

HPE Aruba Networking 750 Series Campus Access Points

Flagship Wi-Fi 7 access points for high performance, high-capacity, resiliency, and secure wireless connectivity

Key features

- Wi-Fi 7 (802.11be) brings multilink operation (MLO) for channel aggregation, 4K QAM for higher throughput and lower latency, and the 6 GHz band for more than double the available capacity
- Three 4x4 MIMO radios provide tri-band coverage across 2.4 GHz, 5 GHz, and 6 GHz to deliver 18.7 Gbps maximum tri-band aggregate data rate
- Capable of up to 28.8 Gbps maximum aggregate data rate using optional dual 5 GHz and 6 GHz radio modes[1]
- Up to three 320 MHz channels in 6 GHz support low-latency, bandwidth-hungry applications like high-definition video and augmented reality/virtual reality applications
- Patented UTB filtering enables 5 GHz and 6 GHz to operate without restrictions or interference
- High availability with dual HPE Smart Rate ports for redundant Ethernet and power. Configurable to 1, 2.5, 5, or 10 Gbps (or 100 Mbps)
- IoT-ready platform with two integrated Bluetooth and 802.15.4/Zigbee radios and two USB-port extensions
- Built-in GNSS receiver, barometric pressure sensor, and intelligent software enable access points (APs) to self-locate and act as reference points for accurate indoor location measurements
- MACsec support[2] extends wired Ethernet protection to the access point
- Offered as optional eco-friendly 5-packs
- AI-powered dynamic power save mode helps reduce energy use

Ideal for the most demanding users and applications, the HPE Aruba Networking 750 Series Campus Access Points deliver secure, resilient, and high performance Wi-Fi 7 connectivity. The flagship 750 series deliver up to 18.7 Gbps maximum tri-band aggregate data rate and goes beyond the Wi-Fi 7 standard to take full advantage of the 6 GHz band, connect more Internet of Things (IoT) devices, strengthen security across wired and wireless, and enable highly accurate location aware capabilities. HPE Aruba Networking Central helps drive efficient operations and provides AI-automation and machine learning (ML) insights for improved wireless connectivity.

Unique to HPE Aruba Networking, the 750 series access points include ultra tri-band (UTB) filtering and dual 10 Gbps Ethernet ports to help eliminate coverage gaps, provide greater resiliency, and deliver fast, secure connectivity.

AI-powered Wi-Fi 7

Managing Wi-Fi 7 access points is easier with HPE Aruba Networking Central that provides intelligent automation, AI insights, and unified infrastructure management. The 750 series is supported by HPE Aruba Networking Wireless Operating System (OS-10).

More capacity and wider channels

The HPE Aruba Networking 750 Series Campus Access Points are designed to take advantage of the 6 GHz band through three 4x4 MIMO radios, which translates into far greater speeds over the 2.4 and 5 GHz bands, wider channels for multigigabit traffic, and less interference. It delivers up to 18.7 Gbps maximum tri-band aggregate data rate, using three 4x4 MIMO radios (2.4 GHz, 5 GHz, and 6 GHz).

To further increase the wireless capacity, the 2.4 GHz radio can be reconfigured to deliver an optional dual 5 GHz or dual 6 GHz mode, which further increases the maximum aggregate data rate to 28.8 Gbps in dual 6 GHz mode.[3]

Table 1. Peak radio performance numbers

Band	Channel bandwidth	Peak data rate
6 GHz	320 MHz	11.5 Gbps
5 GHz	160 MHz	5.8 Gbps
2.4 GHz	20 MHz 40 MHz	688 Mbps 1.4 Gbps
Total using 2.4 GHz with 20 MHz Total using 2.4 GHz with 40 MHz Total using dual 6 GHz (no 2.4 GHz)[1]		18.0 Gbps 18.7 Gbps 28.8 Gbps

Powerful 4x4 MIMO radios

It is able to sustain 3- and 4-spatial stream data rates with clients that support it. It also supports 4-spatial stream MU-MIMO with two 2SS client devices and adds MIMO redundancy when using 2SS client devices to increase likelihood of 2SS rates versus slower 1SS data rate.

[1, 2, 3] Feature available in a future software release.

Wi-Fi 7 standard

The new Wi-Fi 7 standard (802.11be) extends the capabilities of Wi-Fi 6E, including the use of the 6 GHz band. New capabilities include wide 320 MHz bandwidth channels, MLO for channel aggregation across different bands and failover, and 4096 QAM (4K QAM) for higher peak data rates.

Advantages of 6 GHz

Wi-Fi 7 takes advantage of up to 1200 MHz in the 6 GHz band for higher throughput and improved application performance. With up to three 320 MHz channels or seven 160 MHz channels, Wi-Fi 7 can better support low-latency, bandwidth-hungry applications like high-definition video, and artificial reality/virtual reality applications. Only Wi-Fi 6E or 7 capable devices can use the 6 GHz band so there is no interference or slowdowns due to legacy devices.

Device class support

The AP-755 access points with integrated antennas are part of the low power indoor (LPI) device class. This fixed indoor-only class uses lower power levels and does not require an automated frequency coordination (AFC) service to manage incumbent outdoor services, which is required for standard class APs. The AP-754 connectorized antenna models will typically operate as standard power APs but may also be allowed to operate as LPI devices in some countries.

