

### Overview

#### HPE Aruba Networking 518 Series Hardened Access Points

The hardened, HPE Aruba Networking 518 Series access point delivers high Wi-Fi 6 performance in harsh, weather-protected environments such as warehouses, industrial freezers or enclosures in extreme environments such as stadiums. It delivers 4x4:4SS MU-MIMO capability, HPE Aruba Networking's advanced ClientMatch and integrated Bluetooth to enable HPE Aruba Networking location services.

Purpose-built to survive in the harshest outdoor environments, 518 Series APs withstand exposure to extreme high and low temperatures, persistent (non-precipitant) moisture, and are sealed to keep out airborne contaminants. All electrical interfaces include industrial strength surge protection.

HPE Aruba Networking Wi-Fi 6 access points provide high-performance connectivity for any organization experiencing growing numbers of IoT and mobility requirements. With maximum aggregate on air data rate of 3 Gbps (HE80/HE40) the 518 Series delivers the speed and reliability needed for any environment.



**High-performance Wi-Fi 6 (802.11ax) for harsh weather environments**

## Standard Features

### Incredible Efficiency

The 518 Series APs are also designed to optimize user experience by maximizing Wi-Fi efficiency and dramatically reducing airtime contention between clients.

Features include Uplink and Downlink Orthogonal Frequency Division Multiple Access (OFDMA), Downlink Multi-User MIMO (MU MIMO) and cellular co-location. With up to 4 spatial stream and 160 MHz channel capability the 518 provides groundbreaking wireless capabilities for any application.

Read the Multi-User 802.11ax white paper for further information.

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### Advantages of OFDMA

This capability allows HPE Aruba Networking Wi-Fi 6 APs to handle multiple Wi-Fi 6 enabled client simultaneously on a single radio. Channel utilization is optimized by handling each transaction by matching allocated bandwidth in a channel to the offered user load. These sub divisions of the channel are referred to as Resource Units (RU).

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### Aruba Air Slice for Extended OFDMA Assurance

APs in controller-less mode (Instant) can provide SLA-grade performance by allocating RUs to specific traffic types. By combining HPE Aruba Networking's Policy Enforcement Firewall (PEF) and Layer 7 deep packet inspection (DPI) to identify user roles and applications, the APs will dynamically allocate the bandwidth needed. Non-Wi-Fi 6 clients can also benefit.

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### Multi-User MIMO (MU-MIMO)

The 518 Series APs support downlink MU-MIMO similar to Wi-Fi 5 (802.11ac Wave 2) APs. With the introduction OFDMA in Wi-Fi 6 the overhead for this capability is reduced and MU-MIMO effectiveness is substantially improved for large client counts.

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### Wi-Fi 6 and MU-MIMO aware client optimization

HPE Aruba Networking's patented AI-powered ClientMatch technology ensures that all clients are attached to their best serving access point. Session metrics, network metrics, applications, client type, are used to identify and maintain best connection.

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### HPE Aruba Networking Advanced Cellular Coexistence (ACC)

This feature uses built in filtering to automatically minimize the impact of interference of high power cellular base stations, in building distributed antenna systems as well as small cell and femtocell equipment.

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### Intelligent Power Monitoring (IPM)

HPE Aruba Networking APs continuously monitor and report hardware energy consumption. APs can be configured to enable or disable capabilities based on the available PoE power – ideal when wired switches have exhausted their power budget.

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### Green AP energy efficiency

HPE Aruba Networking Wi-Fi 6 APs utilize analytics from HPE Aruba Networking Central to automatically transition in and out of a sleep mode.

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### IoT Platform Capabilities

HPE Aruba Networking Wi-Fi 6 APs 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. This allow organizations to leverage the 518 as an IoT platform, which eliminates the need for an overlay infrastructure and additional IT resources..

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### Target Wake Time (TWT)

Ideal for IoT solutions that communicate infrequently, this Wi-Fi 6 capability allows IoT devices to use 802.11ax protocol. TWT coordinates with client devices to allow them to sleep for extended periods use shorter wake times to communicate before returning to sleep. This substantially extends the useful operating life of Wi-Fi 6 based battery powered sensors.

