HPE Aruba Networking 670 Series Outdoor Access Points

High-performance Wi-Fi 6E for outdoor with 670EX for hazardous locations

Key features

- Ideal for outdoor and environmentally challenging locations.
- Tri-band coverage across 2.4 GHz, 5 GHz, and 6 GHz for 3.9 Gbps peak aggregate data rate.
- Industrial IoT-ready with high-power Bluetooth and Zigbee radios.
- Fast wired connectivity with 2.5GbE and 1GbE SFP ports.
- Standard Power (SP) device operation and self-locating with embedded GPS receiver.
- Class 1 Division 2 and ATEX Zone 2 certified[1] AP-670EX models.

[1] Currently in process with certification labs.

Weatherproof, temperature hardened, and ready for hazardous environments, the HPE Aruba Networking 670 Series Outdoor APs bring high performance Wi-Fi 6E to outdoor and environmentally challenging locations.

The 670 Series delivers more wireless capacity and wider channels taking advantage of Wi-Fi 6E and the 6 GHz band to more than double capacity to enable the speed and reliability needed by enterprise and industrial IoT environments.

With integrated high-power Bluetooth and Zigbee radios, fast wired connectivity, and a limited lifetime warranty, the 670 Series provides high-performance outdoor connectivity you can depend on, delivering up to 3.9Gbps maximum aggregate data rates with a Tri-radio 2x2:2 MIMO AP.

For the most extreme conditions, the 670 Series includes 670EX models that are Hazardous Location (HazLoc) compliant[1], making them ideal for environments such as oil rigs, industrial manufacturing, and transportation sites.

Ruggedized and outdoor ready

Purpose-built to survive harsh outdoor environments and deliver maximum wireless capacity and range, the 670 Series APs withstand exposure to extreme high and low temperatures, persistent moisture, and precipitation. They are fully sealed to keep out airborne contaminants and all electrical interfaces include industrial-strength surge protection. Available with choice of internal antenna (omni, directional, or point-to-point) to optimize wireless coverage, the 670 Series also includes EX models for additional protection for hazardous locations and harsh outdoor environments, and TAA models.

670 AP models for outdoor environments

The 670 models (AP-675, AP-677, AP-679) are ideal for deployment in harsh outdoor weather conditions such as parking lots, stadiums, and public venues.

670EX AP models for hazardous environments

The 670EX models (AP-675EX, AP-677EX, AP-679EX) are Class 1 Division 2 and ATEX Zone 2 certified[1] to survive in extreme environments making them ideal for outdoor oil rigs, industrial manufacturing, mining facilities, and transportation sites. Also ideal for deployment where networks need to be protected from extreme temperatures, flammable gases or vapors, and dust concentrations.

Wi-Fi 6E for faster speeds, more capacity

670 Series APs are designed to take advantage of Wi-Fi 6E and the 6 GHz band, which translates into far greater speeds, wider channels for multi-gigabit traffic, and less interference. The 670 Series delivers 3.9 Gbps maximum aggregate data rates with tri-radio, 2x2:2 MIMO in all three bands (3.9 Gbps aggregate peak).

Advantages of 6 GHz

Wi-Fi 6E provides up to 1200 MHz in the 6 GHz band for higher throughput and improved application performance. With up to seven 160 MHz channels[2], Wi-Fi 6E can better support low-latency, bandwidth hungry applications like high-definition video and augmented reality/virtual reality applications. Only Wi-Fi 6E capable devices can use the 6 GHz band so there is no interference or slowdowns since legacy devices use the 5 GHz or 2.4 GHz bands. And to ensure both 6E and legacy devices are supported, the 670 Series provides flexible coverage across the 2.4 GHz, 5 GHz, and 6 GHz bands.

Band	Channel bandwidth	Peak data rate
6 GHz	160 MHz	2.4 Gbps
5 GHz	80 MHz	1.2 Gbps
2.4 GHz	20 MHz	287 Mbps
Total		3.9 Gbps

Standard power support

HPE Aruba Networking 670 Series Outdoor APs will operate as Standard Power (SP) devices and, where required, will use an Automated Frequency Coordination service (AFC) before enabling the 6GHz radio to protect incumbent outdoor services (such as microwave links, broadcast auxiliary service, and cable television relay service) in the 6 GHz band. Note that the AP will only enable the 6GHz radio once the standard power requirements are met and the 6GHz radio is authorized, however the 2.4 GHz and 5 GHz radios will function normally regardless of the 6GHz radio's state.

