QuickSpecs

Overview

HPE Aruba Networking 600R Series Remote Access Points

6 GHz powered APs with wired connectivity – ideal for mission-critical remote work and small branches

HPE Aruba Networking 600R Series Remote Access Points enable IT teams to deliver a seamless and secure user experience to remote workers and small branch environments. The remote access points are based on Wi-Fi 6E, achieving a combined maximum 3.6 Gbps data rate (using 5 GHz and 6 GHz bands) and increasing capacity by up to 1200 MHz with more 160 MHz channels to better support ever-increasing Wi-Fi demands, especially for latency-sensitive, high-bandwidth video communications. They can also take advantage of an optional cellular module for high-speed backup or primary connectivity.

HPE Aruba Networking 600R Series Remote Access Points

Key Features

- Unlocks the 6 GHz band for up to triple the capacity of previous generations.
- Delivers up to 3.6 Gbps combined peak data rate (when using 5 GHz + 6 GHz operation).
- Cellular module provides backup connectivity and higher resiliency.
- Offers low power consumption – virtually unrestricted operation from an 802.3af (class 3) POE source*.
- Up to seven 160MHz channels in 6 GHz support low-latency, bandwidth-hungry applications like high-definition video, and augmented reality/virtual reality applications.
- Multiple uplink/downlink options: 2.5 Gbps uplink/downlink Ethernet port, dedicated 1 Gbps uplink port, and three dedicated downlink ports to eliminate bottlenecks.
- Leverages cloud-native HPE Aruba Networking Central to provide zero touch provisioning and a single pane of glass for Day 0 to Day N management across campus, branch, and remote work environments.

Notes: *By default (with IPM disabled) the AP-605R will disable the USB port and limit the speed of the Ethernet port to 1Gbps when on class 3 POE. The IPM feature can be used to avoid these restrictions.

Hewlett Packard Enterprise

Standard Features

Home Office/Small Office Use

IT teams are tasked with ensuring a secure and reliable experience for a highly distributed workforce that is accessing data center and cloud-based applications over consumer broadband and cellular connections that are outside IT's control and visibility. With HPE Aruba Networking 600R Series Remote Access Points, managed by HPE Aruba Networking Central, IT can remotely deploy and centrally manage secure network connectivity for hundreds or even thousands of remote workers or small office employees to deliver an in-office experience – without need for a gateway.

Remote workers can connect wireless clients (laptops, smartphones, tablets) as well as wired clients, such as VoIP phones, and access mission-critical applications reliably and securely via a 2.5 Gbps uplink/downlink Ethernet port, dedicated 1 Gbps uplink port, and three dedicated downlink ports.

IT benefits from a unified approach that enables staff to configure, troubleshoot, and optimize network performance across campus, branch, and remote work environments. Built in SD-WAN intelligent route and tunnel orchestration and policy-based routing drives operational efficiencies and optimizes network performance. Comprehensive WAN health dashboards assist in troubleshooting problems quickly and boosting user satisfaction. Refer to the **technical brief** for more information.

Wi-Fi 6E for Faster Speeds

600R Series APs are designed to take advantage of Wi-Fi 6E and the 6GHz band, which translates into far greater speeds, wider channels for multi-gigabit traffic, and less interference. Its two 2x2 MIMO radios deliver a maximum combined data rate of up to 3.6 Gbps when configured for concurrent 5 GHz and 6 GHz operation.

Wi-Fi 6E provides up to 1200 MHz of additional unlicensed spectrum in the 6 GHz band for higher throughput and improved application performance. With up to seven 160 MHz channels, 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 due to legacy devices.

Device Class Support

HPE Aruba Networking 600R Series Remote Access Points 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 service (AFC) to manage incumbent outdoor services, which is required for standard class APs.

Global Readiness

While the need for more Wi-Fi capacity is recognized across the globe, countries are approaching the 6 GHz band differently. HPE Aruba Networking 600R Series Remote Access Points 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 600R Series Remote Access Points 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 Aruba Wi-Fi 6E access points as well. Explore the benefits of **Wi-Fi 6**.