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### HPE Aruba Networking Secure Infrastructure

The 518 Series is an integral part of HPE Aruba Networking's 360 Secure Fabric to help protect user authentication and wireless traffic. Select capabilities include:



## Standard Features

### WPA3 and Enhanced Open

With the introduction of WPA3 and Enhanced open a Wi-Fi 6 certified client will never send unencrypted traffic over the air. Even with an open authenticated network enhanced open still provides strong encryption over the air.

In all Wi-Fi 6 user sessions each user is uniquely encrypted and if they disconnect and reconnect the encryption changes from session to session.

### WPA2-MPSK

MPSK enables simpler passkey management for WPA 2 devices – should the Wi-Fi password on one device change, no additional changes are needed for other devices. This feature is enabled when networks are deployed with ClearPass Policy Manager.

### VPN Tunnels

In Remote AP (RAP) and IAP-VPN deployments, the HPE Aruba Networking 518 can be used to establish a secure SSL/IPSec VPN tunnel to a Mobility Controller that is configured as a VPN concentrator.

### Trusted Platform Module (TPM)

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

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### Simple and Secure Access

To simplify policy enforcement, the HPE Aruba Networking 518 uses HPE Aruba Networking's policy enforcement firewall (PEF) features to encapsulate all traffic from the AP to the Mobility Controller (Gateway) for end-to-end encryption and inspection.

Policies are applied based on context including: user role, device type, application, and location. This reduces the manual configuration of SSIDs, VLANs, and ACLs. PEF also serves as the underlying technology for dynamic segmentation.

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### High-Density Connectivity

Each 518 Series AP provides connectivity for a maximum of 512 associated clients per radio (1,024 total).

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### Flexible Operation and Management

A unique feature of HPE Aruba Networking APs is the ability to operate in either controller less or controller-based mode.

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### Controller-less (Instant) Mode

In controller-less mode, one AP serves as a virtual controller for the entire network. Learn more about Instant mode in this [technology brief](#).

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### Mobility Controller Mode

For optimized network performance, roaming and security, APs tunnel all traffic to a mobility controller for central management of traffic forwarding, segmentation, encryption, and policy enforcement. Learn more in the [HPE Aruba Networking OS datasheet](#).

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### Management Options

Available management solutions include HPE Aruba Networking Central, cloud based, or Aruba AirWave, a multi-vendor, on-premises, management solution.

For large installations across multiple sites, HPE Aruba Networking APs can be shipped and activated with Zero Touch Provisioning through HPE Aruba Networking Central or AirWave. This reduces deployment time, centralizes configuration, and provides inventory visibility.

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## Standard Features

### Additional Wi-Fi Features

- Transmit Beamforming (TxBF): Increased signal reliability and range
  - Passpoint Release 2: Seamless cellular-to-Wi-Fi carryover for guests
  - Dynamic Frequency Selection (DFS): Optimized use of available RF spectrum
  - Maximal Ratio Combining (MRC): Improved receiver performance for multi antenna access points.
  - Cyclic Delay/Shift Diversity (CDD/CSD): Enable use of multiple transmit antennas
  - Space-Time Block Coding (STBC): Increased connection robustness
  - Low-Density Parity Check (LDPC): High performance error detection and correction coding for enhanced receiver performance.
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## Configuration Information

### BTO Models

Remarks	Description	SKU
	<b>518 Unified Hardened Access Points</b>	
	Aruba AP-518 (RW) 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H02A
	Aruba AP-518 (US) 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H03A
	Aruba AP-518 (EG) 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4G99A
	Aruba AP-518 (IL) 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H00A
	Aruba AP-518 (JP) 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H01A
	<b>518 Unified Hardened Access Points TAA</b>	
	Aruba AP-518 (RW) TAA 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H07A
	Aruba AP-518 (US) TAA 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H08A
	Aruba AP-518 (EG) TAA 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H04A
	Aruba AP-518 (IL) TAA 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H05A
	Aruba AP-518 (JP) TAA 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H06A
<b>Notes:</b>	OCA Only Model Selection Form - <a href="#">HPE Aruba Networking &gt; Wireless &gt; Access Points &gt; Outdoor / Rugged:</a> <a href="#">HPE Aruba Networking 518 Series Access Points</a>	

