoE with the IPM feature disabled, the AP will disable the USB port and PoE-PSE capability With IPM enabled, the AP will start up without restrictions, but may dynamically apply additional restrictions depending on the PoE budget and actual power consumption. The feature specific restrictions and order in which they are applied can be configured
Maximum (worst-case) power
AP-503H: DC powered: 10.0W PoE powered (802.3af): 11.4W **AP-505H:** DC powered: 14W / 50W PoE powered (802.3bt): 14W / 51W PoE powered (802.3at): 14W / 25.5W PoE powered (802.3af): 13.5W / 13.5W
Maximum (worst-case) power consumption in idle mode (without USB or PSE)
AP-503H: 4.5W (PoE) AP-505H: 6.2W (PoE)

Technical Specifications

Mechanical Specifications

Dimensions/weight (unit, excluding mount bracket):

AP-503H:
86mm (W) x 40mm (D) x 150mm (H)
290g
AP-505H:
86mm (W) x 47mm (D) x 150mm (H)
360g

Dimensions/weight (shipping):

AP-503H:
111mm (W) x 54mm (D) x 167mm (H)
380g
AP-505H:
111mm (W) x 54mm (D) x 167mm (H)
450g

Mounting details

Using one of the (separate orderable) mount kits, the AP can be attached to a single or dual gang wall-box, directly to a wall, or desk mounted. See the 500H Series Ordering Guide for details.

Environmental Specifications

Operating conditions

Temperature: 0C to +40C / +32F to +104F
Humidity: 5% to 93% non-condensing
ETS 300 019 class 3.1 environments

Storage and transportation conditions

Temperature: -40C to +70C / -40F to +158F
Humidity: 5% to 93% non-condensing
ETS 300 019 classes 1.2 and 2.3 environments

Reliability

Mean time between failure

AP-503H: 1,360 khrs (155 yrs) at +25C operating temperature
AP-505H: 780 khrs (88 yrs) at +25C operating temperature.

Technical Specifications

Regulatory And Safety Compliance

Regulatory model numbers

AP-503H (all variants): APINH503
AP-505H (all variants): APINH505

Minimum software release

HPE Aruba Networking Operating System and HPE Aruba Networking InstantOS 8.7.1.0 (AP-503H) and 8.7.0.0 (AP-505H)

HPE Aruba Networking Operating System 10.3.0.0 (AP-503H), 10.2.0.0 (AP-505H)

Regulatory compliance (for more country-specific regulatory information and approvals, please see your HPE Aruba Networking representative.)

FCC/ISED
CE Marked
RED Directive 2014/53/EU
EMC Directive 2014/30/EU
Low Voltage Directive 2014/35/EU
UL/IEC/EN 62368-1
EN 60601-1-1, EN60601-1-2

Certifications

- Wi-Fi Alliance:
  - Wi-Fi CERTIFIED a, b, g, n, ac
  - Wi-Fi CERTIFIED 6 (ax)
  - WPA, WPA2 and WPA3–Enterprise with CNSA option, Personal (SAE), Enhanced Open (OWE)
  - WMM, WMM-PS, Wi-Fi Agile Multiband
  - Wi-Fi CERTIFIED LocationTM (AP-505H Only)
- Bluetooth SIG
- Ethernet Alliance (PoE)

Technical Specifications

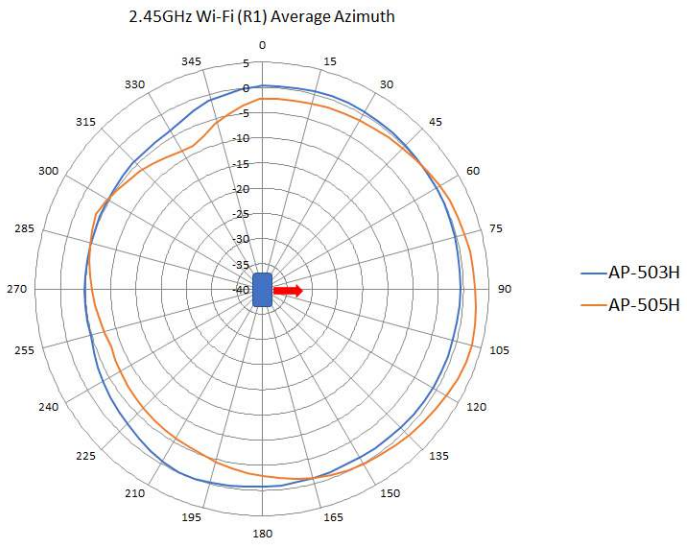
RF Performance Table		
	Maximum transmit power (dBm) per transmit chain	**Receiver sensitivity (dBm) per receive chain**
2.4GHz, 802.11b		
1Mbps	18	-98
11Mbps	18	-90
2.4GHz, 802.11g		
6Mbps	18	-93
54Mbps	18	-76
2.4GHz, 802.11n HT20		
MCS0	18	-93
MCS7	16	-75
2.4GHz, 802.11ax HE20		
MCS0	18	-93
MCS11	14	-62
5GHz, 802.11a		
6Mbps	18	-92
54Mbps	18	-75
5GHz, 802.11n HT20		
MCS0	18	-92
MCS7	16	-74
5GHz, 802.11n HT40		
MCS0	18	-90
MCS7	16	-71
5GHz, 802.11ac VHT20		
MCS0	18	-90
MCS9	16	-69
5GHz, 802.11ac VHT40		
MCS0	18	-90
MCS9	16	-65
5GHz, 802.11ac VHT80		
MCS0	18	-87
MCS9	16	-62
5GHz, 802.11ax HE20		
MCS0	18	-93
MCS11	14	-62
5GHz, 802.11ax HE40		
MCS0	18	-90
MCS11	14	-59
5GHz, 802.11ax HE80		
MCS0	18	-87
MCS11	14	-56