Dual Radio/Tri-Band Architecture

HPE Aruba Networking 600R Series Remote Access Points use a unique dual-radio, tri-band architecture to unlock the 6 GHz band with its faster speeds, wider channels, and less interference. Adding support for the 6 GHz band to the traditional 2.4 GHz and 5 GHz bands provides up to 3x the available wireless capacity – so small offices/home offices can meet growing demand due to bandwidth-hungry video, increasing numbers of client and IoT devices, and growth in cloud.

These remote access points feature two radios that can be automatically tuned to any two of the three available spectrum bands for Wi-Fi (2.4 GHz, 5 GHz, 6 GHz). They include a cellular add-on module for backhaul and/or backup connectivity.

Standard Features

Ease Of Deployment And Maintentance

With HPE Aruba Networking Central, onboarding, configuring, and provisioning is simpler and requires 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. To avoid downtime or loss of service caused by upgrades, HPE Aruba Networking Central offers Live Upgrade functionality to reduce maintenance windows and ensure continuous wireless operations. In addition, HPE Aruba Networking 600R Series Remote APs are offered in a number of bundles that combine an AP variant a desk stand, power adapter, and North American or European power cord. This eliminates packaging and transport waste and helps organizations meet sustainability goals.

Wi-Fi 6 CERTIFIED™ for 6 GHz

HPE Aruba Networking 500R Series Remote Access Points are fully Wi-Fi CERTIFIED™ to meet all the requirements for Wi-Fi 6 (802.11ax) for greater efficiency including OFDMA, MU-MIMO, and Target Wake Time to extend battery life of devices.

Application Assurance

By allocating radio resources such as time, frequency, and spatial stream to specific traffic types, the APs can provide SLA-grade performance to client devices whether they support Wi-Fi 6 or prior standards. Air Slice relies on the Policy Enforcement Firewall and Deep Packet Inspection (DPI) to identify user roles and applications so bandwidth can be dynamically allocated to ensure performance.

RF optimization

ML-based radio frequency optimization known as AirMatch dynamically adjusts resources such as power to optimize coverage and eliminate coverage gaps.

Advanced Cellular Coexistence

Built-in filtering automatically minimizes the impact of interference from cellular networks, distributed antenna systems (DAS), and commercial small cell or femtocell equipment.

Indoor Location Aware

HPE Aruba Networking 600R Series Remote Access Points include embedded GPS receivers and fine time measurement to accurately auto-locate themselves. They also support Open Locate, an emerging standard that allows APs to share their location over the air and through cloud-based APIs.

IoT ready

HPE Aruba Networking 600R Series Remote Access Points include 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. There is also a USB-port extension to provide IoT connectivity to a wider range of devices. These IoT capabilities allows 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 improve client power savings and reduces airtime contention with other clients, which is ideal for IoT.

Intelligent Power Monitoring (IPM)

For better insights into energy consumption, our APs continuously monitor and report hardware energy usage. Unlike other vendor's access points, 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 if needed based on their actual usage.

Standard Features

Security

Remote work increases the attack surface in an organization. With HPE Aruba Networking Central, HPE Aruba Networking 600R Series Remote Access Points are better protected using new, sophisticated security models such as Zero Trust and SASE. A fundamental concept of both Zero Trust and SASE security frameworks is identity- based access control that grants least-privilege access for a device or user, restricting them from accessing resources not required to complete their tasks.

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 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 6 (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. In addition, 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.

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.

Standards Based Technologies

HPE Aruba Networking 600R Series Remote Access Points also include the following standards-based technologies:
- Transmit Beamforming to increase signal reliability and range
- Passpoint Wi-Fi (Release 2) (Hotspot 2.0) for seamless cellular to Wi-Fi handover for guests
- 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.

Summary

HPE Aruba Networking 600R Series Remote Access are designed to make remote work better and provide seamless connectivity for small branches by taking advantage of the 6 GHz band. With Wi-Fi 6E coverage, IT can better support work-from-home employees using high-bandwidth, low-latency applications such as video conferencing, telehealth, high-definition video, and AR/VR. For greater reliability, a cellular module can be added for high-speed backup connectivity.