6 GHz global readiness

At launch, the 670 Series will be orderable in U.S. and Canada only. Other countries may become available as they begin or announce their 6GHz certification standards and requirements. While the need for more Wi-Fi capacity is recognized across the globe, countries are approaching the 6 GHz band differently. HPE Aruba Networking 670 Series APs are set up to automatically update regulatory rules once Wi-Fi 6E regulations have been approved and certified.

Extends the benefits of Wi-Fi 6

HPE Aruba Networking 670 Series APs are based on the 802.11ax (Wi-Fi 6) standard, which means that all its efficiency and security enhancements are also available on the 6 GHz band. Wi-Fi 6 features such as Orthogonal Frequency Division Multiple Access (OFDMA), BSS coloring etc., are fully supported on the HPE Aruba Networking Wi-Fi 6E APs as well.

Advantages of OFDMA

This capability allows HPE Aruba Networking APs to handle multiple 802.11ax 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.

Simplified deployment and operations

HPE Aruba Networking APs can operate as standalone APs 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. With HPE Aruba Networking Central, onboarding, configuring, and provisioning are simpler and require no manual CLI configuration or maintenance windows. Once the AP is plugged in, the device connects and receives its running configuration from the cloud using zero touch provisioning, which allows remote workers and offices to onboard and configure wireless connectivity without any on-site IT support. Central 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. See the Central Ordering Guide.

[1] Currently in process with certification labs.

[2] Spectrum allocation per country regulations.

Flexible power deployment

Power via PoE 802.3bt (802.3at w/IPM) or for AC or DC power, use outdoor power injector (PD-9501-5GCO AD/DC Outdoor PoE Injectors).

Key Wi-Fi features

Wi-Fi 6E

HPE Aruba Networking 670 Series Outdoor APs meet the requirements for Wi-Fi 6E (802.11ax) for greater efficiency including OFDMA, MU-MIMO, and Target Wake Time to extend the battery life of devices.

Client optimization

HPE Aruba Networking's patented AI-powered ClientMatch technology help eliminating sticky client issues by steering a client to the AP where it receives the best radio signal. Client Match steers traffic from the noisy 2.4 GHz band to the preferred 5 GHz or 6 GHz band depending on client capabilities. ClientMatch also dynamically steers traffic to load balance APs to improve the user experience.

RF optimization

HPE Aruba Networking AirMatch, a radio frequency optimization technique with machine learning capabilities, aims to dynamically adjust resources like power to improve coverage and potentially reduce coverage gaps.

HPE Aruba Networking Advanced Cellular Coexistence

Unique Advanced Cellular Coexistence (ACC) 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.

Self-locating APs

The 670 Series APs include built-in GPS receivers and fine time measurement (FTM) to allow them to automatically locate themselves accurately within the universal framework of latitude and longitude. As part of HPE Aruba Networking's location solutions, they serve as reference points for client devices and other technologies using fine time measurement.

Open Locate, an emerging standard that allows APs to share their location over the air and through cloud-based APIs, enables mobile devices to locate themselves and applications to support network analytics.

IoT ready

HPE Aruba Networking 670 Series Outdoor APs include integrated high-power 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-ports to provide IoT connectivity to a wider range of devices. These IoT capabilities allow organizations to leverage our APs as an IoT transport, which eliminates the need for an overlay infrastructure and additional IT resources and can accelerate IoT initiatives.

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

The Advanced IoT Coexistence (AIC) feature uses built-in filtering to allow Wi-Fi, Bluetooth and Zigbee radios to operate at maximum capacity without the impact of interference.