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

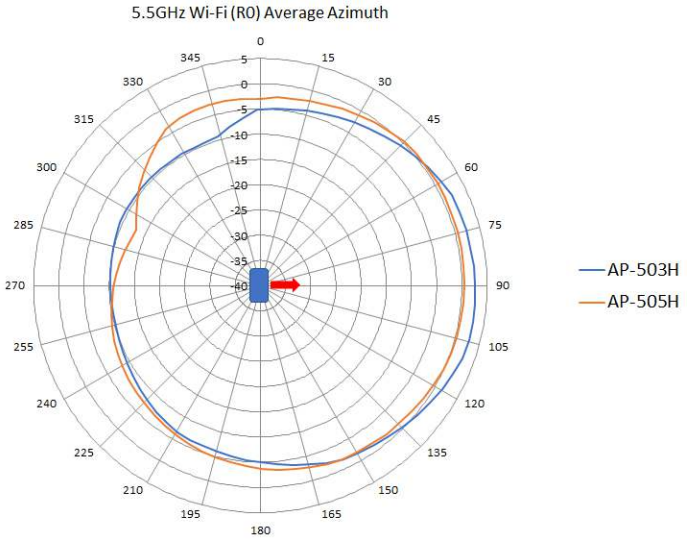
Antenna Patterns

Horizontal or azimuth plane (looking at the top of the AP, front facing to the right)

(averaged patterns for all applicable antennas)



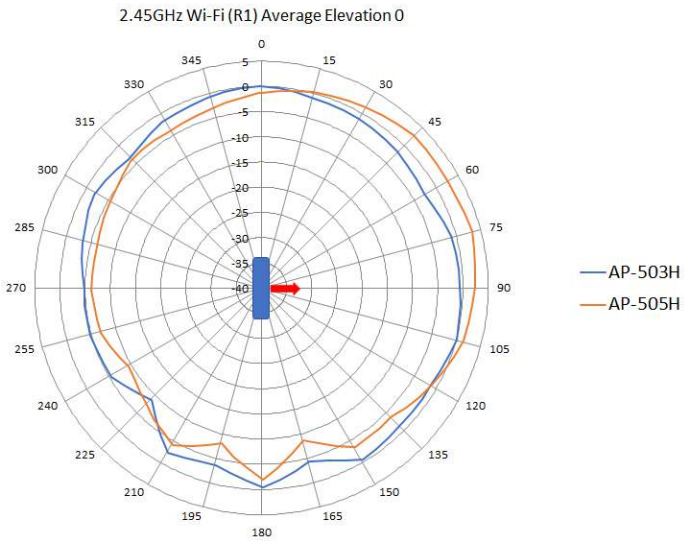
2.45 GHz Wi-Fi (antennas 0, 1)



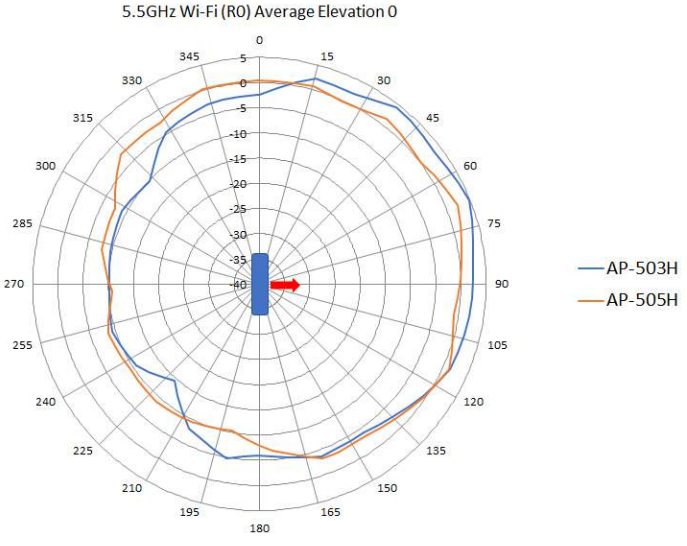
5.5 GHz Wi-Fi (antennas 0, 1)

Vertical (elevation) plane 0 (looking at the side of the AP, front facing to the right)

(averaged patterns for all applicable antennas)