Configuration Information

BTO Models

605R Remote Access Points

Rule #	Description	SKU
1, 7	Aruba AP-605R (RW) Dual-radio Tri-band 2x2:2 802.11ax Wi-Fi 6E Remote Access Point	R8N09A
	• Includes AC power adapter & cord	
	HPE Aruba Networking AP-605R-RW Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point No Loc	R8N09A#AC3
	• No Power Cord	
2, 7	HPE Aruba Networking AP-605R-US Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point	R8N10A
	• Includes AC power adapter & cord	
	HPE Aruba Networking AP-605R-US Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point No Loc	R8N10A#AC3
	• No Power Cord	
3, 7	HPE Aruba Networking AP-605R-IL Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point	R8N07A
	• Includes AC power adapter & cord	
	HPE Aruba Networking AP-605R-IL Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point No Loc	R8N07A#AC3
	• No Power Cord	
4, 7	HPE Aruba Networking AP-605R-JP Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point	R8N08A
	• Includes AC power adapter & cord	
	HPE Aruba Networking AP-605R-JP Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point No Loc	R8N08A#AC3
	• No Power Cord	
5, 7	HPE Aruba Networking AP-605R-EG Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point	R8N06A
	• Includes AC power adapter & cord	
	HPE Aruba Networking AP-605R-EG Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point No Loc	R8N06A#AC3
	• No Power Cord	

605R TAA Remote Access Points

Rule#	Description	SKU
1, 7	Aruba AP-605R (RW) TAA compliant Dual-radio Tri-band 2x2:2 802.11ax Wi-Fi 6E Remote Access Point	R8N14A
	• Includes AC power adapter & cord	
	HPE Aruba Networking AP-605R-RWF1 TAA Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point No Loc	R8N14A#AC3
	• No Power Cord	
2, 7	HPE Aruba Networking AP-605R-USF1 TAA Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point	R8N15A
	• Includes AC power adapter & cord	
	HPE Aruba Networking AP-605R-USF1 TAA Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point No Loc	R8N15A#AC3
	• No Power Cord	
3, 7	HPE Aruba Networking AP-605R-ILF1 TAA Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point	R8N12A
	• Includes AC power adapter & cord	
	HPE Aruba Networking AP-605R-ILF1 TAA Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point No Loc	R8N12A#AC3
	• No Power Cord	
4, 7	HPE Aruba Networking AP-605R-JPF1 TAA Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point	R8N13A
	• Includes AC power adapter & cord	

Configuration Information

	HPE Aruba Networking AP-605R-JPF1 TAA Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point No Loc	R8N13A#AC3
	• No Power Cord	
5, 7	HPE Aruba Networking AP-605R-EGF1 TAA Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point	R8N11A
	• Includes AC power adapter & cord	
	HPE Aruba Networking AP-605R-EGF1 TAA Dual-radio Tri-band 2x2 Wi-Fi 6E Remote Access Point No Loc	R8N11A#AC3
	• No Power Cord	

605R12 Remote Access Points

Rule#	Description	SKU
6	HPE Aruba Networking AP-605R12-EU Dual-radio Tri-band 2x2 Wi-Fi 6E CAT12 LTE Remote AP	R8N19A
	• Includes AC power adapter (with Europe AC cord)	
2	HPE Aruba Networking AP-605R12-US Dual-radio Tri-band 2x2 Wi-Fi 6E CAT12 LTE Remote AP	R8N20A
	• Includes AC power adapter (with North America AC cord)	

Configuration Rules

Rule#	Description
1	Available everywhere except, US, Puerto Rico, Israel, Japan and Egypt.
2	Available in US and Puerto Rico only
3	Available in Israel only
4	Available in Japan only
5	Available in Egypt only
6	Available in European Union only
7	Localization for Wall Power Cord required (refer to HPN Localization Menu)

Notes:
- OCA Only: Required Custom Choice (Min1/Max1)
  Drop down under power supply should offer the following options and results:
  No Power Cord - AC3 Option
- OCA Only Model Selection Form - HPE Offering > Aruba > Access Points > Hospitality / Remote:
  HPE Aruba Networking 600R Series RAPs

Modules

Cellular Radio Module

Rule#	Description	SKU
	HPE Aruba Networking AP-605CM12Aruba AP-605CM12 CAT12 LTE Cellular Module	R8N34A

Power Options

Rule#	Description	SKU
	AP-AC2-48C 48V/50W AC/DC desktop style power adapter with 1.35/3.5mm connector	R3K01A
	• Add AC power cord	