Intelligent power monitoring (IPM)

For better insights into energy consumption, our APs continuously monitor and report hardware energy usage. Unlike other vendor's APs, our APs can also be configured to enable or disable capabilities based on available PoE power – ideal when wired switches have exhausted their power budget. Enterprises can deploy Wi-Fi 6E APs and update switching and power at a later date if needed based on their actual usage.

Key security features

AI client insights

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

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 help 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.

WPA3 and Enhanced Open

As part of Wi-Fi 6E (802.11ax), WPA3 ensures stronger encryption and authentication while Enhanced Open offers protection for users connecting to open networks by automatically encrypting each session 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 (requires ClearPass Policy Manager).

Trusted platform module (TPM)
For enhanced device assurance, all HPE Aruba Networking APs include an installed TPM for secure storage of credentials and keys, and boot code.

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.

Standards based technologies

HPE Aruba Networking 670 Series Outdoor APs also include the following standards-based technologies:

- Transmit Beamforming to increase signal reliability and range
- Dynamic Frequency Selection (DFS) to optimize use of available RF spectrum
- Maximum Rate Combining (MRC) for improved receiver performance
- Cyclic Delay/Shift Diversity (CDD/CSD) to deliver greater downlink RF performance
- Space-Time Block Coding (STBC) to increase range and improve reception
- Low-Density Parity Check (LDPC) to provide high-efficiency error correction and improve throughput

Specifications

Hardware variants

- HPE Aruba Networking AP-675
  - Built-in Omnidirectional Antennas
  - 2.4 GHz Antennas 3.5dBi
  - 5 GHz Antennas 5dBi
  - 6 GHz Antennas 5dBi
  - BLE/Zigbee: Integrated omnidirectional antenna with peak gain of 6dBi
- HPE Aruba Networking AP-677
  - Built-in Directional Antennas
  - 2.4 GHz Antennas 5.6dBi
  - 5 GHz Antennas 6dBi
  - 6 GHz Antennas 7dBi
  - BLE/Zigbee: Integrated omnidirectional antenna with peak gain of 8dBi
- HPE Aruba Networking AP-679
  - Built-in Dynamic Directional Antennas
  - 2.4 GHz Antennas 6dBi
  - 5 GHz Antennas
    - Wide 9dBi
    - Narrow 12dBi
  - 6 GHz Antennas
    - Wide 9dBi
    - Narrow 13dBi
  - BLE/Zigbee: Integrated omnidirectional antenna with peak gain of 6dBi

Wi-Fi radio specifications

- AP type: Outdoor, tri radio, 2.4GHz, 5GHz and 6GHz (concurrent) 802.11ax 2x2 MIMO
- 2.4 GHz radio: Two spatial stream Single User (SU) MIMO for up to 574 Mbps wireless data rate with 2SS HE40 802.11ax client devices
- 5 GHz radio: Two spatial stream Single User (SU) MIMO for up to 1.2 Gbps wireless data rate with 2SS HE80 802.11ax client devices
- 6 GHz radio: Two spatial stream Single User (SU) MIMO for up to 2.4 Gbps wireless data rate with 2SS HE160 802.11ax client devices
- Up to 512 associated client devices per radio, and up to 16 BSSIDs per radio (limited to 8 for the 6GHz 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
  - 6.525 to 6.875 GHz U-NII-7
  - 6.875 to 7.125 GHz U-NII-8
- 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
- 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 (37 for the 6GHz radio)
- 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
- 802.11n high-throughput (HT) support: HT20/40

- 802.11ac very high throughput (VHT) support: VHT20/40/80
- 802.11ax high efficiency (HE) support: HE20/40/80/160
- 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 (proprietary extension)
  - 802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 2, VHT20 to VHT80); 1,083 with 1024-QAM (MCS10 and MCS11, proprietary extension)
  - 802.11ax (2.4GHz): 3.6 to 574 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE40)
  - 802.11ax (5GHz): 3.6 to 1,201 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE80)
  - 802.11ax (6GHz): 3.6 to 2,402 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE160)
- 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): +25 dBm (22 dBm per chain)
  - Note: conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain.
- Advanced Cellular Coexistence (ACC) minimizes the impact of interference from cellular networks
- 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 beamforming (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