Less interference

HPE Aruba Networking 750 Series Campus Access Points include HPE Aruba Networking patented UTB filtering, which enables enterprises to take advantage of the high end of 5 GHz with the lower end of 6 GHz without experiencing interference.

Because there is only 50 MHz between 5 GHz and 6 GHz, without advanced filtering, enterprises would likely experience problems between the bands and would therefore be limited in the number of channels available. By applying advanced filtering capabilities, enterprises can fully utilize the available spectrum without creating coverage gaps or islands.

Global readiness

While the need for more Wi-Fi capacity is recognized across the globe, countries are approaching 6 GHz differently. The HPE Aruba Networking 750 Series Campus Access Points are set up to automatically update regulatory rules once Wi-Fi 7 regulations have been approved and certified.

Business continuity

The HPE Aruba Networking 750 Series Campus Access Points provide high availability with two 10GbE ports for hitless failover for both data and power. Configurable to 1, 2.5, 5, or 10 Gbps (or 100 Mbps), these dual ports provide business continuity for mission-critical applications.

Advantages of OFDMA

This capability allows HPE Aruba Networking access points to handle multiple 802.11be capable clients on each channel simultaneously, regardless of device or traffic type. Channel utilization is optimized by handling each transaction through smaller subcarriers or resource units (RUs), which means that clients are sharing a channel and not competing for airtime and bandwidth.

Wi-Fi optimization

Client optimization

The patented AI- powered HPE Aruba Networking Central ClientMatch technology helps eliminate sticky client issues by steering a client to the access point where it receives the best radio signal. HPE Aruba Networking ClientMatch steers traffic from the noisy 2.4 GHz band to the preferred 5 GHz or 6 GHz band depending on client capabilities. HPE Aruba Networking ClientMatch also dynamically steers traffic to load balance access points to improve the user experience.

Automated Wi-Fi radio frequency management

To optimize the user experience and provide greater stability, HPE Aruba Networking AirMatch allows organizations to automate network optimization using machine learning (ML). HPE Aruba Networking AirMatch provides dynamic bandwidth adjustments to support changing device density, enhanced roaming using an even distribution of effective isotropic radiated power (EIRP) to radios, and real-time channel assignments to mitigate co-channel interference.

HPE Aruba Networking Advanced Cellular Coexistence

Unique HPE Aruba Networking Advanced Cellular Coexistence (ACC) uses built-in filtering to automatically reduce the impact of interference from cellular networks, distributed antenna systems (DAS), and commercial small cell or femtocell equipment.

The HPE Aruba Networking 750 Series Campus Access Points include a built-in GPS receiver, barometric pressure sensor, and intelligent software to allow them to automatically locate themselves accurately within the universal framework of latitude, longitude, and altitude (floor level).

AI-powered dynamic power save mode

Access points switch into a dynamic power save mode and automatically wake up at a schedule when connectivity demand arises, reducing power demands and saving money in alignment with the organization's sustainability initiatives.

Intelligent Power Monitoring

For better insights into energy consumption, HPE Aruba Networking access points continuously monitor and report hardware energy usage. Unlike other vendor's access points, HPE Aruba Networking access points can also be configured to enable or disable capabilities based on available Power over Ethernet (PoE) power — ideal when wired switches have exhausted their power budget. Enterprises can deploy Wi-Fi 7 access points and update switching and power later if needed based on their actual usage.

Self-locating access points

Indoor location shouldn't require guesswork or costly, complex overlay technologies. HPE Aruba Networking Wi-Fi 6/6E and Wi-Fi 7 access points help organizations leverage their wireless investment to deliver indoor location capabilities everywhere.

As part of HPE Aruba Networking indoor location solutions, they serve as reference points for client devices and other technologies using fine time measurement (FTM).

Open Locate, an emerging standard that allows access points to share their location over the air, enables mobile devices to use Wi-Fi FTM or Bluetooth (BLE) to calculate their own location and apply location coordination information in a variety of applications including wayfinding, asset tracking, and employee safety.

The 750 series access points support FTM 802.11az for sub one-meter accuracy[4] and include a GNSS receiver and built-in barometric sensor to enable APs to automatically place themselves on floor plan maps in HPE Aruba Networking Central, helping eliminate manual effort and error.

Access points as flexible and secure IoT-ready platform

By combining IoT radios with a zero trust network framework, the HPE Aruba Networking 750 Series Campus Access Points can serve as flexible IoT platforms that bolster network security, provide coverage for a broad range of IoT devices, and help eliminate the need for network overlays just for IoT devices.

The 750 series includes two integrated Bluetooth and 802.15.4 radios for Zigbee support to simplify deploying and managing IoT-based location services, asset tracking services, security solutions, and IoT sensors. There are also two USB-port extensions providing up to 10W for IoT connectivity to a wide range of devices. These IoT capabilities allow organizations to leverage the access points as an IoT platform, which helps eliminate the need for an overlay infrastructure and opens opportunities to accelerate IoT initiatives.

In addition, Target Wake Time (TWT) establishes a schedule for when clients need to communicate with an access point. This helps improve client power savings and reduces airtime contention with other clients, which is ideal for IoT.