Notes:
- If this Power Supply is selected, bring in (Min 1 // Max 1) Localized power cord based on the Aruba Wireless Power Cord Table
- Most devices are PoE powered from switch so these are optional

Configuration Information

Accesories

Other Accessories

Std (Min 0 // max 99) User Selection (min 0 // max 99)

Rule#	Description	SKU
	AP-CBL-SERU Micro-USB TTL3.3V to USB2.0 AP Console Adapter Cable	JY728A
	AP-MOD-SERU Micro-USB TTL3.3V to RJ45 RS232 AP Console Adapter Module	R6Q99A
	Aruba AP-USB-ZB External USB based Dongle with Zigbee and BLE for AP	R2X45A
	Aruba AP-USB-ZB 10-pk External USB based Dongle with Zigbee and BLE for AP	R2Y09A
	Aruba AP-USB-ZB 50-pk External USB based Dongle with Zigbee and BLE for AP	R2Y10A
	Aruba USB LTE Modem for use with Access Points and Gateways	R8F34A
	Aruba USB Extender Cable Kit for use with Aruba USB LTE Modem	R8G76A

Software

Central

Cloud Services / Access Point Foundation Subscriptions

2, 8	Aruba Central AP Foundation 1 year Subscription E-STU	Q9Y58AAE
2, 8	Aruba Central AP Foundation 3 year Subscription E-STU	Q9Y59AAE
2, 8	Aruba Central AP Foundation 5 year Subscription E-STU	Q9Y60AAE
2, 8	Aruba Central AP Foundation 7 year Subscription E-STU	Q9Y61AAE
2, 8	Aruba Central AP Foundation 10 year Subscription E-STU	Q9Y62AAE

Cloud Services / Access Point Advanced Subscriptions

2, 8	Aruba Central AP Advanced 1yr Subscription E-STU	Q9Y63AAE
2, 8	Aruba Central AP Advanced 3yr Subscription E-STU	Q9Y64AAE
2, 8	Aruba Central AP Advanced 5yr Subscription E-STU	Q9Y65AAE
2, 8	Aruba Central AP Advanced 7yr Subscription E-STU	Q9Y66AAE
2, 8	Aruba Central AP Advanced 10yr Subscription E-STU	Q9Y67AAE

On-Prem Services / Access Point Foundation Subscriptions

3, 8	Aruba Central On-Premises AP Foundation 1 year Subscription E-STU	R6U63AAE
3, 8	Aruba Central On-Premises AP Foundation 3 year Subscription E-STU	R6U64AAE
3, 8	Aruba Central On-Premises AP Foundation 5 year Subscription E-STU	R6U65AAE
3, 8	Aruba Central On-Premises AP Foundation 7 year Subscription E-STU	R6U66AAE
3, 8	Aruba Central On-Premises AP Foundation 10 year Subscription E-STU	R6U67AAE

FedRAMP Services / Access Point Advanced Subscriptions

6, 8	Aruba Central AP Advanced 1yr Subscription Government E-STU	R8K84AAE
6, 8	Aruba Central AP Advanced 3yr Subscription Government E-STU	R8K85AAE
6, 8	Aruba Central AP Advanced 5yr Subscription Government E-STU	R8K86AAE
6, 8	Aruba Central AP Advanced 7yr SubscriptionGovernment E-STU	R8K87AAE
6, 8	Aruba Central AP Advanced 10yr Subscription Government E-STU	R8K88AAE

Configuration Rules

Rule #	Description	SKU
2	Add the Central Cloud Skus to the Aruba Catalog as Standalone: Aruba > Network Management > Central > Cloud Services	
3	Add the Central On-Prem Skus to the Aruba Catalog as Standalone: Aruba > Network Management > Central > On-Prem Services	
6	Add the Central FedRAMP Service Skus to the Aruba Catalog as Standalone: Aruba > Network Management > Central > FedRAMP	
8	For OCA: When configuring the following AP 10-Pack, selection condition for this Subscription should be 0(default) or 10	