- HPE Aruba Networking AP-675: Integrated tri-band omni-directional antennas for 2x2 MIMO with antenna gain of 3.8dBi in 2.4GHz, 5.7dBi in 5GHz, and 5.9dBi in 6Ghz. Built-in antennas are optimized for a horizontally mounted orientation of the AP. The downtilt angle for maximum gain is roughly 5-10 degrees.
  - A mix of horizontally and vertically polarized antenna elements are used
  - Combining the patterns of each of the antennas of the MIMO radios, the peak gain of the combined, average pattern is 4.6dBi in 2.4GHz, 7.9dBi in 5GHz, and 6.2dBi in 6Ghz
- HPE Aruba Networking AP-677: Integrated tri-band directional antennas for 2x2 MIMO with antenna gain of 6.9dBi in 2.4GHz, 6.5dBi in 5GHz, and 6.9dBi in 6Ghz. Built-in antennas are optimized for either wall/pole vertically oriented (or with downtilt), or down-firing in a horizontally mounted orientation of the AP. The antenna beamwidth is approx. 90° x 90°.
  - Cross-polarized antenna elements are used
  - Combining the patterns of each of the antennas of the MIMO radios, the peak gain of the combined, average pattern is 6.9dBi in 2.4GHz, 6.5dBi in 5GHz, and 6.9dBi in 6Ghz
- HPE Aruba Networking AP-679: Integrated tri-band directional antennas for 2x2 MIMO with two different modes for the 5 GHz and 6 GHz antennas (a wider 90°x30° antenna, and a narrow 30°x30°) that are software provisioned. The built-in antennas are optimized for either wall/pole vertically oriented (or with downtilt), or down-firing in a horizontally mounted orientation of the AP.
  - Wide 90°x30° has 7.1dBi in 5Ghz and 8.1dBi in 6Ghz (peak of 7.7dBi and 8.6dBi respectively)
  - Narrow 30°x30° has 10.5dBi in 5Ghz and 10.1dBi in 6Ghz (peak of 11dBi and 11.2dBi respectively)
  - 6.1dBi in 2.4GHz (approx. 90°x90°) in either mode
  - 6.6dBi for BLE/IoT in either mode
  - Cross-polarized antenna elements are used

Other interfaces and features

- Wired network interface (E0)
  - Auto-sensing link speed (100/1000/2500BASE-T) and MDI/MDX
  - 2.5 Gbps speed complies with NBASE-T and 802.3bz specifications
  - PoE-PD: 48 Vdc (nominal) 802.3at/bt PoE (class 4 or higher)
  - 802.3az Energy Efficient Ethernet (EEE)
- Wired Network Interface (E1)
  - SFP Fiber Port
  - When used in operation it is expected that this is the primary uplink port
  - Only recommended industrial temperature SFP modules should be used for optimal performance
- USB 2.0 host interface (Type C connector), supporting 2A/10W maximum. See the Central Ordering Guide for the recommended transceivers
- USB 2.0 host interface (Type A connector), supporting 1A/5W maximum
- Bluetooth Low Energy (BLE5.0) and Zigbee (802.15.4) radio
- BLE: up to 8 dBm transmit power (class 1) and -100 dBm receive sensitivity (125 kbps)
- Zigbee: up to 8 dBm transmit power and -97 dBm receive sensitivity (250 kbps)
- GNSS L1 (1575.42 MHz) receiver supporting GPS, Galileo, GLONASS, and BeiDou signal
  - Receive sensitivity: -163 dBm (tracking)
  - Integrated antenna with gain of ~2 dBi

- Advanced IoT Coexistence (AIC) allows concurrent operation of multiple radios in the 2.4 GHz band
- Built-in Trusted Platform Module (TPM) for enhanced security and anti-counterfeiting
- Visual indicators for System and Radio status (1x multi-color LED), auto-disable after 15 min when up
- Reset button: factory reset, LED mode control (normal/off)
- Serial console interface (proprietary, USB-C physical jack)
- Automatic thermal shutdown and recovery function

