DATA SHEET

ARUBA 303H HOSPITALITY ACCESS POINT

High-performance 802.11ac Wave 2 (Wi-Fi 5) access point for hospitality and branch offices

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

With a maximum concurrent data rate of 867Mbps in the 5GHz band and 300Mbps in the 2.4GHz band, the 303H AP delivers high-performance Gigabit Wi-Fi for hospitality and branch environments at an attractive price point. It supports multi-user MIMO (MU-MIMO) and 2 spatial streams (2SS) to provide simultaneous data transmission for up to 2 devices, maximizing data throughput and improving network efficiency.

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

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

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

Single-gang wall-box (primary hospitality deployment)

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

KEY FEATURES

- Combine wireless and wired access in a single, compact device
- Resolve sticky client issues with MU-MIMO-aware ClientMatch
- Up to 1.2 Gbps aggregate data rate
- Wall-jack and desk stand mounting options
- Participates in Aruba's Dynamic Segmentation solution

IOT PLATFORM CAPABILITIES

Like all Aruba Wi-Fi 6 APs, the 303H Series provides integrated Bluetooth capabilities to enable Meridian and IoT-based location services, asset tracking, and mobile engagement services. For expanded use cases, an IoT expansion radio can be added to support the Zigbee protocol. These features allow organizations to leverage the AP as an IoT platform, which eliminates the need for an overlay infrastructure and additional IT resources.

UNIQUE BENEFITS

Two devices in one

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

Unified AP – deploy with or without controller

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

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

- Supports up to 867Mbps in the 5GHz band (with 2SS/VHT80 clients) and up to 300Mbps in the 2.4GHz band (with 2SS/HT40 clients).

Built-in Bluetooth Low-Energy (BLE) radio

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

Advanced Cellular Coexistence (ACC)

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

Intelligent Power Monitoring (IPM)

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

RF Management

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

Aruba Secure Infrastructure

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

Intelligent app visibility and control

- AppRF technology leverages deep packet inspection to classify and block, prioritize, or limit bandwidth for thousands of applications in a range of categories.

Quality of service for unified communication apps

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

CHOOSE YOUR DEPLOYMENT AND OPERATING MODES

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

- The 303H AP is a unified AP that supports both controller-based and controllerless deployment modes, providing maximum flexibility
- Controller-based mode: When deployed in conjunction with an Aruba Mobility Controller, Aruba APs offer centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding.
- Controllerless (Instant) mode: The controller function is virtualized in a cluster of APs in Instant mode. As the network grows and/or requirements change, Instant deployments can easily migrate to controller-based mode.

- Remote AP (RAP) mode for branch deployments
- Air monitor (AM) for wireless IDS, rogue detection and containment
- Spectrum analyzer, dedicated or hybrid, for identifying sources of RF interference
- Secure enterprise mesh

For large installations across multiple sites, the Aruba Activate service significantly reduces deployment time by automating device provisioning, firmware upgrades, and inventory management. With Aruba Activate, APs in Instant mode can configure themselves when powered up.

303H ACCESS POINT SPECIFICATIONS

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

WI-FI RADIO SPECIFICATIONS

- AP type: Indoor, dual radio, 5GHz 802.11ac 2x2 MIMO and 2.4GHz 802.11n 2x2 MIMO[1]
- Software-configurable dual radio supports 5GHz (Radio 0) and 2.4GHz (Radio 1)
- 5GHz: Two spatial stream Multi User (MU) MIMO for up to 867Mbps wireless data rate to up to two (1x1 VHT80) MU-MIMO capable client devices simultaneously
- 5GHz: Two spatial stream Single User (SU) MIMO for up to 867Mbps wireless data rate to individual 2x2 VHT80 client devices
- 2.4GHz: Two spatial stream Single User (SU) MIMO for up to 300Mbps wireless data rate to individual 2x2 HT40 client devices
- Support for up to 256 associated client devices per radio, Supported frequency bands (country-specific restrictions apply):
  - 2.400 to 2.4835GHz
  - 5.150 to 5.250GHz
  - 5.250 to 5.350GHz
  - 5.470 to 5.725GHz
  - 5.725 to 5.850GHz
- Available channels: Dependent on configured regulatory domain
- Dynamic frequency selection (DFS) optimizes the use of available RF spectrum
- Supported radio technologies:
  - 802.11b: Direct-sequence spread-spectrum (DSSS)
  - 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM)
- Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum (conducted) transmit power (limited by local regulatory requirements):
  - 2.4GHz band: +18 dBm per chain, +21 dBm aggregate (2x2)
  - 5GHz band: +18 dBm per chain, +21 dBm aggregate (2x2)
  - Note: conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain
- Advanced Cellular Coexistence (ACC) minimizes interference from cellular networks
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance
- Short guard interval for 20MHz, 40MHz and 80MHz channels
- Space-time block coding (STBC) for increased range and improved reception
- Low-density parity check (LDPC) for high-efficiency error correction and increased throughput
- Transmit beam-forming (TxBF) for increased signal reliability and range
- Supported data rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n (2.4GHz): 6.5 to 300 (MCS0 to MCS15)
  - 802.11n (5GHz): 6.5 to 450 (MCS0 to MCS23)
  - 02.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 2 for VHT20/40/80)
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11ac very high throughput (VHT) support: VHT 20/40/80
- 802.11n/ac packet aggregation: A-MPDU, A-MSDU