### Mounting Accessories

#### AP Mount Kits

For 518 Series Std (Min 0 // max 1) User Selection (min 0 // max 1)

Rule #	Description	SKU
	AP-MNT-A Campus AP mount bracket kit (individual) type A: suspended ceiling rail flat 9/16	R3J15A
	AP-MNT-B Campus AP mount bracket kit (individual) type B: suspended ceiling rail flat 15/16	R3J16A
	AP-MNT-C Campus AP mount bracket kit (individual) type C: suspended ceiling rail profile 9/16	R3J17A
	AP-MNT-D Campus AP mount bracket kit (individual) type D: solid surface	R3J18A
	AP-MNT-E Campus AP mount bracket kit (individual) type E: wall-box	R3J19A
	AP-270-MNT-ADP AP-228 to AP-270-MNT-XX Outdoor Mount Adapter	JW056A
*	Aruba AP-OUT-MNT-V1A Outdoor AP Long Arm Pole/Wall Mounting Bracket	R9H97A
*	Aruba AP-270-MNT-V2 Outdoor AP Short Arm Pole/Wall Mounting Bracket	JW053A
*	Aruba AP-270-MNT-H1 Outdoor AP Hanging or One-Way Tilt Pole/Wall Mounting Bracket	JW054A
*	Aruba AP-270-MNT-H2 Outdoor AP Flush Wall Mounting Bracket	JW055A
	Aruba AP-270-MNT-H3 Outdoor AP Hanging or Dual-Tilt Pole/Wall Mounting Bracket	R6W11A

#### Configuration Rules

- Notes:**
- \*If this AP Mount is selected, then add Qty 1 of JW056A
  - AP-270-MNT-XX or AP-OUT-MNT-XX requires that AP-270-MNT-ADP (JW056A) be ordered.
  - AP-270-MNT-XX or AP-OUT-MNT-XX requires that the common rail be removed before attaching the AP AP-270-MNT-ADP (JW056A).

### Power Options

Rule #	Description	SKU
	<b>PoE Power Options</b>	
	For 518 Series Std (Min 0 // max 1) User Selection (min 0 // max 1)	
	PD-9501-5GCO-AC 60W 802.3bt Smart Rate Outdoor Surge Protection Midspan Injector	R7T40A
	PD-9501-5GCO-DC 60W 802.3bt Smart Rate Outdoor Surge Protection Midspan Injector	R7T41A
*	AP-POE-ATSR 1-Port Smart Rate 802.3at 30W midspan injector	R6P67A
*	AP-POE-BTSR 1-Port Smart Rate 802.3bt 60W midspan injector	R1C73A
<b>Notes:</b>	- *If this Power Supply is selected, bring in (Min 1 // Max 1) Localized power cord based on the <a href="#">HPE Aruba Networking Localization Menu</a>	



## Configuration Information

- Indoor Injector provides no surge protection
- Indoor injector requires indoor AC power cord
- AP-518 may be powered by PoE Only
- Power Cord for JW630A, R7T40A, R7T41A should be provided by installer
- R7T40A and R7T41A do not include a power cord, power cord must be constructed by installer using the included power connector parts and assembled per the user guide by a certified installer

### Power Injector Mounts

For 518 Std (Min 0 // max 1) User Selection (min 0 // max 1)