Configuration Information

	Aruba Access Point-503 (RW) 10-Pack Dual Radio 2x2:2 802.11ax Wi-Fi 6 Campus Access Point	S1E83A
	Aruba Access Point-503 (US) 10-Pack Dual Radio 2x2:2 802.11ax Wi-Fi 6 Campus Access Point	S1E84A

As-a-Service

Cloud Services / Access Point Foundation Subscriptions

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

Cloud Services / Access Point Advanced Subscriptions

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

Configuration Rules

Rule#	Description	SKU
7	For IRIS reference only. No action required for OCX and Clic	

Technical Specifications

Hardware Variants

- AP-605R:
  Remote AP platform (desk mount, wired + wireless access), integrated antennas
- AP-605R12:
  AP-605R with pre-installed AP-605CM12 CAT12 LTE radio module

Wi-Fi Radio Specifications
Aruba AP-503H

- AP type: Indoor, tri-radio, 2.4GHz, 5GHz and 6GHz (dual concurrent) 802.11ax 2x2 MIMO

- 2.4GHz radio: Two spatial stream Single User (SU) MIMO for up to 574Mbps wireless data rate with 2SS HE40 802.11ax client devices (287Mbps for HE20)

- 5GHz radio: Two spatial stream Single User (SU) MIMO for up to 1.2Gbps wireless data rate with 2SS HE80 802.11ax client devices

- 6GHz radio: Two spatial stream Single User (SU) MIMO for up to 2.4Gbps 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 4 for the 6GHz 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
  - 5.925 to 6.425GHz   U-NII-5
  - 6.425 to 6.525GHz   U-NII-6
  - 6.525 to 6.875GHz   U-NII-7
  - 6.875 to 7.125GHz   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 5GHz 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

- 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

Technical Specifications

- 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 (2.4GHz / 5GHz / 6GHz): +21 dBm (18dBm per chain)
  - **Notes:** 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 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

Notes: When configured for concurrent operation in 5GHz and 6GHz (only), the U-NII-4 band will be disabled.

Wi-Fi Antennas

- AP-605R: Integrated omni-directional antennas for 2x2 MIMO with peak antenna gain of 5.5dBi in 2.4GHz, 5.5dBi in 5GHz and 5.5dBi in 6GHz. Built-in antennas are optimized for horizontal 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 4.4dBi in 2.4GHz, 4.7dBi in 5GHz and 4.7dBi in 6GHz.

Other interfaces and features

- Uplink (E0): Ethernet wired network port (RJ-45)
  - Auto-sensing link speed (10/100/1000BASE-T) and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
- Up-/downlink (E1): Ethernet wired network port (RJ-45)
  - Auto-sensing link speed (100/1000/2500BASE-T) and MDI/MDX
  - 2.5Gbps speed complies with NBase-T and 802.3bz specifications
  - POE-PD: 48Vdc (nominal) 802.3af/at POE (class 3 or higher)
  - 802.3az Energy Efficient Ethernet (EEE)
- Downlink (E1-E3): Ethernet wired network ports (RJ-45)
  - Auto-sensing link speed (10/100/1000BASE-T) and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
  - E3: POE-PSE: 802.3af POE output (15.4W max)
- DC power interface
  - Circular: 48Vdc (nominal, +/- 5%), accepts 1.35mm/3.5mm center-positive circular plug with 9.5mm length
- USB 2.0 host interface (Type A connector)
  - Capable of sourcing up to 1A / 5W to an attached device
- Cellular radio module interface (accessible after removing the back cover)
  - Proprietary module interface, intended for 4G and 5G cellular radios

Technical Specifications

- – Capable of sourcing up to 7W of power to such a module
- Bluetooth Low Energy (BLE5.0) and Zigbee (802.15.4) radio
  - – BLE: up to 3dBm transmit power (class 1) and -100dBm receive sensitivity (125kbps)
  - – Zigbee: up to 3dBm transmit power and -95dBm receive sensitivity (250kbps)
  - – Integrated omnidirectional antenna with roughly 30 to 40 degrees downtilt and peak gain of 5.0dBi
- GNSS L1 (1575.42MHz) receiver supporting GPS, Galileo, GLONASS and BeiDou signals
  - – Receive sensitivity: -162dBm (tracking)
  - – Integrated omnidirectional antenna with roughly 30 to 40 degrees downtilt and peak gain of 2.7dBi
- Advanced IOT Coexistence (AIC) allows concurrent operation of multiple radios in the 2.4GHz band
- Built-in Trusted Platform Module (TPM) for enhanced security and anti-counterfeiting
- Backlit LCD status display with scroll button
  - – AP and cellular module status, firmware versions, etc.
  - – Key configuration info
  - – Interface status (Ethernet, WLAN, USB, cellular)
  - – Connected device info
- Visual system status indicator (multi-color LED)
- Serial console interface (proprietary, micro-B USB physical jack)
- Reset button: factory reset, LED mode control (normal/off)
- Kensington security slot
- Automatic thermal shutdown and recovery function