[4] Feature available in a future software release.

Streamline IoT operations

HPE Aruba Networking Central IoT Operations is a service for access points running HPE Aruba Networking Wireless Operating System (OS-10). This unifies visibility of IT and OT infrastructure within the network health dashboard by extending network monitoring and insights to BLE, Zigbee, and other non-IP IoT devices. It helps streamline non-Wi-Fi device onboarding and data collection.

AI client insights

ML-based classification of all clients and IoT devices through HPE Aruba Networking Central Client Insights uses deep packet inspection to provide additional context and behavioral information to help ensure devices are receiving proper policy enforcement and continuously monitor for rogue devices.

Technology partnerships

A broad ecosystem of technology partners provides interoperability for easier installations and operations, and certified solutions are available to help digital transformation and to extend capabilities of network infrastructure.

Security built-in

The 750 series access points include security capabilities such as:

WPA3 and Enhanced Open

Support for stronger encryption and authentication is provided through 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 capability requires HPE Aruba Networking ClearPass Policy Manager.

10GbE port with MACsec[5]

MACsec support extends wired Ethernet encryption to the access point using the 10 Gbps port.

Trusted Platform Module

For enhanced device assurance, all HPE Aruba Networking access points include an installed Trusted Platform Module (TPM) for secure storage of credentials and keys, and boot code.

User and device authentication

Cloud-native network access control (NAC) provided by HPE Aruba Networking Central further simplifies how IT controls network access while providing a frictionless experience for end users. Global policy automation and orchestration enables IT to define and maintain global policies at scale with ease, using UI-driven, intuitive workflows that automatically translate security intent into policy design and map user roles for employees, contractors, guests, and devices to their proper access privileges.

Intrusion detection

HPE Aruba Networking Central utilizes the Rogue AP Intrusion Detection Service (RAPIDS) to identify and resolve issues caused by rogue APs and clients. Wired and wireless data is automatically correlated to identify potential threats, thereby strengthening network security and improving incident response processes by reducing false positives.

Web content filtering

Web Content Classification (WebCC) classifies websites by content category and rates them by reputation and risk score, enabling IT to block malicious sites to help prevent phishing, DDoS, botnets, and other common attacks.

Simple and secure access

To improve security and ease of management, IT can centrally configure and automatically enforce role-based policies that define proper access privileges for employees, guests, contractors, and other user groups — no matter where users connect on wired and WLANs. Dynamic segmentation helps eliminate the time consuming and error-prone task of managing complex and static VLANs, ACLs, and subnets by dynamically assigning policies and keeping traffic secure and separated.

[5] Feature available in a future software release.

Seamless handoffs to cellular

Built on the technical foundations of Passpoint® and Wi-Fi calling, HPE Aruba Networking Air Pass creates a roaming network across the HPE Aruba Networking enterprise customer footprint, extending cellular coverage and enhancing the visitor and subscriber experience to deliver a great experience for your guests while helping to reduce costs and management overhead for DAS.

Optimize with HPE Aruba Networking Wireless Operating System

Cloud-native HPE Aruba Networking Wireless Operating System (OS-10) is the distributed network operating system working with HPE Aruba Networking Central that acts as the control layer for HPE Aruba Networking access points and gateways.

With its flexible architecture, IT can deliver reliable and secure wireless connectivity for small offices, mid-sized branches, large campus environments, and remote workers. Working in tandem with cloud-native HPE Aruba Networking Central, HPE Aruba Networking Wireless Operating System (OS-10) provides the WLAN management and control to deliver greater scalability, security, and AI-powered optimization. Using HPE Aruba Networking Wireless Operating System (OS-10) together with cloud-based HPE Aruba Networking Central for management and orchestration reduces processing required by the on-site gateways to manage clients and access points.

Enterprises can then optimize gateway deployments with fewer gateways in very large environments with thousands of access points and devices.

Flexible operation and management

Our unified access points can operate as stand-alone APs or with a gateway for greater scalability, security, and manageability. Access points 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 access points can be managed using cloud-based 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.

Simplified, flexible consumption

The 750 series access points require HPE Aruba Networking Central subscription-based licenses, which are purchased on a per-device basis for APs. Licenses are available in 1-, 3-, 5-, 7-, and 10-year increments, making it easy to align requirements for AIOps, security, and other desired management features. HPE Aruba Networking Wireless Operating System (OS-10) is included in the subscription. Learn more about HPE Aruba Networking Central.

Summary

For enterprises looking for the highest performance Wi-Fi, the flagship HPE Aruba Networking 750 Series Campus Access Points deliver more wireless capacity by taking advantage of Wi-Fi 7 features, the 6 GHz band, and a powerful architecture featuring three 4x4 MIMO radios. They support high-density IoT integration with dual IoT radios and dual USB ports, provide highly precise locating with built-in GNSS receivers, barometric sensors, and fast wired connectivity with dual 10 Gbps Ethernet ports.

Unique to HPE Aruba Networking, the HPE Aruba Networking Wireless Operating System (OS-10) based 750 series access points include UTB filtering and dual 10 Gbps Ethernet ports to help eliminating coverage gaps, providing greater resiliency, and delivering fast, secure connectivity.