Aruba PD-MOUNT-OD Outdoor PoE Midspan Injectors Pole/Mast Mount Kit

JW620A

**Notes:** This is optional but recommended for outdoor injectors

## Antennas

Rule #	Description	SKU
<b>5 GHz Antennas</b>		
For 518 Std (Min 0 // max 1) User Selection (min 0 // max 1)		
1	AP-ANT-1W 2.4-2.5GHz (4dBi)/4.9-5.875GHz (6dBi) Hi Gain Dual-band Omni-Dir Indoor Antenna	JW009A
1	AP-ANT-13B 2.4-2.5GHz (2.3dBi)/4.9-5.9GHz (4.0dBi) Downtilt Smallest Omni-Dir Single Ant	JW001A
1	AP-ANT-19 2.4/5G Dual Band Omni-Dir 3dBi/6dBi Indr/Otrd RPSMA Cnctr Ant w/36in Intgrtd Cable	JW004A
1	AP-ANT-20W 2.4-2.5GHz (2dBi)/4.9-5.875GHz (2dBi) Compact Omni-Dir DMt Indr White Antenna	JW011A
2	AP-ANT-22 Dual Band 2/4dBi Omni RPSMA Low Profile 2-pk Omni Antenna	Q8N49A
	AP-ANT-40 Dual Band Downtilt Omni 4dBi 4 Elmt MIMO Ceiling Mount 4xRPSMA Pigtail Antenna	JW017A
	AP-ANT-45 Dual Band 90x90deg 5dBi 4 Element MIMO 4xRPSMA Pigtail Antenna	JW018A
	AP-ANT-48 Dual Band 60x60deg 8.5dBi 4 Element MIMO 4xRPSMA Pigtail Antenna	JW019A
	ANT-3x3-5712 4.9-5.9GHz 12.0dBi 75x25deg +/- 45deg and V Pol 3 MIMO High Gain Dir Antenna	JW033A
	ANT-4x4-5314 5.15-5.9GHz 14dBi 30x30deg Dual Pol MIMO Hi Gain Dir N-Type Outdoor Antenna	JX988A

### Configuration Rules

- 1 Must select Qty 0 or Qty 4
- 2 Must select Qty 0 or Qty 2

- Notes:**
- AP-ANT-1W, AP-ANT-20W and AP-ANT-22 are usually direct connect to the chassis
  - AP-ANT-40 ships with its mounting bracket
  - AP-ANT-45,-48 ship only with hardware for flush mount to a flat surface
  - AP-518 has 4x RPSMA female for 5 GHz
  - ANT-3x3-5712 (JW033A) requires qty3 of AFCSJMTM-00 (JW067A)
  - ANT-4x4-5314 (JX988A) requires qty4 of AFCSJMTM-00 (JW067A)

### 2.4 GHz Antennas

For 518 Std (Min 0 // max 1) User Selection (min 0 // max 1)

*	AP-ANT-1W 2.4-2.5GHz (4dBi)/4.9-5.875GHz (6dBi) Hi Gain Dual-band Omni-Dir Indoor Antenna	JW009A
*	AP-ANT-13B 2.4-2.5GHz (2.3dBi)/4.9-5.9GHz (4.0dBi) Downtilt Smallest Omni-Dir Single Ant	JW001A
	AP-ANT-16 2.4-2.5GHz (3.9dBi)/4.9-5.9GHz (4.7dBi) 3 Elmt MIMO Ant w/Downtilt Omni-Dir Antenna	JW003A
*	AP-ANT-19 2.4/5G Dual Band Omni-Dir 3dBi/6dBi Indr/Otrd RPSMA Cnctr Ant w/36in Intgrtd Cable	JW004A
*	AP-ANT-20W 2.4-2.5GHz (2dBi)/4.9-5.875GHz (2dBi) Compact Omni-Dir DMt Indr White Antenna	JW011A
	AP-ANT-22 Dual Band 2/4dBi Omni RPSMA Low Profile 2-pk Omni Antenna	Q8N49A
	AP-ANT-25A Dual Band 90x90deg 5dBi +/- 45 Pol 2 Element MIMO 2xRPSMA Pigtail Antenna	JW012A
	Aruba AP-ANT-28a Dual Band 7dBi +/- 45 2 Element MIMO 2xRPSMA Pigtail Antenna	SOA66A
	ANT-2x2-2314 2.4 GHz 14dBi 30x30deg Dual Pol MIMO High Gain Dir N-Type Outdoor Antenna	JW024A