Power Sources And Power Consumption
- The AP is powered using a compatible DC power source
  - – The AP ships with a compatible 48V/5W DC power adapter
- Maximum (worst-case) power consumption: 40W
  - – Without cellular module and no power drawn from USB or E3 port (PSE): 14.5W
  - – Worst-case adder when sourcing 5W to an attached USB device: 5.7W
  - – Worst-case adder when sourcing 15.4W to an attached POE device: 16.0W
  - – Worst-case adder when using AP-605CM12 module: 3.8W
- Maximum (worst-case) power consumption in idle mode: 4.9W.
  - – This assumes no power is supplied to any attached module or device

AP-605CM12 LTE Radio Module Specifications (optional or pre-installed)
- Global support for all major carriers
- High speed CAT12 LTE connectivity:
  - – FDD: Max 480Mbps (DL)/150Mbps (UL)
  - – TDD: Max 430Mbps (DL)/90Mbps (UL)
- Supported bands:
  - – LTE FDD: B1/B2/B3/B4/B5/B7/B8/B9/B12/B13/B14/B17/B18/B19/B20/B21/B25/B26/B28/B30/B66
  - – LTE TDD: B38/39/B40/B41
  - – WCDMA: B1/B2/B3/B4/B5/B8/B9/B19
- Carrier aggregation:
  - – DL 2   CA: Inter-band CA/Intra-band CA
  - – DL 3   CA: Inter-band CA/Intra-band CA
- Antennas: main and directional, omnidirectional high-gain dipole antennas
- Carrier certifications: Verizon, AT&T, T-Mobile, Sprint, Rogers, Telus, Vodafone, TIM, Deutsche Telekom, British Telecom, Telefónica, NTT DOCOMO, SoftBank, KDDI, Telstra
- Max (worst-case) power consumption: 3.3W

Technical Specifications

Mounting Details

The AP is intended to be desk mounted; the integrated antennas are optimized for that.

Mechanical Specifications

- Dimensions/weight (AP-605R; unit):
  - 225mm (W) x 150mm (D) x 40mm (H)
  - 900g
- Dimensions/weight (AP-605R12; unit, LTE antennas folded):
  - 225mm (W) x 180mm (D) x 67mm (H)
  - 1080g
- Dimensions/weight (AP-605R; shipping):
  - 373mm (W) x 309mm (D) x 107mm (H)
  - 1935g
- Dimensions/weight (AP-605R12; shipping):
  - 373mm (W) x 309mm (D) x 107mm (H)
  - 2110g

Environmental Specifications

- Operating conditions
  - Temperature: 0C to +40C / +32F to +104F
  - 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: -25C to +55C / +13F to +131F
  - Relative humidity: 10% to 100%
  - ETS 300 019 class 1.2 environments
- Transportation conditions
  - Temperature: -40C to +70C / -40F to +158F
  - Relative humidity: up to 95%
  - ETS 300 019 class 2.3 environments

Reliability

Mean Time Between Failure (MTBF) at +25C ambient operating temperature:

- AP-605R: 697khrs (80yrs)
- AP-605CM12:   4.5Mhrs (514yrs)
- AP-605R12:   605khrs (69yrs)

Regulatory Compliance

- FCC/ISED
- CE Marked
- RED Directive 2014/53/EU
- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- UL/IEC/EN 60950
- IEC/EN 62368-1
- EN 60601-1-1, EN60601-1-2

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

Technical Specifications

Regulatory Model Numbers
- AP-605R Access Points (all models): APINR605
- AP-605CM12 CAT12 LTE Module: APINCM12

Warranty
HPE Aruba Networking's hardware limited lifetime warranty.