[1] 256-QAM modulation (802.11ac) supported by the 2.4GHz radio as well

WI-FI ANTENNAS

- Two integrated dual-band moderately directional antennas for 2x2 MIMO with maximum individual antenna gain of 4.3dBi in 2.4GHz and 6.2dBi in 5GHz. Built-in antennas are optimized for vertical orientation of the AP.
  - The horizontal beamwidth is roughly 120 degrees. Combining the patterns of each of the antennas of the MIMO radios, the peak gain of the effective per-antenna pattern is 3.2dBi in 2.4GHz and 4.6dBi in 5GHz.

OTHER INTERFACES

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

ENCRYPTED THROUGHPUT

- Maximum IPsec encrypted wired throughput: 100Mbps

POWER SOURCES AND CONSUMPTION

- The AP supports direct DC power and Power over Ethernet (PoE)
- When both power sources are available, DC power takes priority over PoE
- Power sources are sold separately
- Direct DC power source: 48Vdc nominal, +/- 5%
- Power over Ethernet (PoE): 48 Vdc (nominal) 802.3af/802.3at compliant source
  - Unrestricted functionality with direct DC power. When using an 802.3af PoE source, the PoE out (PSE) capability of the 303H is always disabled.
  - Without IPM, both the USB port and PoE out (PSE) capability are disabled when the AP is powered by an 802.3af PoE source, and either the USB port or the PoE out (PSE) capability is disabled when powered by an 802.3at PoE source (PSE capability is disabled by default).
  - When using IPM, the AP may enter power-save mode with reduced functionality when powered by a PoE source (see details on Intelligent Power Monitoring elsewhere in this datasheet)
- Maximum (worst-case) power consumption: 9.7W
  - Excludes power consumed by external USB and/or PoE-PD device (and internal losses); this could add up to 6.1W (PoE) for a 5W/1A USB device and up to 15.6W for a max load (15.4W) 802.3af PoE-PD device
- Maximum (worst-case) power consumption in idle mode: 4.9W (PoE) or 4.8W (DC)

MOUNTING

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

MECHANICAL

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

ENVIRONMENTAL

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

REGULATORY

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

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

RELIABILITY

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

REGULATORY MODEL NUMBER

- AP-303H-xx (all variants): APINH303

CERTIFICATIONS

- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- Wi-Fi Alliance (WFA) certified 802.11a/b/g/n/ac
- WPA, WPA2 and WPA3 – Enterprise with CNSA option, Personal (SAE), Enhanced Open (OWE)

WARRANTY

- Aruba limited lifetime warranty

MINIMUM SOFTWARE VERSIONS

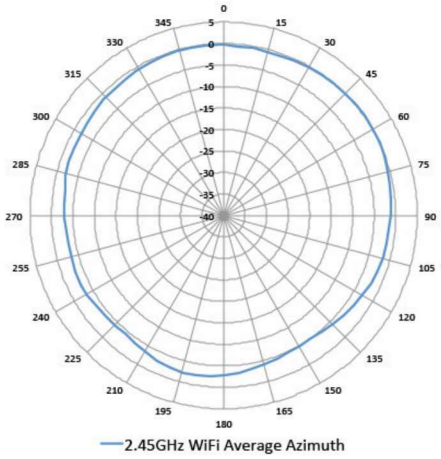
- ArubaOS™: 6.5.2.0/8.2.0.0
- InstantOS™: 6.5.2.0/8.2.0.0