Technical specifications

Hardware variants

— HPE Aruba Networking AP-754: External antenna models

— HPE Aruba Networking AP-755: Internal antenna models

Wi-Fi radio specifications

— AP type: Indoor, tri radio, 2.4 GHz, 5 GHz, and 6 GHz (concurrent) 802.11be 4x4 MIMO

— 2.4 GHz radio: Four spatial stream MIMO for up to 1.4 Gbps wireless data rate with 4SS EHT40 802.11be client devices

— 5 GHz radio: Four spatial stream MIMO for up to 5.8 Gbps wireless data rate with 4SS EHT160 802.11be client devices

— 6 GHz radio: Four spatial stream MIMO for up to 11.5 Gbps wireless data rate with 4SS EHT320 802.11be client devices

— MU-MIMO (downlink, uplink) is supported on all radios

— Up to 512 associated client devices per radio, and up to 16 BSSIDs per radio

— Supported frequency bands (country-specific restrictions apply):
  - 2.400 to 2.4835 GHz ISM
  - 5.150 to 5.250 GHz U-NII-1
  - 5.250 to 5.350 GHz U-NII-2
  - 5.470 to 5.725 GHz U-NII-2E
  - 5.725 to 5.850 GHz U-NII-3/ISM
  - 5.850 to 5.895 GHz U-NII-4
  - 5.925 to 6.425 GHz U-NII-5
  - 6.425 to 6.525 GHz U-NII-6[6]
  - 6.525 to 6.875 GHz U-NII-7
  - 6.875 to 7.125 GHz U-NII-8

— When the AP is configured in dual-5 GHz mode,[7] one radio covers U-NII-1 and -2, while a second radio covers U-NII-2E, -3/ISM and -4. The third radio covers the full 6 GHz band.

— When the AP is configured in dual-6 GHz mode,[8] one radio covers U-NII-5, while a second radio covers U-NII-7 and -8. The third radio covers the full 5 GHz band.

— Available bands and channels: Dependent on configured regulatory domain (country)

— Dynamic frequency selection (DFS) optimizes the use of available RF spectrum in the 5 GHz band
  - Including Zero-Wait DFS (ZWDFS) to accelerate channel changes

— Supported radio technologies:
  - 802.11b: Direct-sequence spread spectrum (DSSS)
  - 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM)
  - 802.11ax/be: Orthogonal frequency-division multiple access (OFDMA) with up to 37 RU

— Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM and 256-QAM (proprietary extension)
  - 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM and 1024-QAM (proprietary extension)
  - 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, and 1024-QAM
  - 802.11be: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, and 4096-QAM

— 802.11n high throughput (HT) support: HT20/40

— 802.11ac very high throughput (VHT) support: VHT20/40/80/160

— 802.11ax high efficiency (HE) support: HE20/40/80/160

— 802.11be extreme high throughput (EHT) support: EHT20/40/80/160/320

— 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 600 (MCS0 to MCS15, HT20 to HT40)
  - 802.11ac: 6.5 to 3,467 (MCS0 to MCS9, NSS = 1 to 4, VHT20 to VHT160)
  - 802.11ax: 7.3 to 4,804 (MCS0 to MCS11, NSS = 1 to 4, HE20 to HE160)
  - 802.11be: 7.3 to 11,530 (MCS0 to MCS13, NSS = 1 to 4, EHT20 to EHT320)

— 802.11n/ac 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
  - Per radio/band (2.4 GHz/5 GHz/6 GHz): +24 dBm (18 dBm per chain)
  - Note: Conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain

— ACC removes the impact of interference from cellular networks

— UTB enables ultimate flexibility in 5 GHz and 6 GHz channel selection without performance degradation

— 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 TWT to support low-power client devices

— 802.11mc/az FTM for precision distance ranging

[6] The U-NII-6 band is not supported when the AP-755 is configured for dual-6 GHz mode

[7,8] Feature available in a future software release

Wi-Fi antennas

— AP-754: Two sets of four (female) RP-SMA connectors for external antennas (A0 through A3 corresponding with radio chains 0 through 3 for the 2.4 GHz and 5 GHz radios, and B0 through B3 corresponding with radio chains 0 through 3 for the 6 GHz radio). Worst-case internal loss between radio interface and external antenna connectors: 1.1 dB in 2.4 GHz, 1.8 dB in 5 GHz, and 2.8 dB in 6 GHz

— AP-755: Integrated downtilt omnidirectional antennas for 4x4 MIMO with peak antenna gain of 5.3 dBi in 2.4 GHz, 6.0 dBi in 5 GHz, and 6.0 dBi in 6 GHz. Built-in antennas are optimized for horizontal ceiling mounted orientation of the AP. The downtilt angle for maximum gain is roughly 30° to 40°

  • Combining the patterns of each of the antennas of the MIMO radios, the peak gain of the combined, average pattern is 3.1 dBi in 2.4 GHz, 3.6 dBi in 5 GHz, and 3.6 dBi in 6 GHz.