Minimum Operating System Software
ArubaOS and Aruba InstantOS 10.5.0.0

RF Performance Table		
Band, rate	**Maximum transmit power (dBm) per transmit chain**	**Receiver sensitivity (dBm) per receive chain**
2.4GHz, 802.11b		
1Mbps	18.0	-95.0
11Mbps	18.0	-88.0
2.4GHz, 802.11g		
6Mbps	18.0	-93.0
54Mbps	16.0	-75.0
2.4GHz, 802.11n HT20		
MCS0	18.0	-92.0
MCS7	16.0	-73.0
2.4GHz, 802.11ax HE20		
MCS0	18.0	-91.0
MCS11	12.0	-61.0
5GHz, 802.11a		
6Mbps	18.0	-92.0
54Mbps	16.0	-74.0
5GHz, 802.11n HT20 / HT40		
MCS0	18.0 / 18.0	-92.0 / -89.0
MCS7	16.0 / 16.0	-72.0 / -69.0
5GHz, 802.11ac VHT20 / VHT40 / VHT80		
MCS0	18.0 / 18.0 / 18.0	-92.0 / -89.0 / -86.0
MCS9	14.0 / 14.0 / 14.0	-67.0 / -64.0 / -61.0
5GHz, 802.11ax HE20 / HE40 / HE80		
MCS0	18.0 / 18.0 / 18.0	-91.0 / -89.0 / -86.0
MCS11	12.0 / 12.0 / 12.0	-61.0 / -58.0 / -54.0

Technical Specifications
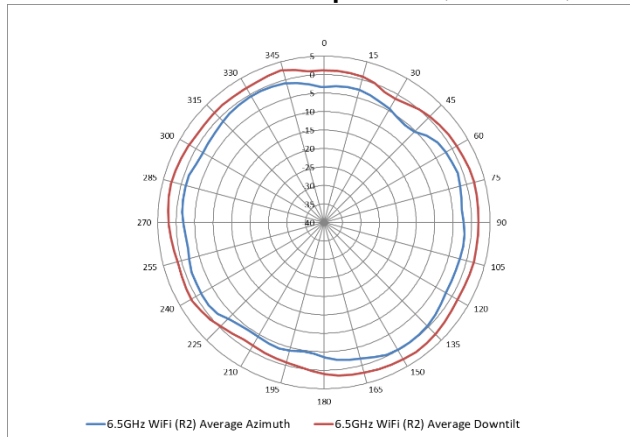
Antenna Patterns
Horizontal Planes (top view)

Showing azimuth (0 degrees) patterns (averaged patterns for all applicable antennas)
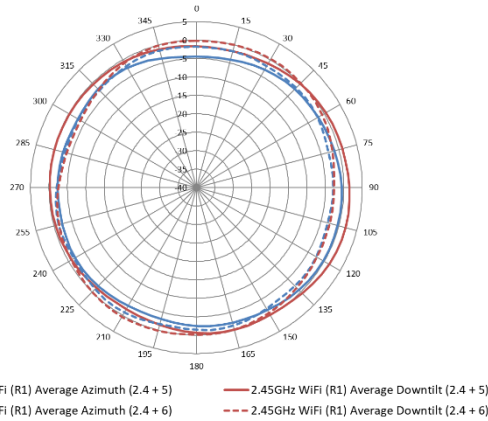
2.45GHz Wi-Fi antenna patterns (horizontal) for both 2.4GHz + 5GHz mode and 2.4GHz + 6GHz mode
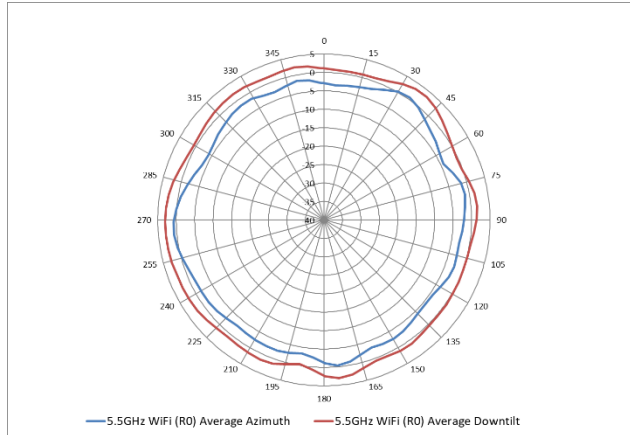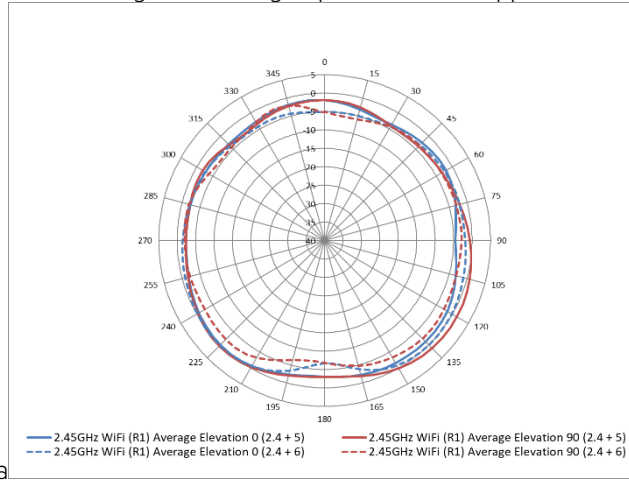

