

### Overview

#### Aruba 518 Series Hardened Access Points

The hardened, Aruba 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, Aruba's advanced ClientMatch and integrated Bluetooth to enable Aruba 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.

Aruba 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.

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

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### 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 Aruba 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 Aruba'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

Aruba'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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#### Aruba 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)

Aruba 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

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

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#### IoT Platform Capabilities

Aruba 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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### Standard Features

#### 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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#### Aruba Secure Infrastructure

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

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#### 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.

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#### 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.

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#### VPN Tunnels

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

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#### Trusted Platform Module (TPM)

For enhanced device assurance, all Aruba 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 Aruba 518 uses Aruba'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 Aruba 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 Aruba 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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### Standard Features

#### 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 ArubaOS datasheet.

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#### Management Options

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

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

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#### 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

**Build To Order:** BTO is a standalone unit with no integration. BTO products ship standalone are not part of a CTO or Rack-Shippable solution.

#### 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 |

**Notes:** [OCA Only Model Selection Form - Aruba > Wireless > Access Points > Outdoor / Rugged: Aruba 518 Series Access Points](#)

### Mounting Accessories

| Rule # | Description   | SKU    |
|--------|---|--------|
|        | <b>AP Mount Kits</b>  |        |
|        | For 518 Series Std (Min 0 // max 1) User Selection (min 0 // max 1)                           |        |
|        | 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 |
| 1      | AP-270-MNT-V1 AP-270 Series Outdoor Pole/Wall Long Mount Kit                                  | JW052A |
| 1      | AP-270-MNT-V2 AP-270 Series Outdoor Pole/Wall Short Mount Kit                                 | JW053A |
| 1      | AP-270-MNT-H1 AP-270 Series Outdoor AP Hanging or Tilt Install Mount Kit                      | JW054A |
| 1      | AP-270-MNT-H2 AP-270 Series Access Flush Wall or Ceiling Mount                                | JW055A |
|        | AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit                 | R6W11A |
|        | <b>Configuration Rules</b>  |        |

### Configuration Information

- 1 If this AP Mount is selected, then add Qty 1 of JW056A

**Notes:** AP-270-MNT-XX requires that AP-270-MNT-ADP (JW056A) be ordered.  
AP-270-MNT-XX requires that the common rail be removed before attaching the AP AP-270-MNT-ADP (JW056A).

### Power Options

| Rule # | Description | SKU |
|--------|-------------|-----|
|--------|-------------|-----|

#### PoE Power Options

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

|  |  |        |
|--|--|--------|
|  | AP-POE-ATSR 1-Port Smart Rate 802.3at 30W midspan injector | R6P67A |
|--|--|--------|

|   |  |        |
|---|--|--------|
| 1 | Aruba PD-9001GR-AC 30W 802.3at PoE+ 10/100/1000 Ethernet Indoor Rated Midspan Injector | JW629A |
|---|--|--------|

|  |  |        |
|--|--|--------|
|  | Aruba PD-9001GO-DC 30W 802.3at PoE+ 10/100/1000 12-24V DC in Outdoor Surge Prot Midspan Injector | JW630A |
|--|--|--------|

|  |  |        |
|--|--|--------|
|  | Aruba PD-9001GO-NA 30W 802.3at PoE+ 10/100/1000 Otdr Surge Prot NA Power Cord Mdsan Injector | JW700A |
|--|--|--------|

|  |   |        |
|--|---|--------|
|  | Aruba PD-9001GO-INTL 30W 802.3at PoE+ 10/100/1000 Outdoor Surge Prot Intl Power Cord Injector | JW701A |
|--|---|--------|

#### Configuration Rules

- 1 If this Power Supply is selected, bring in (Min 1 // Max 1) Localized power cord based on the Aruba Localization Menu

**Notes:** 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 is not sourced by Aruba

#### 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

### Cables

#### RF Jumper Cables

For 518 Series Std (Min 0 // max 6) User Selection (min 0 // max 6)

|  |  |        |
|--|--|--------|
|  | AFC2DL60-00 Indoor AP RPSMAm to Nf 60cm Flexible Indoor Rated RF Cable | JW066A |
|--|--|--------|

|         |  |        |
|---------|--|--------|
| 1, 2, 3 | AFCSJMTM-00 Indoor AP RPSMAm to Nm 60cm Flexible Indoor Rated RF Cable | JW067A |
|---------|--|--------|

#### Configuration Rules

- 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.

