RETIRED: This document has been officially retired, and the base products listed herein are now considered obsolete and are no longer available for sale. Consequently, the information contained within may no longer be current. This document is provided exclusively for reference and informational purposes.

Overview

Aruba 387 Series Outdoor Access Points

Dual 60GHz 802.11ad and 5GHz 802.11ac Wave 2 for high speed outdoor point-to-point connectivity
Weatherproof and temperature-hardened, the Aruba 387 Series Access Points deliver multi-gigabit per second aggregate throughput at distances up to 400 meters (or 0.25 miles).

With the ever-growing number of IoT devices, demand for reliable connectivity is rising – not just in traditional carpeted enterprises but also in outdoor use cases such as enabling connectivity across buildings on the same campus, adjacent structures (e.g. parking garage or annex), and remote or temporary event sites.

Point-to-point wireless solutions offer an attractive option for connecting two sites together where the right of way is difficult to obtain – or as a backup or recovery link for existing connections. But legacy point-to-point solutions can be expensive and vulnerable to inclement weather conditions. They can also require highly skilled workers for AP installation and alignment.

To solve these challenges, the 387 Series AP is designed with the resiliency needed during inclement weather and to survive harsh conditions. The 387 Series AP can withstand up to 165 mph winds and tolerate water, dust, and salt sprays for extended periods of time, and also provide connectivity at up to 400 meters. Should weather cause the 387 Series to become misaligned, Aruba's 60GHz radios can automatically adjust and align the point-to-point connection.

The 5GHz radio is also bonded with the 802.11ad radio to provide: 1) a boost in throughput in good conditions, and 2) intelligent fallback if the 60GHz radio is impacted by heavy rainfall.



Aruba 387 Series Outdoor Access Points

Key Features

- Cost-effective and easy-to-deploy with automatic radio alignment
- High reliability with intelligent fallback to the 5GHz 802.11ac radio
- Up to 3.37 Gbps of aggregate throughput (60GHz: 2.5Gbps and 5GHz: 867Mbps)
- Up to 400 meters of extended range
- IoT-ready with integrated Bluetooth Low Energy (BLE)
- Based on a proven, hardened outdoor design
- Participates in Aruba's Dynamic Segmentation solution

Standard Features

Simple, cost-effective deployment

From a deployment standpoint, the auto-adjustment feature can dramatically simplify labor requirements by eliminating the need for precision AP alignments during installation or weather impacts. APs can intelligently form links based on optimal parameters up to +/- 45 degrees azimuth* and +/- 17 degrees elevation. The 5GHz radio uses a fixed sector to cover the same range.

IoT-ready

Like all Aruba Wi-Fi 6 APs, the 387 Series includes an integrated Bluetooth Low Energy radio to simplify the deployment and management of location services, asset tracking services, security solutions and IoT sensors. This allows organizations to leverage the 360 Series as an IoT platform, which eliminates the need for an overlay infrastructure and additional IT resources

Simple and secure access

To simplify policy enforcement, the Aruba 387 Series uses Aruba's policy enforcement firewall (PEF) feature to encapsulate all traffic from the AP to the Mobility Controller (or Gateway) for end-to-end encryption and inspection. Policies are applied based on user role, device type, applications, and location. This reduces the manual configuration of SSIDs, VLANs and ACLs. PEF also serves as the underlying technology for Aruba Dynamic Segmentation.

Unique Benefits

WPA3 and Enhanced Open

Support for stronger encryption and authentication is provided via the latest version of WPA for enterprise protected networks. Enhanced Open offers seamless new protection for users connecting to open networks where each session is automatically encrypted to protect user passwords and data on guest networks.

WPA2-MPSK

MPSK enables simpler passkey management for WPA2 devices – should the Wi-Fi password on one device or device type change, no additional changes are needed for other devices. Requires ClearPass Policy Manager.

VPN Tunnels

In Remote AP (RAP) and IAP-VPN deployments, the Aruba 318 Series can be used to establish a secure SSL/IPSec VPN tunnel to a Mobility Controller that is acting as a VPN concentrator.

Trusted Platform Module (TPM)

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

Flexible operations and management

Controller-less (Instant) mode - For enhanced device assurance, all Aruba APs have an installed TPM for secure storage of credentials and keys, and boot code.
Mobility Controller mode - For optimized network performance, roaming and security, APs tunnel all traffic to a mobility controller for centrally managed traffic forwarding and segmentation, data encryption, and policy enforcement.