Power sources and power consumption

- The AP supports Power over Ethernet (PoE) on port E0
- Power sources are sold separately; see the HPE Aruba Networking 67 Series Ordering Guide for details
- When powered by 802.3bt (class 6) PoE, the AP will operate without restrictions.
- When powered by 802.3bt (class 5) PoE with the IPM feature disabled, the AP will disable the USB-C port.
- 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.
- Operating the AP with an 802.3at (class 4) PoE with the IPM feature disabled, the AP will disable the USB ports, the SFP port, and one of the two chains on the 2.4Ghz radio
- Operating the AP with an 802.3af (class 3 or lower) PoE source is not supported (except for AP staging)
- Maximum (worst-case) power consumption (without/with a USB device attached):
  - PoE powered: 29W/45.5W.
  - This assumes that up to 16.5W total is supplied the attached USB devices
- Maximum (worst-case) power consumption in idle mode: 11W/27.5W (both USB active at max).
- Maximum (worst-case) power consumption in deep-sleep mode: 3.2W (PoE).

PoE Source	Class 6 (802.3bt)	Class 5 (802.3bt)	Class 4 (802.3at)	Class 3 (802.3af)
Power Budget	45.5W	40W	25.5W	13.9W
Power Budget	Unrestricted	Restricted	Restricted	Restricted
USB Ports	Both Enabled	USB-A Only (USB-C disabled)	USB Disabled SFP Disabled 2.4GHz drops to 1x1	All Disabled
Ethernet	2.5G + SFP	2.5G + SFP	2.5G	(staging only)
MIMO	2x2	2x2	2x2 (1x1 on 2.4Ghz)	All Disabled
RF Power Reduction	0dB	0dB	0dB	Disabled

With IPM enabled, AP will start up in unrestricted mode and apply reductions per policy or defaults.

Mounting

A mounting bracket holder has been pre-installed on the AP. This bracket is used to secure the AP to any of the mount kits (sold separately); see the HPE Aruba Networking 670 Series Ordering Guide for details. The HPE Aruba Networking 670 Series Outdoor APs also share the same mounting hardware and accessories so upgrades from previous HPE Aruba Networking outdoor APs are quick and easy.

- AP-OUT-MNT-V1A: Outdoor Pole/Wall Long Mount Kit
- AP-270-MNT-V2: Outdoor Pole/Wall Short Mount Kit
- AP-270-MNT-H1: Outdoor AP Hanging or Tilt Install Mount Kit
- AP-270-MNT-H2: Outdoor Flush Wall or Ceiling Mount
- AP-270-MNT-H3: Outdoor AP Hanging or Dual-Tilt Install Mount Kit

Mechanical

Note: AP-670EX variants include HazLoc compliant Ethernet glands.

- AP-675/AP-675EX
  - Dimensions/weight (unit only):
    - 290mm (W) x 288mm (D) x 312mm (H)
    - 11.4 in (W) x 11.3 in (D) x 12.3in (H)
    - 4kg / 8.8lbs
- AP-677/AP-677EX
  - Dimensions/weight (unit only):
    - 290mm (W) x 288mm (D) x 171mm (H)
    - 11.4 in (W) x 11.3 in (D) x 6.7 in (H)
    - 3.6kg / 7.9lbs

- AP-679/AP-679EX
  - Dimensions/weight (unit only):
    - 290mm (W) x 288mm (D) x 171mm (H)
    - 11.4 in (W) x 11.3 in (D) x 6.7 in (H)
    - 3.8kg / 8.4lbs
- HazLoc variants include intrinsically certified Ethernet glands (CMP A2F), but other certified Explosive Atmosphere glands can be used, subject to approvals by the safety authority

Environmental specifications
- Operating conditions
  - Temperature: -40°C to +70°C / -40°F to 158°F (no solar loading), -40°C to +65°C / -40°F to 149°F (with solar loading)
  - Humidity: 5% to 100% non-condensing internal
  - Rated for operation in all weather conditions
- Storage and transportation conditions
  - Temperature: -40°C to +70°C / -40°F to +158°F
- Operating Altitude: 3000m
- Water and Dust
  - IP66/67
- Salt Tolerance
  - Test to ASTM B117-07A Salt Spray 200hrs
- Wind Survival: 150mph (GR-487)

Reliability
Mean Time Between Failure (MTBF): 500,562hrs (59.4 yrs.) at +25°C ambient operating temperature.