Other interfaces and features

— E0, E1: Two Ethernet wired network ports (RJ-45)

  • Auto-sensing link speed (100/1000/2500/5000/10000BASE-T) and MDI/MDIX

  • PoE-PD: 48 Vdc (nominal) 802.3af/at/bt PoE (class 3 or higher)

  • 802.3az Energy Efficient Ethernet (EEE)

  • Link Aggregation Control Protocol (LACP) support between both network ports for redundancy and increased capacity

  • MACsec support on E0 (802.1ae)

— DC power interface: 12 VDC (nominal, +/– 5%), accepts 2.1 mm / 5.5 mm center-positive circular plug with 9.5 mm length

— U0, U1: Two USB 2.0 host interface (Type A connector)

  • Capable of sourcing up to 2A/10W to one or two attached devices

— Flexible dual IoT radio options: BLE 5.4 (w/HADM), plus either BLE 5.4 or 802.15.4/Zigbee:

  • BLE: BT5.4 with up to 11 dBm transmit power (class 1) and –105 dBm receive sensitivity (125 kbps)

  • IEEE 802.15.4/Zigbee: up to 12 dBm transmit power and –97 dBm receive sensitivity (250 kbps)

  • Integrated omnidirectional antenna with roughly 30° to 40° downtilt and peak gain of 5.6 dBi (AP-754) or 6.0 dBi (AP-755)

— GNSS L1 (1575.42 MHz) and L5 (1176.45 MHz) receiver supporting GPS, Galileo, GLONASS, and BeiDou signal

  • Receive sensitivity: –165 dBm (tracking)

  • Integrated omnidirectional antenna with roughly 30° to 40° downtilt and peak gain of 3.0 dBi (AP-754) or 4.1 dBi (AP-755)

— Integrated barometric pressure sensor to determine (relative) deployment altitude of the AP

— Advanced IoT Coexistence (AIC) allows concurrent operation of multiple radios in the 2.4 GHz band

— Built-in TPM for enhanced security and anti-counterfeiting

— Visual indicators (four multi-color LEDs): for System (1x) and Radio (3x) status

— Reset button: factory reset, LED mode control (normal/off)

— Serial console interface (proprietary, micro-B USB physical jack)

— Kensington security slot

— Automatic thermal shutdown and recovery function

Table 2. Default PoE power modes (IPM disabled) — single PoE source. Enable the IPM feature to manage or avoid restrictions

Single PoE source	Class 6 (802.3bt)	Class 5 (802.3bt)	Class 4 (802.3at)	Class 3 (802.3af)
Available power budget	51W	40W	25.5W	13.9W
AP power mode	Unrestricted	Restricted	Restricted	Not supported
USB ports	Enabled	Disabled	Disabled	
Ethernet ports	Both ports enabled	Both ports enabled	Second port disabled	
MIMO operation	4x4	4x4	2x2	
Reduced max RF transmit power	0 dB	0 dB	–3 dB	

Table 3. Default PoE power modes (IPM disabled) — dual PoE source. Enable the IPM feature to manage or avoid restrictions

Dual PoE source	Class 5 + Class 3+	Class 4 + Class 4	Class 4 + Class 3	Class 3 + Class 3
Available power budget	53.9W	51W	39.4W	27.8W
AP power mode	Unrestricted	Unrestricted	Restricted	Restricted
USB ports	Enabled	Enabled	Disabled	Disabled
Ethernet ports	Both ports enabled	Both ports enabled	Both ports enabled	Both ports enabled
MIMO operation	4x4	4x4	4x4	2x2
Reduced max RF transmit power	0 dB	0 dB	–3 dB	–3 dB

Power sources and power consumption

- The AP supports direct DC power and PoE on port E0 and/or E1
- When both DC and PoE power sources are available, DC power takes priority over PoE
- Power sources are sold separately; see the HPE Aruba Networking 750 Series ordering guide for details
- When powered by DC or 802.3bt (class 6) PoE, the AP will operate without restrictions
- Operating the AP with a single 802.3af (class 3 or lower) PoE source is not supported, regardless of IPM status (except for AP staging)
- With IPM enabled, the AP will start up in unrestricted mode but may dynamically apply restrictions depending on the available power budget and actual consumption. The feature restrictions and order in which these get applied are configurable
- Maximum (worst case) power consumption (without/with USB devices attached):
  - DC powered: 35W/46W
  - PoE powered: 40W/51W
  - This assumes that up to 10W is supplied to the attached USB devices
- Maximum (worst case) power consumption in idle mode: 14W/25W (DC) or 12W/23W (PoE)
- Maximum (worst case) power consumption in deep-sleep mode: 2.4W (DC) or 3.5W (PoE)

Using IPM to avoid platform restrictions

Operating the 750 series access point from a single 802.3at source requires some restrictions, but the IPM feature allows doing that in a flexible way.

The following configurations (with IPM enabled) are some examples of how the access point can remain within the 802.3at budget without any additional restrictions:

- No power drawn from USB, transmit power on all radios limited to 18 dBm EIRP or less.
- No power drawn from USB, single Ethernet, transmit power on all radios limited to 21 dBm EIRP or less.
- No power drawn from USB, single Ethernet, any one radio disabled.

Mounting details

A mounting bracket has been preinstalled on the back of the AP. This bracket is used to secure the AP to any of the mount kits (sold separately); see the HPE Aruba Networking 750 Series Campus Access Points ordering guide for details.