Other management options - Available management solutions include Aruba Central (cloud-managed) or Aruba AirWave – a multi-vendor on-premises management solution. For large installations across multiple sites, APs can be factory-shipped and can be activated with Zero Touch Provisioning through Aruba Central or AirWave. This reduces deployment time, centralizes configuration, and helps manage inventory.

Additional Features

Zero Touch Provisioning - APs can be factory-shipped and zero-touch provisioned through Aruba Central or AirWave using a cloud-based service to reduce deployment time, centralize configuration, and manage inventory.
Advanced Cellular Coexistence - Minimizes interference from 3G/4G LTE cellular networks, distributed antenna systems (DAS), and commercial small cell or femtocell equipment.

Hardened, industrial design - Extends the temperature range capabilities of indoor access points for environments that lack heating and cooling. It also provides sealed connector interfaces to protect against dust and moisture

Standard Features

Choose your operating mode

Unified APs can be deployed with or without a controller (Instant mode). They can also be readily switched between Controller and Instant modes to accommodate for changing network needs.

- Controller mode: When managed by Aruba Mobility Controllers, AP-387 offers centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding or,
- Controllerless (Instant) mode: As a mesh extension in Aruba Instant mode, an AP-387 adds capability and reach for instant deployments.

Other functionality includes

Aruba Activate significantly reduces deployment time by automating device provisioning, firmware upgrades, and inventory management for large installations across multiple sites. APs are factory-shipped to any site and configure themselves based on your desired mode as the power up.

Configuration Information

Step 1: Select AP-387 Chassis

Remarks	Description	SKU
	387 Series Unified Outdoor Access Points	
	Aruba AP-387 (JP) 802.11ac/ad 802.3at POE Dual 5/60 GHz Integrated Antenna Outdoor Radio	R0K12A
	Aruba AP-387 (RW) 802.11ac/ad 802.3at POE Dual 5/60 GHz Integrated Antenna Outdoor Radio	R0K13A
	Aruba AP-387 (US) 802.11ac/ad 802.3at POE Dual 5/60 GHz Integrated Antenna Outdoor Radio	R0K14A
	387 Series TAA Unified Outdoor Access Points	
	Aruba AP-387 (RW) TAA 802.11ac/ad 802.3at POE Dual 5/60 GHz Integrated Antenna Outdoor Radio	R4E10A
	Aruba AP-387 (US) TAA 802.11ac/ad 802.3at POE Dual 5/60 GHz Integrated Antenna Outdoor Radio	R4E11A

Step 2: Add mounting bracket

	AP Mount Kits	
	Aruba AP-270-MNT-V1 Outdoor AP Long Arm Pole/Wall Mounting Bracket	JW052A
	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

Notes: The H2 are most commonly used with AP-387. The H1 brackets provide additional tilt beyond the +/- 17 electronic tilt provided by the AP-387.

Step 3: Add POE powering accessories if needed

	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
	Aruba PD-9001GO-INTL 30W 802.3at PoE+ 10/100/1000 Outdoor Surge Prot Intl Power Cord Injector	JW701A
	Aruba PD-9001GO-NA 30W 802.3at PoE+ 10/100/1000 Otdr Surge Prot NA Power Cord Mdspan Injector	JW700A
	Aruba PD-9001GO-DC 30W 802.3at PoE+ 10/100/1000 12-24V DC in Outdoor Surge Prot Midspan Injector	JW630A
	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

Notes:
- Indoor Injector provides no surge protection
- Indoor injector requires indoor AC power cord
- AP-38x should be powered by 802.3at compliant PoE. Unit will function with reduced 5 GHz operation on 802.3af power.
- 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 cerified installer

Step 4: Add mounting kit for outdoor POE Midspan injector (optional)