**Notes:** Not usually required  
Radio 0 (5 GHz) has 4 connectors  
Radio 1 (2.4 GHz) has 2 connectors  
No cables required for direct connect omnis or antennas with pigtails  
AFC2DL60-00 used to adapt from RPSMA to Nf for connection to longer Nm to Nm jumpers  
AFCSJMTM-00 used to adapt from RPSMA to Nm for connection to antennas with Nf connectors

### Configuration Information

#### 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 |
| <b>Configuration Rules</b>                                   |   |        |
| 1  | Must select Qty 0 or Qty 4  |        |
| 2  | Must select Qty 0 or Qty 2  |        |
| <b>Notes:</b>  | AP-ANT-1W, AP-ANT-20W and AP-ANT-22 are usually direct connect to the chassis<br>AP-ANT-40 ships with its mounting bracket<br>AP-ANT-45,-48 ship only with hardware for flush mount to a flat surface<br>AP-518 has 4x RPSMA female for 5 GHz<br>ANT-3x3-5712 (JW033A) requires qty3 of AFCSJMTM-00 (JW067A)<br>ANT-4x4-5314 (JX988A) requires qty4 of AFCSJMTM-00 (JW067A) |        |
| <b>2.4 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 |
|  | 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 |
| 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 |
|  | 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 |
|  | AP-ANT-28 Dual Band 60x60deg 7.5dBi +/- 45 Pol 2 Element MIMO 2xRPSMA Pigtail Antenna   | JW013A |
|  | ANT-2x2-2314 2.4 GHz 14dBi 30x30deg Dual Pol MIMO High Gain Dir N-Type Outdoor Antenna  | JW024A |

### Configuration Information

#### Configuration Rules

- 1 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-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)

| Rule #  | Description  | SKU    |
|---|--|--------|
| <b>Antenna Mount Kits</b>   |  |        |
| For 518 Series Std (Min 0 // max 1) User Selection (min 0 // max 1)   |  |        |
| 1   | AP-ANT-MNT-3 AP-ANT-25A/28/35A/38 Azimuth and Elevation Adjustable Mount Kit | JW020A |
| <b>Notes:</b> Only compatible with JW017A   |  |        |
| 2   | AP-ANT-MNT-4 AP-ANT-48 Azimuth and Elevation Adjustable Mount Kit            | JW021A |
| <b>Notes:</b> Only compatible with JW018A   |  |        |
| 3   | AP-ANT-MNT-5 AP-ANT-45 Azimuth and Elevation Adjustable Mount Kit            | JW022A |
| <b>Notes:</b> Only compatible with JW019A   |  |        |
| <b>Notes:</b> AP-ANT-MNT-3 compatible with AP-ANT-25A and AP-ANT-28<br>AP-ANT-MNT-4 compatible with AP-ANT-48<br>AP-ANT-MNT-5 compatible with AP-ANT-45 |  |        |

### Accessories

#### Spare Items

For 518 Series Std (Min 0 // max 99) User Selection (min 0 // max 99)

|  |        |
|--|--------|
| AP-MNT-MP10-A Campus AP mount bracket kit (10-pack) type A: suspended ceiling rail | JZ370A |
| AP-MNT-MP10-B Campus AP mount bracket kit (10-pack) type B: suspended ceiling rail | Q9G69A |
| AP-MNT-MP10-C Campus AP mount bracket kit (10-pack) type C: suspended ceiling rail | Q9G70A |
| AP-MNT-MP10-D Campus AP mount bracket kit (10-pack) type D: solid surface          | Q9G71A |
| AP-MNT-MP10-E Campus AP mount bracket kit (10-pack) type E: wall-box               | R1C72A |
| AP-MNT-MP10-X Campus AP mount adapter kit (10-pack)                                | R3T20A |



### Technical Specifications

#### Aruba 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 ArubaOS 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)

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### Technical Specifications

- 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)

### 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

### Technical Specifications

- 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
  - 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
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### 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

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

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### Regulatory Model Numbers

- APIN0518
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### Warranty

- Limited lifetime warranty
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### Technical Specifications

#### Minimum Operating System Software

- ArubaOS and Aruba InstantOS 8.7.0.0

| 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  |
|-------------|-----------------|---------|--|
| 02-Nov-2020 | Version 3       | Changed | Configuration Information section was updated.<br>New SKUs were added. |
| 08-Sep-2020 | Version 2       | Changed | Configuration Information section was updated.<br>New SKUs were added. |
| 04-May-2020 | Version 1       | New     | New QuickSpecs   |

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