RF PERFORMANCE TABLE		
	Maximum transmit power (dBm) per transmit chain	**Receiver sensitivity (dBm) per receive chain**
2.4 GHz		
802.11b		
1 Mbps	18.0	-96.0
11 Mbps	18.0	-88.0
802.11g		
6 Mbps	18.0	-91.0
54 Mbps	16.0	-74.0
802.11n HT20		
MCS0/8	18.0	-90.0
MCS7/15	14.0	-71.0
802.11n HT40		
MCS0/8	18.0	-87.0
MCS7/15	14.0	-69.0
5 GHz		
802.11a		
6 Mbps	18.0	-90.0
54 Mbps	16.0	-73.0
802.11n HT20		
MCS0/8	18.0	-90.0
MCS7/15	14.0	-71.0
802.11n HT40		
MCS0/8	18.0	-87.0
MCS7/15	14.0	-68.0
802.11ac VHT20		
MCS0	18.0	-90.0
MCS8	13.0	-67.0
802.11ac VHT40		
MCS0	18.0	-87.0
MCS9	12.0	-62.0
802.11ac VHT80		
MCS0	18.0	-84.0
MCS9	12.0	-59.0

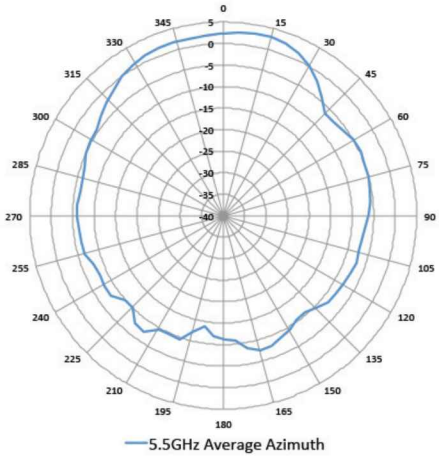
Table shows the maximum capability of the hardware provided (excluding antenna gain). Maximum transmit power is limited by local regulatory settings.

ANTENNA PATTERN PLOTS

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

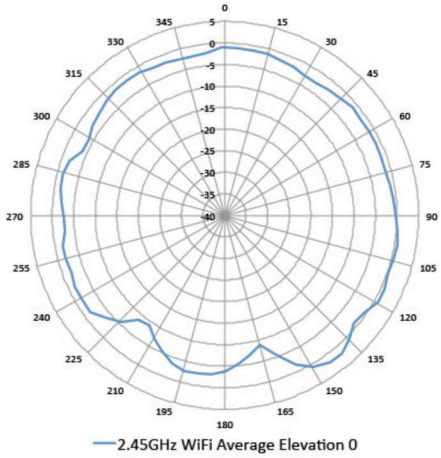


2.45 GHz

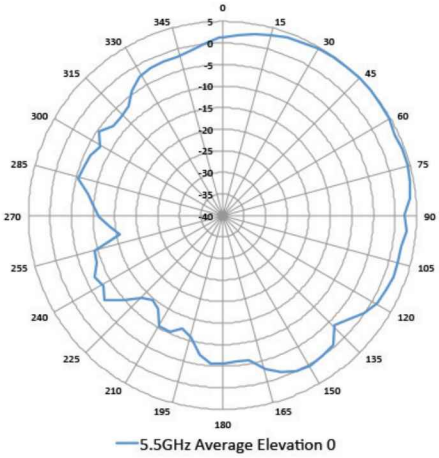


5.5 GHz

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

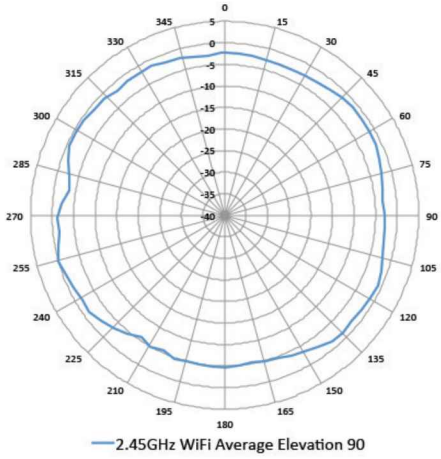


2.45 GHz

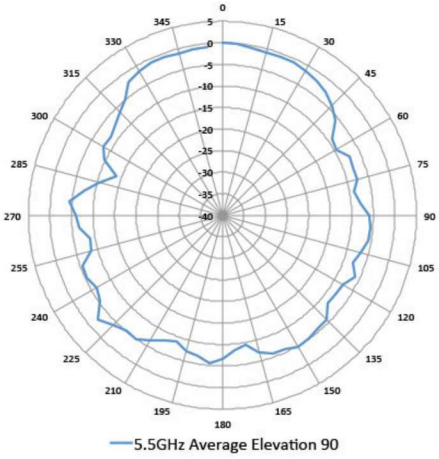


5.5 GHz

Elevation plane 90 (looking at the front of the AP)