- Notes:**
- \*Must select Qty 0 or Qty 2
  - AP-ANT-1W, AP-ANT-20W and AP-ANT-22 are usually direct connect to the chassis
  - AP-ANT-25A,-28 ship only with hardware for flush mount to a flat surface
  - AP-518 has 2x RPSMA female for 2.4 GHz
  - ANT-2x2-2314 (JW024A) requires qty2 of AFCSJMTM-00 (JW067A)

## Configuration Information

Rule #	Description	SKU
	<b>Antenna Mount Kits</b>	
	For 518 Series Std (Min 0 // max 1) User Selection (min 0 // max 1)	
1	Aruba AP-ANT-MNT-3 AZ/EL Adjustable Antenna Pole/Wall Mount Kit	JW020A
<b>Notes:</b>	Only compatible with JW017A	
2	Aruba AP-ANT-MNT-4 AZ/EL Adjustable Antenna Pole/Wall Mount Kit	JW021A
<b>Notes:</b>	Only compatible with JW018A	
3	Aruba AP-ANT-MNT-5 AZ/EL Adjustable Antenna Pole/Wall Mount Kit	JW022A
<b>Notes:</b>	Only compatible with JW019A	
<b>Notes:</b>	<ul style="list-style-type: none"> <li>- AP-ANT-MNT-3 compatible with AP-ANT-25A and AP-ANT-28</li> <li>- AP-ANT-MNT-4 compatible with AP-ANT-48</li> <li>- AP-ANT-MNT-5 compatible with AP-ANT-45</li> </ul>	

## Cables

	<b>RF Jumper Cables</b>	
	For 518 Series Std (Min 0 // max 6) User Selection (min 0 // max 6)	
1, 2, 3	AFC2DL60-00 Indoor AP RPSMAm to Nf 60cm Flexible Indoor Rated RF Cable	JW066A
	AFCSJMTM-00 Indoor AP RPSMAm to Nm 60cm Flexible Indoor Rated RF Cable	JW067A
	<b>Configuration Rules</b>	
1	For Antenna JW024A - ANT-2x2-2314 2.4G 14dBi Panel is selected, then must select qty 0 or qty 2 of this jumper cable.	
2	For Antenna JW033A - ANT-3x3-5712 5G 12dBi Sector is selected, then must select qty 0 or qty 3 of this jumper cable.	
3	For Antenna JX988A - ANT-4x4-5314 5G 14dBi Panel is selected, then must select qty 0 or qty 4 of this jumper cable.	
<b>Notes:</b>	<ul style="list-style-type: none"> <li>- Not usually required</li> <li>- Radio 0 (5 GHz) has 4 connectors</li> <li>- Radio 1 (2.4 GHz) has 2 connectors</li> <li>- No cables required for direct connect omnis or antennas with pigtails</li> <li>- AFC2DL60-00 used to adapt from RPSMA to Nf for connection to longer Nm to Nm jumpers</li> <li>- AFCSJMTM-00 used to adapt from RPSMA to Nm for connection to antennas with Nf connectors</li> </ul>	

## Accessories

### Spare Items

	For 518 Series Std (Min 0 // max 99) User Selection (min 0 // max 99)	
	HPE Aruba Networking AP-MNT-MP10-A Campus AP 10-Pack 9/16 Flat Ceiling Rail Mount Bracket Kit	JZ370A
	HPE Aruba Networking AP-MNT-MP10-B Campus AP 10-Pack 15/16 Flat Ceiling Rail Mount Bracket Kit	Q9G69A
	HPE Aruba Networking AP-MNT-MP10-C Campus AP 10-Pack Profile 9/16 Ceiling Rail Mount Bracket Kit	Q9G70A
	HPE Aruba Networking AP-MNT-MP10-E Campus AP 10-Pack Wall-box Mount Bracket Kit	Q9G71A
	HPE Aruba Networking AP-MNT-MP10-E Campus AP 10-Pack Wall-box Mount Bracket Kit	R1C72A
	AP-MNT-MP10-X Campus AP mount adapter kit (10-pack)	R3T20A
	HPE Aruba Networking AP-MNT-MP10-B1 Campus AP 10-Pack 15/16 Adj Flat Ceiling Rail Mount Bracket Kit	R6T34A