	Aruba PD-MOUNT-OD Outdoor PoE Midspan Injectors Pole/Mast Mount Kit	JW620A

Step 5: Select 3-prong AC power cord for indoor POE injector

	PC-AC-ARG AC Power Cord (Argentina) 250V/10A 1.8m C13 to IRAM 2073	JW113A
	PC-AC-AUS AC Power Cord (Australia) 250V/10A 1.8m C13 to AS3112	JW114A
	PC-AC-BR AC Power Cord (Brazil) 250V/10A 1.8m C13 to NBR 14136	JW115A
	PC-AC-CHN AC Power Cord (China) 250V/10A 1.8m C13 to GB2099	JW116A
	PC-AC-DEN AC Power Cord (Denmark) 250V/10A 1.8m C13 to AFSNIT 107-2-D1	JW117A
	PC-AC-EC AC Power Cord (Europe) 250V/10A 1.8m C13 to CEE7/7	JW118A
	PC-AC-IL AC Power Cord (Israel) 250V/10A 1.8m C13 to SI32	JW120A

Configuration Information

	PC-AC-IN AC Power Cord (India) 250V/6A 1.8m C13 to IS1293	JW119A
	PC-AC-IT AC Power Cord (Italy) 250V/10A 1.8m C13 to CEI 23-50	JW121A
	PC-AC-JPN AC Power Cord (Japan) 125V/12A 1.8m C13 to JISC 8303	JW122A
	PC-AC-KOR AC Power Cord (Korea) 250V/7A 1.8m C13 to KSC 8305	JW123A
	PC-AC-NA AC Power Cord (North America) 125V/10A 1.8m C13 to NEMA 5-15P	JW124A
	PC-AC-SWI AC Power Cord (Switzerland) 220V/10A 1.8m C13 to SEV 1011	JW125A
	PC-AC-TW AC Power Cord (Taiwan) 125V/7A 1.8m C13 to CNS 10917	JW126A
	PC-AC-UK AC Power Cord (United Kingdom) 250V/10A 1.8m C13 to BS1363	JW127A
	PC-AC-ZA AC Power Cord (South Africa) 250V/10A 1.8m C13 to SANS 164-1	JW128A

Notes: Outdoor power injectors ship with cable.

Step 6: Spares/Optional items for AP-387 chassis

Remarks	Description	SKU
	Spare Items	
	Outdoor AP Covers and Glands 1-pk M25/5-pk M20 Cover/2-pk M16 Cover/5-pk M20 Gland/2-pk Ground Kit	Q8N47A
	Outdoor AP Metric to Standard M20 to 1/2 inch NPT 5-pk Thread Adapter	Q8N48A

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	HPE Aruba Networking Central AP Advanced 7 year Subscription E-STU	Q9Y66AAE
2, 8	Aruba Central AP Advanced 10yr 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	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
	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 SubscriptionGovernment E-STU	R8K87AAE

Configuration Information

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	
	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	HPE Aruba Networking Central AP Foundation 5 year Subscription SaaS	Q9Y60AAS
7	HPE Aruba Networking 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

RF performance table		
	Maximum transmit power (dBm) per transmit chain	**Receiver sensitivity (dBm) per receive chain**
802.11a 5GHz		
6 Mbps	22	-90
54 Mbps	22	-73
802.11n HT20 5GHz		
MCS0/8	22	-93
MCS7/15	21	-71
802.11n HT40 5GHz		
MCS0/8	22	-90
MCS7/15	21	-68
802.11ac VHT20 5GHz		
MCS0	22	-93
MCS9	21	-68
802.11ac VHT40 5GHz		
MCS0	22	-90
MCS9	21	-63
802.11ac VHT80 5GHz		
MCS0	22	-87
MCS9	21	-61
802.11ad 60GHz		
MCS0	19	-
MCS9	19	-

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

Minimum Operating System Software

- 8.4. AOS and 8.4 for Instant

Warranty

- Limited Lifetime Warranty

Power

- Worst-case power consumption -13.5 W
- Idle power consumption 4.5W
- Power sources sold separately
- Power over Ethernet (PoE+): 802.3at-compliant
- Power over Ethernet (PoE): 802.3af with some operational restriction.
  - Max conducted power per chain for 5GHz drops to 19 dBm

Certifications

- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- Wi-Fi Alliance certified 802.11a/b/g/n/ac