Mechanical specifications

- Dimensions/weight (HPE Aruba Networking AP-755; unit without mount bracket):
  - 260 mm (W) x 260 mm (D) x 57 mm (H)
  - 1530g
- Dimensions/weight (AP-755; shipping):
  - 350 mm (W) x 320 mm (D) x 83 mm (H)
  - 2130g

Environmental specifications

— Operating conditions
  • Temperature: 0°C to +50°C/+32°F to +122°F
  • Relative humidity: 5% to 95%
  • ETS 300 019 class 3.2 environments
  • AP is plenum rated for use in air-handling spaces
— Storage conditions
  • Temperature: –25°C to +55°C/–13°F to +131°F
  • Relative humidity: 10% to 100%
  • ETS 300 019 class 1.2 environments
— Transportation conditions
  • Temperature: –40°C to +70°C/–40°F to +158°F
  • Relative humidity: up to 95%
  • ETS 300 019 class 2.3 environments

Reliability

Mean time between failure (MTBF): 569 khrs (65 years) at +25°C operating temperature (AP-755)

General regulatory statements

HPE Aruba Networking WLAN access points comply with all regulatory rules that apply in the country they are configured for.

In most countries these products may not be allowed to enable all available radios and channels, and various restrictions may apply (RF transmit power levels, radar detection, and so on).

Hewlett Packard Enterprise will continue to upgrade the software and regulatory restrictions that apply to these products to help ensure they remain in compliance with the latest regulatory rules in the country of operation.

However, this does not imply a promise or commitment to enable all radios in all countries where we ship these products, and/or enabling all deployment scenarios (indoor/outdoor for example) that they can be configured for.

Consult your HPE representative to confirm the latest regulatory status for each product in the country of operation and any anticipated future enhancements or other changes, as well as check the regulatory rules through the host country's regulatory agencies for more.

Regulatory compliance

— FCC/ISED
— CE Marked
— Low Voltage Directive 2014/35/EU
— UL/IEC/EN 62368-1
— EN 60601-1-2

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

Regulatory model numbers

— HPE Aruba Networking AP-754 (all models): APIN0754
— HPE Aruba Networking AP-755 (all models): APIN0755

Certifications

— UL2043 plenum rating
— Wi-Fi Alliance (WFA):
— Wi-Fi CERTIFIED a, b, g, n, ac, 6, 7
  • WPA2 and WPA3 (Enterprise, Personal), Enhanced Open (OWE)
  • WMM, WMM-PS, Wi-Fi agile multiband
— Bluetooth SIG
— Ethernet Alliance (PoE, PD device, class 6)

Warranty

HPE Aruba Networking hardware limited lifetime warranty.

Minimum operating system software versions

HPE Aruba Networking Wireless Operating System 10.7.0.0

Table 4. RF performance table

Band, rate	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
2.4 GHz, 802.11b		
1 Mbps	18.0	–93.0
11 Mbps	18.0	–88.0
2.4 GHz, 802.11g		
6 Mbps	18.0	–93.0
54 Mbps	18.0	–75.0
2.4 GHz, 802.11n HT20		
MCS0	18.0	–93.0
MCS7	16.0	–73.0
2.4 GHz, 802.11ax HE20		
MCS0	18.0	–93.0
MCS11	15.0	–64.0
2.4 GHz, 802.11ax HE20		
MCS0	18.0	–93.0
MCS13	13.0	–58.0

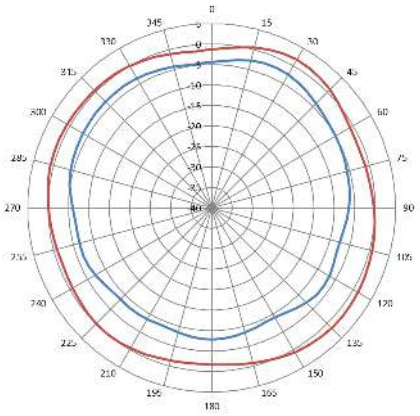
Table 4. RF performance table (continued)

Band, rate	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
5 GHz, 802.11a		
6 Mbps	18.0	–93.0
54 Mbps	18.0	–75.0
5 GHz, 802.11n HT20/HT40		
MCS0	18.0/18.0	-93.0/-90.0
MCS7	18.0/18.0	-73.0/-70.0
5 GHz, 802.11ac VHT20/VHT40/VHT80/VHT160		
MCS0	18.0/18.0/18.0/18.0	–93.0/–90.0/–87.0/–84.0
MCS9	18.0/18.0/18.0/18.0	–69.0/–66.0/–63.0/–60.0
5 GHz, 802.11ax HE20/HE40/HE80/HE160		
MCS0	18.0/18.0/18.0/18.0	–93.0/–90.0/–87.0/–84.0
MCS11	16.0/16.0/16.0/16.0	–63.0/–60.0/–57.0/–54.0
5 GHz, 802.11be EHT20/EHT40/EHT80/EHT160		
MCS0	18.0/18.0/18.0/18.0	–93.0/–90.0/–87.0/–84.0
MCS13	12.0/12.0/12.0/12.0	–57.0/–54.0/–51.0/–48.0
6 GHz, 802.11ax HE20/HE40/HE80/HE160		
MCS0	18.0/18.0/18.0/18.0	–93.0/–90.0/–87.0/–84.0
MCS11	13.0/14.0/14.0/14.0	–63.0/–60.0/–57.0/–54.0
6 GHz, 802.11be EHT20/EHT40/EHT80/EHT160/EHT320		
MCS0	18.0/18.0/18.0/18.0/18.0	–93.0/–90.0/–87.0/–84.0/–81.0
MCS13	13.0/13.0/14.0/14.0/14.0	–57.0/–54.0/–51.0/–48.0/–45.0