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

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

Regulatory model numbers
- AP-675: APEX0675
- AP-677: APEX0677
- AP-679: APEX0679

Certifications
- Wi-Fi Alliance:
- Bluetooth SIG
- Ethernet Alliance (E0, PoE PD device, class 6)

RF performance table

Band, rate	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
2.4GHz, 802.11b		
1Mbps	22	-95
11Mbps	22	-87
2.4GHz, 802.11g		
6Mbps	22	-92
54Mbps	20	-74
2.4GHz, 802.11n HT20		
MCS0	22	-92
MCS7	20	-74
2.4GHz, 802.11ax HE20		
MCS0	22	-92
MCS11	18	-62

Band, rate	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
5GHz, 802.11a		
6Mbps	22	-93
54Mbps	2	-75
5GHz, 802.11n HT20 / HT40		
MCS0	22 / 22	-93 / -90
MCS7	21 / 21	-73 / -70
5GHz, 802.11ac VHT20 / VHT40 / VHT80		
MCS0	22 /22 / 22	-93 / -90 / -87
MCS9	20 /20 / 20	-68 / -65 / -62
5GHz, 802.11ax HE20 / HE40 / HE80		
MCS0	22 /22 / 22	-92 / -89 / -86
MCS11	18 / 18 / 18	-62 / -59 / -56
6GHz, 802.11ax HE20 / HE40 / HE80 / HE160		
MCS0	22 / 22 / 21 / 20	-92 / -89 / -86 / -83
MCS11	18 / 17 / 17 / 17	-63 / -66 / -57 / -54

Ordering information

Part number	Description
HPE Aruba Networking 670 Series Outdoor Access Points	
S0P50A	HPE Aruba Networking AP-675 (US) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional Outdoor AP
S0P51A	HPE Aruba Networking AP-675 (RW) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional Outdoor AP
S0P52A	HPE Aruba Networking AP-675 (JP) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional Outdoor AP
S0P53A	HPE Aruba Networking AP-675 (IL) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional Outdoor AP
S0P54A	HPE Aruba Networking AP-675 (EG) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional Outdoor AP
S0P55A	HPE Aruba Networking AP-677 (US) Tri Radio 2x2 Wi-Fi 6E Internal Directional Outdoor AP
S0P56A	HPE Aruba Networking AP-677 (RW) Tri Radio 2x2 Wi-Fi 6E Internal Directional Outdoor AP
S0P57A	HPE Aruba Networking AP-677 (JP) Tri Radio 2x2 Wi-Fi 6E Internal Directional Outdoor AP

Part number	Description
S0P58A	HPE Aruba Networking AP-677 (IL) Tri Radio 2x2 Wi-Fi 6E Internal Directional Outdoor AP
S0P59A	HPE Aruba Networking AP-677 (EG) Tri Radio 2x2 Wi-Fi 6E Internal Directional Outdoor AP
S0P60A	HPE Aruba Networking AP-679 (US) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional Outdoor AP
S0P61A	HPE Aruba Networking AP-679 (RW) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional Outdoor AP
S0P62A	HPE Aruba Networking AP-679 (JP) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional Outdoor AP
S0P63A	HPE Aruba Networking AP-679 (IL) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional Outdoor AP
S0P64A	HPE Aruba Networking AP-679 (EG) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional Outdoor AP