## Configuration Information

### Software

#### Central

##### Cloud Services / Access Point Foundation Subscriptions

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

##### Cloud Services / Access Point Advanced Subscriptions

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

##### On-Prem Services / Access Point Foundation Subscriptions

3, 8	HPE Aruba Networking Central on Prem AP Foundation 1 year Subscription E-STU	R6U63AAE
3, 8	HPE Aruba Networking Central on Prem AP Foundation 3 year Subscription E-STU	R6U64AAE
3, 8	HPE Aruba Networking Central on Prem AP Foundation 5 year Subscription E-STU	R6U65AAE
3, 8	HPE Aruba Networking Central on Prem AP Foundation 7 year Subscription E-STU	R6U66AAE
3, 8	HPE Aruba Networking Central on Prem AP Foundation 10 year Subscription E-STU	R6U67AAE

##### On-Prem Services / Access Point Foundation Government Subscriptions

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

##### 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 Subscription Government E-STU	R8K87AAE
6, 8	Aruba Central AP Advanced 10yr Subscription Government E-STU	R8K88AAE

#### Configuration Rules

Rule #	Description	SKU
2	<a href="#">Add the Central Cloud Skus to the HPE Aruba Networking Catalog as Standalone: HPE Aruba Networking &gt; Network Management &gt; Central &gt; Cloud Services</a>	
3	<a href="#">Add the Central On-Prem Skus to the HPE Aruba Networking Catalog as Standalone: HPE Aruba Networking &gt; Network Management &gt; Central &gt; On-Prem Services</a>	
6	<a href="#">Add the Central FedRAMP Service Skus to the HPE Aruba Networking Catalog as Standalone: HPE Aruba Networking &gt; Network Management &gt; Central &gt; FedRAMP</a>	
8	For OCA: When configuring the following AP 10-Pack, selection condition for this Subscription should be 0(default) or 10	
	HPE Aruba Networking AP-503 (RW) Dual Radio 2x2 802.11ax Wi-Fi 6 10-pack Campus Access Point	S1E83A
	HPE Aruba Networking AP-503 (US) Dual Radio 2x2 802.11ax Wi-Fi 6 10-pack Campus Access Point	S1E84A



## Configuration Information

### As-a-Service

#### Cloud Services / Access Point Foundation Subscriptions

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

#### Cloud Services / Access Point Advanced Subscriptions

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

### HPE Aruba Networking 518 Series Specifications

- 5 GHz: Four RP-SMA connectors for external antenna operation
- 2.4 GHz: Two RP-SMA connectors for external antenna operation

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### Dimensions and weight

- 220 (W) x 220 (D) x 75 mm (H) / 8.5 (W) x 8.5 (D) x 2.5 in (H)
- 1.5 kg / 3.3 lbs

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### Mounting

- Optional mounting kits:
  - AP-220-MNT-W1 are directly compatible
  - 270 Series outdoor AP mounts (AP-270-MNT-V1, AP-270-MNT-V2, AP-270-MNT-H1, AP-270-MNT-H2) are compatible when the AP-270-MNT-ADP adapter is utilized

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### Power

- Worst-case power consumption from the AP: 25.6W
- Power sources sold separately
- Power over Ethernet (PoE+): 802.3at-compliant

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### Certifications

- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- Wi-Fi Alliance certified 802.11a/b/g/n
- Wi-Fi CERTIFIED™ 6 (802.11ax)
- Wi-Fi CERTIFIED™ ac (with Wave 2 features)
- Passpoint® (Release 2) with HPE Aruba Networking OS and Instant

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### Environmental

- Operating:
  - Temperature: -40° C to +55° C (-40° F to +140° F)
  - Humidity: 5% to 95% non-condensing internal to chassis.
- Storage and transportation:
  - Temperature: -40° C to +70° C (-40° F to +158° F)
- Operating altitude: 3,000 m
- Water and dust: IP55
- Shock and vibration: ETSI 300-19-2-4