Wi-Fi antenna patterns AP-755

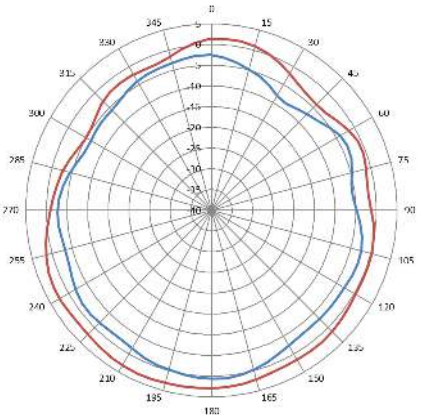
Horizontal planes (top view)

Showing both azimuth 0° and 30° downtilt patterns (averaged patterns for all applicable antennas)



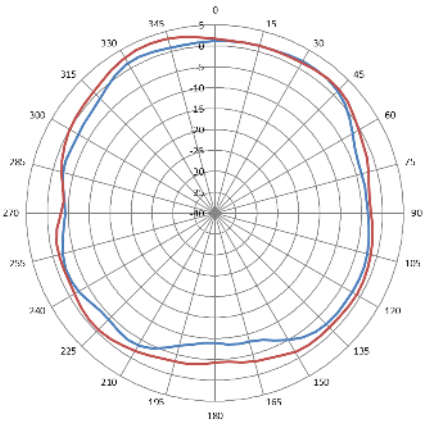
2.45 GHz Wi-Fi (R0) average azimuth 2.45 GHz Wi-Fi (R0) average downtilt

Figure 1. 2.45 GHz Wi-Fi antenna patterns (horizontal)



5.55 GHz Wi-Fi (R1) average azimuth 5.55 GHz Wi-Fi (R1) average downtilt

Figure 2. 5.55 GHz Wi-Fi antenna patterns (horizontal)

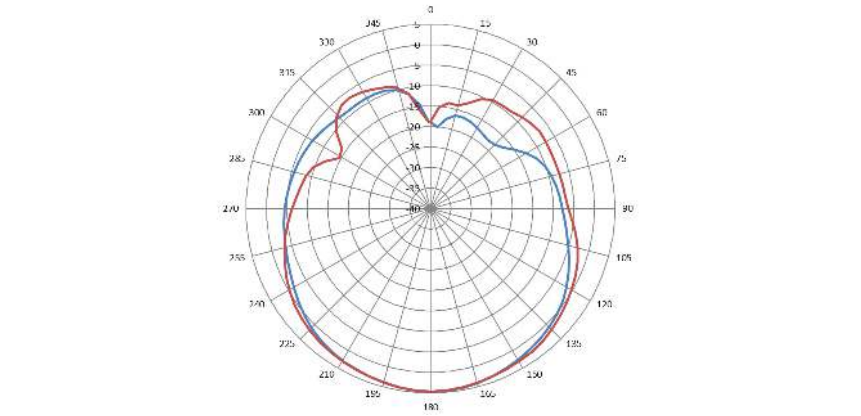


6.56 GHz Wi-Fi (R2) average azimuth 6.56 GHz Wi-Fi (R2) average downtilt

Figure 3. 6.56 GHz Wi-Fi antenna patterns (horizontal)

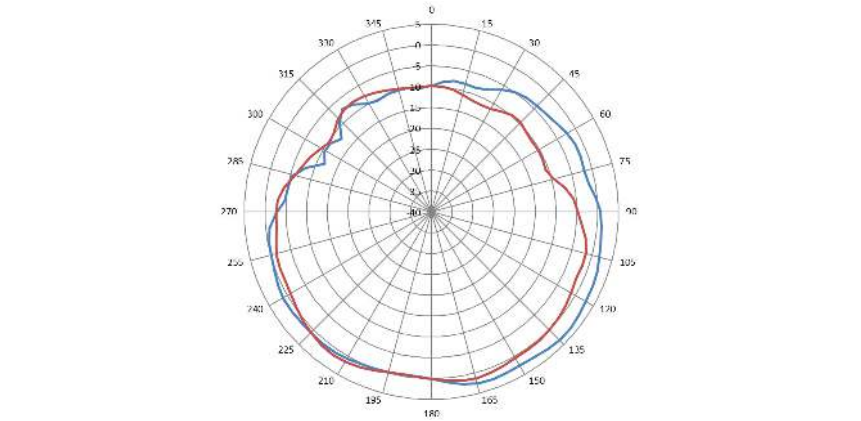
Vertical (elevation) planes (side view, AP facing down)

Showing side view with AP rotated 0° and 90° (averaged patterns for all applicable antennas)