2.45 GHz



5.5 GHz

ORDERING INFORMATION

Part Number	Description
303H Series Access Points	
JY678A	Aruba AP-303H (RW) Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY679A	Aruba AP-303H (RW) TAA Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY680A	Aruba AP-303H (US) Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY681A	Aruba AP-303H (US) TAA Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY682A	Aruba AP-303H (JP) Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY683A	Aruba AP-303H (JP) TAA Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY684A	Aruba AP-303H (IL) Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY685A	Aruba AP-303H (IL) TAA Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY862A	Aruba AP-303H (EG) Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY678ACM	Aruba CM AP-303H (RW) Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY680ACM	Aruba CM AP-303H (US) Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY863A	Aruba AP-303H (EG) TAA Dual-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JZ087A	Aruba AP-303HR (EU) 802.11ac Dual 2x2:2 Radio Remote AP Bundle. Contains AP-303H (RW), desk stand (assembled, attached), RJ45 jumper cable (installed), power adapter European AC power cord (europlug)
JZ088A	Aruba AP-303HR (US) 802.11ac Dual 2x2:2 Radio Remote AP Bundle. Contains AP-303H (US), desk stand (assembled, attached), RJ45 jumper cable (installed), power adapter North America AC power cord
Mount Kits	
JY686A	AP-303H-MNT1 Kit with Spare Single-gang Wall-box Mount Adapter for 303H Series AP
JY687A	AP-303H-MNT2 Kit with Optional Dual-gang Wall-box Mount Adapter for 303H Series AP
JY689A	AP-303H-MNTD Kit with Optional Desk Mount Adapter for 303H Series AP
JY688A	AP-303H-MNTW Kit with Optional Wall Mount Adapter for 303H Series AP
JY686ACM	Aruba CM AP-303H-MNT1 Kit with Spare Single-gang Wall-box Mount Adapter for 303H Series AP
JY687ACM	Aruba CM AP-303H-MNT2 Kit with Optional Dual-gang Wall-box Mount Adapter for 303H Series AP
JY689ACM	Aruba CM AP-303H-MNTD Kit with Optional Desk Mount Adapter for 303H Series AP
JY688ACM	Aruba CM AP-303H-MNTW Kit with Optional Wall Mount Adapter for 303H Series AP
R3T21A	AP-303H-MNTU Wall-box mount kit (USB)
Cosmetic Covers	
JY973A	AP-303H-CVR-20 20-pk for AP-303H with Holes for LED Indicators White Non-glossy Snap-on Covers
JY973ACM	Aruba CM AP-303H-CVR-20 20-pk White Non-glossy Snap-on Covers

ORDERING INFORMATION

Part Number	Description
Power Accessories	
JW627A	PD-3501G-AC PoE midspan injector, 10/100/1000 802.3af (15.4W)
JW629A	PD-9001GR-AC PoE midspan injector, 10/100/1000 802.3at (30W)
JX991A	AP-AC-48V36C AC-to-DC Power Adapter (48V/36W)
JW627ACM	Aruba CM PD-3501G-AC 15.4W 802.3af PoE 10/100/1000Base-T Ethernet Midspan Injector
JW629ACM	Aruba CM PD-9001GR-AC 802.3at PoE+ 10/100/1000 Ethernet Indoor Rated Midspan Injector
JX991ACM	Aruba CM AP-AC-48V36C 48V/36W AC/DC desktop style power adapter with type C connector
R3K01ACM	Aruba CM AP-AC2-48C 48V/50W AC/DC desktop style power adapter with type C connector
R3K01A	48V/50W AC/DC power adapter type C
Other Accessories	
JY728A	AP-CBL-SERU Micro-USB TTL3.3V to USB2.0 AP Console Adapter Cable
JY728ACM	Aruba CM AP-CBL-SERU AP console adapter cable for custom micro-USB console port
JW072A	AP-CBL-ETH10 10-pk Short Ethernet Cable

Note: All hardware SKUs can be managed by Aruba Central. Central Managed (CM) SKUs are used for simplified ordering within US and Canada only.

For more ordering information, please refer to the ordering guide

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