Regulatory Model Number

- AP-387: APEX0387

Technical Specifications

WI-FI radio specifications

- AP type: Outdoor hardened, dual radio, 60GHz 11ad and 5GHz 802.11ac 2x2 MIMO
- 60 GHz 802.11ad 1x1 (2502.5 Mbps max rate) radio
  - 1 Spatial Stream for up to 2.5 Gbps
  - Internal scanning antenna
    - +/- 45° Azimuth Scan
    - +/- 17° Vertical Scan
- 5GHz 802.11ac 2x2 MU-MIMO (867 Mbps max rate)
  - Two spatial stream MIMO for up to 867 Mbps wireless data
  - Internal directional antenna 9 dBi
- Software-configurable dual radio supports 5 GHz (Radio 0) and 60GHz (Radio 1)
- Supported frequency bands (country-specific restrictions apply):
  - 2.400 to 2.4835 GHz (BLE)
  - 5.150 to 5.250 GHz
  - 5.250 to 5.350 GHz
  - 5.470 to 5.725 GHz
  - 5.725 to 5.850 GHz
  - 5.825 to 5.875 GHz
  - 57 to 64 GHz
- Available channels: Dependent on configured regulatory domain.
- Dynamic frequency selection (DFS) maximizes the use of available 5GHz RF spectrum.
- Supported radio technologies:
  - 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM)
  - 802.11ad: Single carrier (SC)
- Supported modulation types:
  - 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
  - 802.11ad: BPSK, QPSK
- Transmit power: Configurable in increments of 0.5 dBm for 5 GHz
- Maximum EIRP (limited by local regulatory requirements):
  - 60GHz band:
    - 40 dBm EIRP max
  - 5GHz band:
    - 387: 34 dBm EIRP
- Maximum ratio combining (MRC) for improved receiver performance on 5 GHz.
- Cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance.
- Short guard interval for 20MHz, 40MHz, 80MHz on 5GHz.
- Low-density parity check (LDPC) for high-efficiency error correction and increased throughput.
- 802.11ac Transmit beam-forming (TxBF) for increased signal reliability and range
- 802.11ad Beam Steering
- Supported 11a/ac data rates (Mbps):
  - 802.11a 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n (5GHz): 6.5 to 600 (MCS0 to MCS15)
  - 802.11ac: 6.5 to 867 Mbps (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 20/40/80/160
- 802.11ad
- 802.11n/ac packet aggregation: A-MPDU, A-MSDU

Mechanical

- Dimensions/weight (excluding mount adapter):
  - -18 cm (W) x 18 cm (D) x 10.1 cm (H)
  - -1.198 kg

Technical Specifications

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

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

Environmental

- Operating:
  - Temperature: -40° C to +60° C (-40° F to +140° F)
  - Humidity: 5% to 95% non-condensing
- Storage and transportation:
  - Temperature: -40° C to +70° C (-40° F to +158° F)
- Operating Altitude: 3,000 m
- Water and Dust
  - IP66/67
- Salt Tolerance
  - Tested to ASTM B117-07A Salt Spray 200hrs
- Wind Survival: Up to 165 Mph
- Shock and Vibration ETSI 300-19-2-4

Mounting

- AP-270-MNT-V1
- AP-270-MNT-V2
- AP-270-MNT-H1 *
- AP-270-MNT-H2 *

Notes: *Recommended bracket solutions for most apps.

Other interfaces

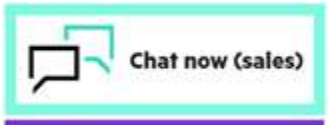
- One 10/100/1000BASE-T Ethernet network interfaces (RJ-45)
  - Auto-sensing link speed and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
- Bluetooth Low Energy (BLE) radio
  - Up to 4dBm transmit power (class 2) and -91 dBm receive sensitivity
- Visual indicator (multi-color LED): For system and radio status
- Reset button: Factory reset (during device power up)
- Micro USB console interface

Summary of Changes

Date	Version History	Action	Description of Change
16-Oct-2023	Version 10	Changed	Configuration Information section was updated.
07-Aug-2023	Version 9	Changed	Configuration Information section was updated.
06-Dec-2021	Version 8	Changed	SKUs were added in Configuration Information.
15-Mar-2021	Version 7	Changed	SKUs were added in Configuration Information.
02-Nov-2020	Version 6	Changed	Configuration Information section was updated. New SKUs were added.
08-Sep-2020	Version 5	Changed	Configuration Information section was updated. New SKUs were added.
04-May-2020	Version 4	Changed	Configuration Information section was updated.
16-Dec-2019	Version 3	Changed	Overview and Standard Features sections were updated.
04-Feb-2019	Version 2	Added	SKU added: R0K12A
03-Dec-2018	Version 1	New	New QuickSpecs

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