5.5GHz Wi-Fi antenna patterns (horizontal)
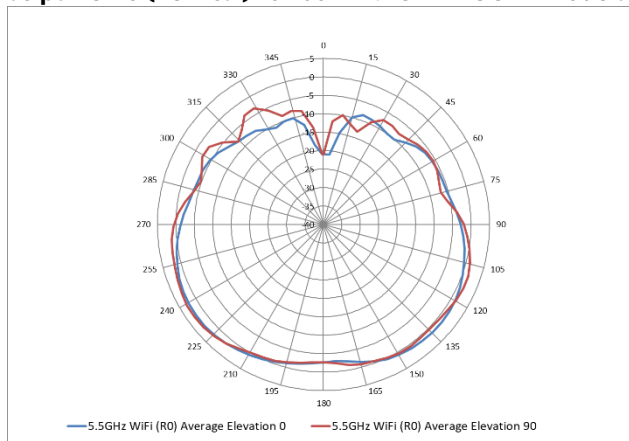

6.5GHz Wi-Fi antenna patterns (horizontal)

Technical Specifications
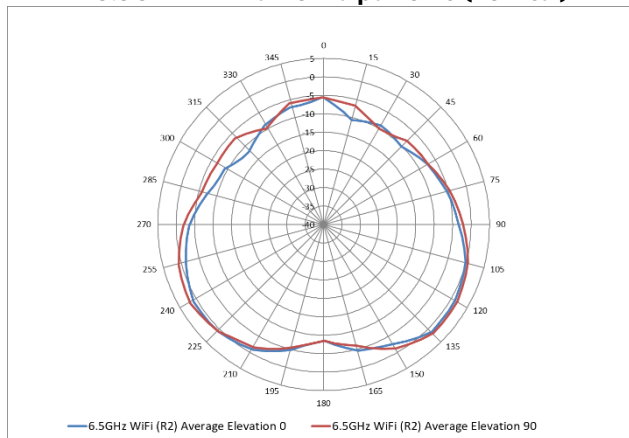
Vertical (elevation) Planes (side view, AP facing up)

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

2.45GHz Wi-Fi antennas patterns (vertical) for both 2.4GHz + 5GHz mode and 2.4GHz + 6GHz mode

5.5GHz Wi-Fi antenna patterns (vertical)

6.5GHz Wi-Fi antennas patterns (vertical)
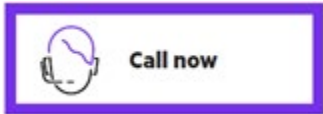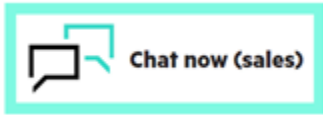
Summary of Changes

Date	Version History	Action	Description of Change
07-Aug-2023	Version 2	Changed	Configuration Information section was updated.
10-Jul-2023	Version 1	New	New QuickSpecs

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