HPE Aruba Networking 670 Series Outdoor Access Points – TAA compliant

S0Q35A	HPE Aruba Networking AP-675 (USF1) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional TAA Outdoor AP
S0Q36A	HPE Aruba Networking AP-675 (ILF1) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional TAA Outdoor AP
S0Q37A	HPE Aruba Networking AP-675 (JPF1) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional TAA Outdoor AP
S0Q38A	HPE Aruba Networking AP-675 (RWF1) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional TAA Outdoor AP
S0Q39A	HPE Aruba Networking AP-675 (EGF1) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional TAA Outdoor AP
S0Q40A	HPE Aruba Networking AP-677 (EGF1) Tri Radio 2x2 Wi-Fi 6E Internal Directional TAA Outdoor AP
S0Q41A	HPE Aruba Networking AP-677 (ILF1) Tri Radio 2x2 Wi-Fi 6E Internal Directional TAA Outdoor AP
S0Q42A	HPE Aruba Networking AP-677 (JPF1) Tri Radio 2x2 Wi-Fi 6E Internal Directional TAA Outdoor AP
S0Q43A	HPE Aruba Networking AP-677 (RWF1) Tri Radio 2x2 Wi-Fi 6E Internal Directional TAA Outdoor AP
S0Q44A	HPE Aruba Networking AP-677 (USF1) Tri Radio 2x2 Wi-Fi 6E Internal Directional TAA Outdoor AP
S0Q45A	HPE Aruba Networking AP-679 (EGF1) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional TAA Outdoor AP
S0Q46A	HPE Aruba Networking AP-679 (ILF1) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional TAA Outdoor AP
S0Q47A	HPE Aruba Networking AP-679 (JPF1) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional TAA Outdoor AP
S0Q48A	HPE Aruba Networking AP-679 (RWF1) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional TAA Outdoor AP
S0Q49A	HPE Aruba Networking AP-679 (USF1) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional TAA Outdoor AP

HPE Aruba Networking 670 EX Series HazLoc Access Points

S0Q50A	HPE Aruba Networking AP-675EX (US) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional HazLoc AP
S0Q51A	HPE Aruba Networking AP-675EX (RW) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional HazLoc AP
S0Q52A	HPE Aruba Networking AP-675EX (JP) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional HazLoc AP
S0Q53A	HPE Aruba Networking AP-675EX (IL) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional HazLoc AP
S0Q54A	HPE Aruba Networking AP-675EX (EG) Tri Radio 2x2 Wi-Fi 6E Internal Omni-Directional HazLoc AP

Part number	Description
S0Q55A	HPE Aruba Networking AP-677EX (US) Tri Radio 2x2 Wi-Fi 6E Internal Directional HazLoc AP
S0Q56A	HPE Aruba Networking AP-677EX (RW) Tri Radio 2x2 Wi-Fi 6E Internal Directional HazLoc AP
S0Q57A	HPE Aruba Networking AP-677EX (JP) Tri Radio 2x2 Wi-Fi 6E Internal Directional HazLoc AP
S0Q58A	HPE Aruba Networking AP-677EX (IL) Tri Radio 2x2 Wi-Fi 6E Internal Directional HazLoc AP
S0Q59A	HPE Aruba Networking AP-677EX (EG) Tri Radio 2x2 Wi-Fi 6E Internal Directional HazLoc AP
S0Q60A	HPE Aruba Networking AP-679EX (US) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional HazLoc AP
S0Q61A	HPE Aruba Networking AP-679EX (RW) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional HazLoc AP
S0Q62A	HPE Aruba Networking AP-679EX (JP) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional HazLoc AP
S0Q63A	HPE Aruba Networking AP-679EX (IL) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional HazLoc AP
S0Q64A	HPE Aruba Networking AP-679EX (EG) Tri Radio 2x2 Wi-Fi 6E Internal Dyn Directional HazLoc AP

For compatible accessories and spares, see the 670 Series Ordering Guide.

Warranty

HPE Aruba Networking hardware limited lifetime warranty.

Minimum operating system software versions

- HPE Aruba Networking Wireless Operating System AOS-10.7.0.0
- HPE Aruba Networking Wireless Operating System AOS-8.12.0.0
- HPE Aruba Networking Instant Operating System AOS-8.12.0.0 (no 6GHz support with Instant)

Support

HPE Aruba Networking network devices (APs, switches, and gateways) that have an active HPE Aruba Networking Central SaaS subscription are fully supported and include:

- 24x7 priority technical support for troubleshooting
- Software updates and upgrades for HPE Aruba Networking Central and hardware products managed by HPE Aruba Networking Central

Learn more about our support services: https://www.arubanetworks.com/support-services/

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