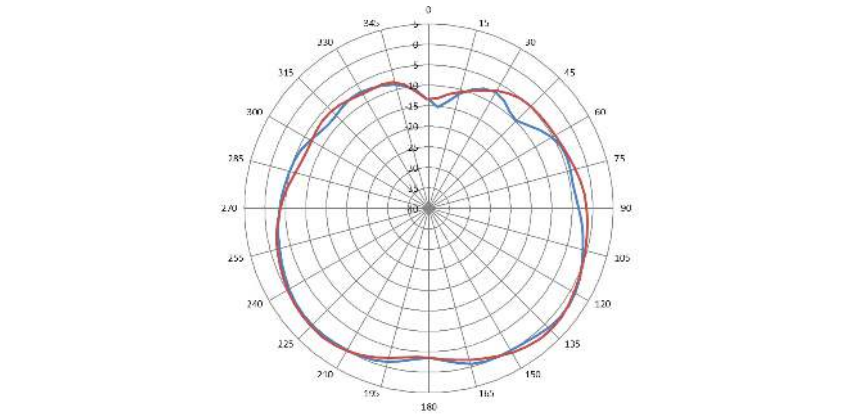
2.45 GHz Wi-Fi (R0) average elevation 0° 2.45 GHz Wi-Fi (R0) average elevation 90°

Figure 4. 2.45 GHz Wi-Fi antennas patterns (vertical)



5.55 GHz Wi-Fi (R1) average elevation 0° 5.55 GHz Wi-Fi (R1) average elevation 90°

Figure 5. 5.55 GHz Wi-Fi antenna patterns (vertical)



2.45 GHz BZ average elevation 0° 2.45 GHz BZ average elevation 90°

Figure 6. 6.56 GHz Wi-Fi antennas patterns (vertical)

Table 5. Ordering information

Part number	Description
Internal antenna access points	
S1G81A	HPE Aruba Networking AP-755 (EG) Tri-radio 4x4 Wi-Fi 7 Internal Antennas Campus Access Point
S5E16A	HPE Aruba Networking AP-755 (ID) Tri Radio 4x4 Wi-Fi 7 Internal Antennas Campus Access Point
S1G82A	HPE Aruba Networking AP-755 (IL) Tri-radio 4x4 Wi-Fi 7 Internal Antennas Campus Access Point
S1G83A	HPE Aruba Networking AP-755 (JP) Tri-radio 4x4 Wi-Fi 7 Internal Antennas Campus Access Point
S1G84A	HPE Aruba Networking AP-755 (RW) Tri-radio 4x4 Wi-Fi 7 Internal Antennas Campus Access Point
S1G85A	HPE Aruba Networking AP-755 (US) Tri-radio 4x4 Wi-Fi 7 Internal Antennas Campus Access Point
Internal antenna access points — eco-friendly 5-packs	
S0H10A	HPE Aruba Networking AP-755 (RW) Tri-radio 4x4 Wi-Fi 7 Internal Antennas 5-Pack Campus Access Point
S0H11A	HPE Aruba Networking AP-755 (US) Tri-radio 4x4 Wi-Fi 7 Internal Antennas 5-Pack Campus Access
External antenna access points	
S1G71A	HPE Aruba Networking AP-754 (EG) Tri-radio 4x4 Wi-Fi 7 External Antennas Campus Access Point
S1G72A	HPE Aruba Networking AP-754 (IL) Tri-radio 4x4 Wi-Fi 7 External Antennas Campus Access Point
S1G74A	HPE Aruba Networking AP-754 (RW) Tri-radio 4x4 Wi-Fi 7 External Antennas Campus Access Point
S1G75A	HPE Aruba Networking AP-754 (US) Tri-radio 4x4 Wi-Fi 7 External Antennas Campus Access Point
Internal antenna access points — TAA models	
S1G86A	HPE Aruba Networking AP-755 (EG) Tri-radio 4x4 Wi-Fi 7 Internal Antennas TAA Campus Access Point
S1G87A	HPE Aruba Networking AP-755 (IL) Tri-radio 4x4 Wi-Fi 7 Internal Antennas TAA Campus Access Point
S1G88A	HPE Aruba Networking AP-755 (JP) Tri-radio 4x4 Wi-Fi 7 Internal Antennas TAA Campus Access Point
S1G89A	HPE Aruba Networking AP-755 (RW) Tri-radio 4x4 Wi-Fi 7 Internal Antennas TAA Campus Access Point
S1G90A	HPE Aruba Networking AP-755 (US) Tri-radio 4x4 Wi-Fi 7 Internal Antennas TAA Campus Access Point

Table 5. Ordering information (continued)

Part number	Description
External antenna access points — TAA models	
S1G76A	HPE Aruba Networking AP-754 (EG) Tri-radio 4x4 Wi-Fi 7 External Antennas TAA Campus Access Point
S1G77A	HPE Aruba Networking AP-754 (IL) Tri-radio 4x4 Wi-Fi 7 External Antennas TAA Campus Access Point
S1G79A	HPE Aruba Networking AP-754 (RW) Tri-radio 4x4 Wi-Fi 7 External Antennas TAA Campus Access Point
S1G80A	HPE Aruba Networking AP-754 (US) Tri-radio 4x4 Wi-Fi 7 External Antennas TAA Campus Access Point

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