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### Wi-Fi Radio Specifications

- AP type: Indoor hardened, Wi-Fi 6 dual-radio, 5 GHz 4x4 MIMO and 2.4 GHz 2x2 MIMO
- Software-configurable dual radio supports 5 GHz (Radio 0) and 2.4 GHz (Radio 1)

#### 5 GHz

- Four spatial stream Single User (SU) MIMO for up to 4.8 Gbps wireless data rate to individual 4SS HE160 Wi-Fi 6 client device (max)
- Two spatial stream Single User (SU) MIMO for up to 1.2 Gbps wireless data rate to individual 2SS HE80 Wi-Fi 6 client device (typical)
- Four spatial stream Multi User (MU) MIMO for up to 4.8 Gbps wireless data rate to up to four 1SS or two 2SS HE160 Wi-Fi 6 DL-MU-MIMO capable client devices simultaneously (max)
- Four spatial stream Multi User (MU) MIMO for up to 2.4 Gbps wireless data rate to up to four 1SS or two 2SS HE80 Wi-Fi 6 DL-MU-MIMO capable client devices simultaneously (typical)



## Technical Specifications

### WI-FI Radio Specifications

#### 2.4 GHz

- Two spatial stream Single User (SU) MIMO for up to 575 Mbps wireless data rate to individual 2SS HE40 Wi-Fi 6 client device (max)
- Two spatial stream Single User (SU) MIMO for up to 287 Mbps wireless data rate to individual 2SS HE20 Wi-Fi 6 client device (typical)
- Two spatial stream Multi User (MU) MIMO for up to 575 Mbps wireless data rate to up to two 1SS HE40 Wi-Fi 6 DL- MU-MIMO capable client devices simultaneously (max)
- Two spatial stream Multi User (MU) MIMO for up to 287 Mbps wireless data rate to up to two 1SS HE20 Wi-Fi 6 DL- MU-MIMO capable client devices simultaneously (typical)
- Support for 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
  - 5.150 to 5.250 GHz
  - 5.250 to 5.350 GHz
  - 5.470 to 5.725 GHz
  - 5.725 to 5.850 GHz
  - 5.850 to 5.925 GHz
  - 5.825 to 5.875 GHz
- 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)
  - 802.11ax: Orthogonal frequency-division multiple access (OFDMA) with up to 16 resource units (RU)
  - Supported modulation types:
    - 802.11b: BPSK, QPSK, CCK
    - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM (proprietary extension)
    - 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024 QAM (proprietary extension)
    - 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024 QAM
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11ac very high throughput (VHT) support: VHT 20/40/80/160
- 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 (2.4GHz): 6.5 to 300 (MCS0 to MCS15, HT20 to HT40)
  - 802.11n (5GHz): 6.5 to 600 (MCS0 to MCS31, HT20 to HT40)
  - 802.11ac: (5 GHz): 6.5 to 3,467 (MCS0 to MCS9, NSS = 1 to 4 for VHT20 to VHT160)
  - 802.11ax (2.4GHz): 3.6 to 574 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE40)
  - 802.11ax (5GHz): 3.6 to 4803 (MCS0 to MCS11, NSS = 1 to 4, HE20 to HE160)
- 802.11n/ac packet aggregation: A-MPDU, A-MSDU
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum (conducted) transmit power (limited by local regulatory requirements):
  - 2.4 GHz band: +22 dBm per chain, +25dBm aggregate (2x2)
  - 5 GHz band: +22 dBm per chain, +28dBm aggregate (4x4)
  - **Notes: conducted transmit power levels exclude antenna gain**
- Maximum EIRP (limited by local regulatory requirements):
  - 2.4 GHz band: 518: 25 + antenna gain + TxBF gain
  - 5 GHz band: 518: 28 + antenna gain + TxBF gain
- Advanced Cellular Coexistence (ACC) minimizes interference from cellular networks
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay/shift diversity (CDD/CSD) to enable the use of multiple transmit antennas