2.45 GHz Wi-Fi (antennas 0, 1)

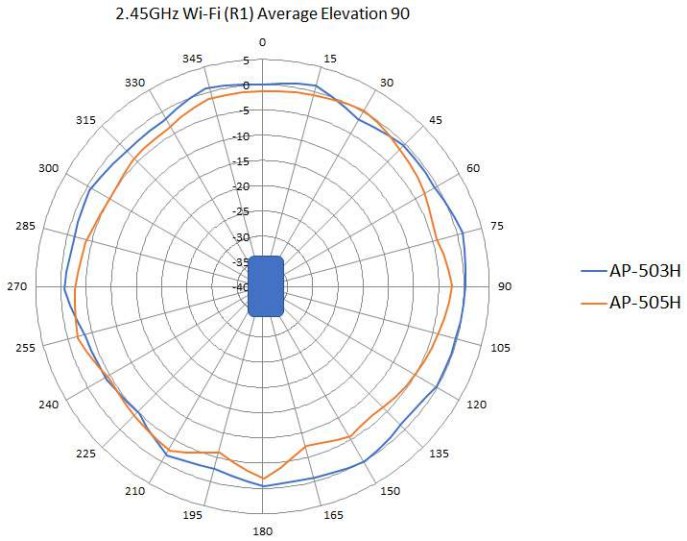


5.5 GHz Wi-Fi (antennas 0, 1)

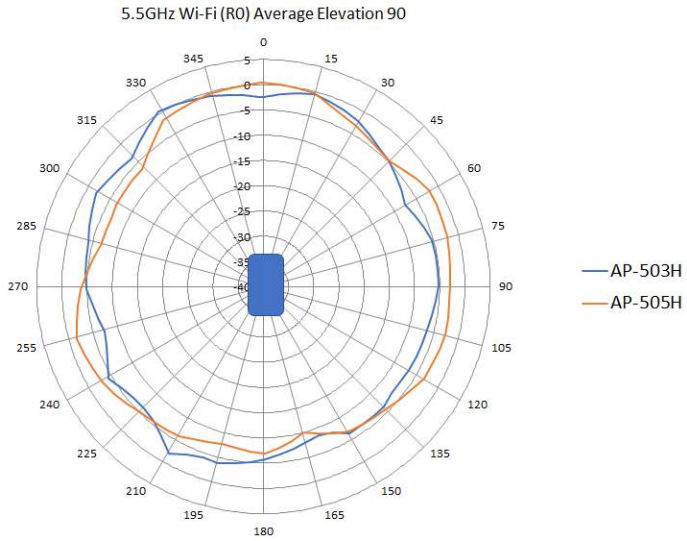
Technical Specifications

Vertical (elevation) plane 90 (looking at the front of the AP)

(averaged patterns for all applicable antennas)



2.45 GHz Wi-Fi (antennas 0, 1)



5.5 GHz Wi-Fi (antennas 0, 1)

Summary of Changes

Date	Version History	Action	Description of Change
17-Aug-2026	Version 22	Changed	New Central SKUs were added in Configuration Information section: R6U68AAE, R6U69AAE, R6U70AAE, R6U71AAE, R6U72AAE, S1P56AAE, S1P57AAE, S1P58AAE, S1P59AAE, S1P60AAE, S1P97AAE, S1P98AAE.
01-Jun-2026	Version 21	Changed	Information updated for Environmental Specifications in Technical Specifications sections.
27-Feb-2026	Version 20	Changed	Rebranding update applied to QuickSpecs
28-Jul-2025	Version 19	Changed	Update survey link.
07-Apr-2025	Version 18	Changed	Overview, Standard Features, Configuration Information, and Technical Specifications sections were updated.
21-Jan-2025	Version 17	Changed	Technical Specifications section was updated.
16-Dec-2024	Version 16	Changed	Overview, Standard Features and Configuration Information sections were updated.
19-Aug-2024	Version 15	Changed	Configuration Information section was updated.
08-Apr-2024	Version 14	Changed	Configuration Information section was updated.
18-Mar-2024	Version 13	Changed	Configuration Information section was updated.
04-Dec-2023	Version 12	Changed	Series name was updated.
07-Aug-2023	Version 11	Changed	Configuration Information section was updated.
06-Mar-2023	Version 10	Changed	Configuration Information section was updated.
21-Nov-2022	Version 9	Changed	Updates worked through out the document.
15-Aug-2022	Version 8	Changed	Configuration Information section was updated.
05-Jul-2022	Version 7	Changed	Configuration Information section was updated, new SKUs were added.
06-Dec-2021	Version 6	Changed	SKUs were added in Configuration Information section was updated.
15-Mar-2021	Version 5	Changed	Configuration Information section was updated.
01-Feb-2021	Version 4	Changed	Configuration Information section was updated.
04-Jan-2021	Version 3	Changed	Standard Features and Configuration Information sections were updated. New SKUS were added.
08-Sep-2020	Version 2	Changed	Configuration Information section was updated. New SKUS were added.
04-May-2020	Version 1	New	New QuickSpecs

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a00056117enw - 16331 - Worldwide - V22 - 17-August-2026

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