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## Technical Specifications

- Short guard interval for 20-MHz, 40-MHz, 80-MHz and 160-MHz 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
- 

### Additional interfaces

- E0: HPE SmartRate 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/bt (Class 3 or higher)
    - 802.3az Energy Efficient Ethernet (EEE)
  - E1: 10/100/1000BASE-T (RJ-45)
    - Auto-sensing link speed and MDI/MDX
    - 802.3az Energy Efficient Ethernet (EEE)
  - Link Aggregation (LACP) support between both network ports for redundancy and increased capacity
  - Bluetooth 5 and 802.15.4 radio
    - 2.4 GHz
    - Bluetooth 5: up to 8dBm transmit power and -95dBm receive sensitivity
    - Zigbee: up to 8 dBm transmit power and -97dBm receive sensitivity
    - Up to 4dBm transmit power (class 2) and -91 dBm receive sensitivity
  - Visual indicator (multi-color LED): For system and radio status
  - Reset button: Factory reset (during device power up)
  - USB-C console interface
- 

### 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, EN60601-1-2
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For more country-specific regulatory information and approvals, please see your HPE Aruba Networking representative.

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### Regulatory Model Numbers

- APIN0518
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### Warranty

- **Limited lifetime warranty**
- 

### Minimum Operating System Software

- HPE Aruba Networking OS and HPE Aruba Networking InstantOS 8.7.0.0
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## Technical Specifications

RF Performance Table		
	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
<b>2.4GHz, 802.11b</b>		
1 Mbps	22	-97
11 Mbps	22	-89
<b>2.4GHz, 802.11g</b>		
6 Mbps	22	-94
54 Mbps	20	-76
<b>2.4GHz, 802.11n/ac HT20</b>		
MCS0	22	-93
MCS8	19	-72
<b>2.4GHz, 802.11ax HE20</b>		
MCS0	22	-93
MCS11	17	-62
<b>5GHz, 802.11a</b>		
6 Mbps	22	-95
54 Mbps	20	-76
<b>5GHz, 802.11n/ac HT20/VHT20</b>		
MCS0	22	-94
MCS8	19	-72
<b>5GHz, 802.11n/ac HT40/VHT40</b>		
MCS0	22	-92
MCS9	19	-68
<b>5GHz, 802.11ac VHT80</b>		
MCS0	22	-90
MCS9	19	-65
<b>5GHz, 802.11ac VHT160</b>		
MCS0	22	-84
MCS9	19	-59
<b>5GHz, 802.11ax HE20</b>		
MCS0	22	-94
MCS11	17	-62
<b>5GHz, 802.11ax HE40</b>		
MCS0	22	-91
MCS11	17	-60
<b>5GHz, 802.11ax HE80</b>		
MCS0	22	-87
MCS11	17	-57
<b>5GHz, 802.11ax HE160</b>		
MCS0	22	-85
MCS11	17	-53

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



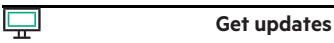
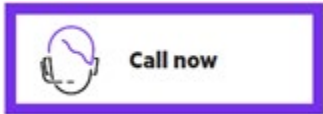
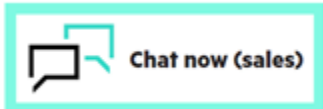
## Summary of Changes

Date	Version History	Action	Description of Change
04-Dec-2023	Version 10	Changed	Series name was updated.
16-Oct-2023	Version 9	Changed	Configuration Information section was updated.
07-Aug-2023	Version 8	Changed	Configuration Information section was updated.
21-Nov-2022	Version 7	Changed	Configuration Information section was updated.
01-Aug-2022	Version 6	Changed	Configuration Information section was updated.
06-Dec-2021	Version 5	Changed	SKUs were added in Configuration Information section.
15-Mar-2021	Version 4	Changed	SKUs were added in Configuration Information section.
02-Nov-2020	Version 3	Changed	Configuration Information section was updated. New SKUs were added.
08-Sep-2020	Version 2	Changed	Configuration Information section was updated. New SKUs were added.
04-May-2020	Version 1	New	New QuickSpecs



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