Overview

Aruba 550 Series Campus Access Points

Extreme Wi-Fi 6 (802.11ax) Performance With Tri-Radios And Green AP Energy Efficiency

Aruba Wi-Fi 6 access points provide high-performance connectivity for any organization experiencing growing numbers of IoT and mobility requirements. With a maximum aggregate data rate of 6 Gbps (5.95 Gbps; HE80/HE40), the 550 Series deliver the speed and reliability needed for any enterprise..

Aruba 550 Series - Front View

Key Features

- 6 Gbps of maximum throughput and up to 1024 clients per radio
- WPA3 and Enhanced Open security
- Built-in technology that resolves sticky client issues for Wi-Fi 6 and Wi-Fi 5 devices
- OFDMA and MU-MIMO for enhanced multi-user efficiency
- IoT-ready Bluetooth 5, NFC, and Zigbee support
- tri-radio mode with two 5GHz and one 2.4Ghz radio (4x4 MIMO)
- Unified wired and wireless policy enforcement with Dynamic Segmentation

Standard Features

IoT Platform Capabilities

Like all Aruba Wi-Fi 6 APs, the 550 Series includes 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 allows organizations to leverage the 550 Series as an IoT platform, which eliminates the need for an overlay infrastructure and additional IT resources.

Incredible Efficiency

The 550 Series APs are also designed to optimize user experience by maximizing Wi-Fi efficiency and dramatically reducing airtime contention between clients.
Features include Orthogonal frequency-division multiple access (OFDMA), bi-directional multi-user MIMO and cellular optimization. With optional tri-radios, up to 4 spatial streams (4SS) and 160MHz channel bandwidth (VHT160), the 550 Series provides groundbreaking wireless capabilities for any enterprise.
Read the **Multi-User 802.11ax white paper** for further information.

Advantages Of OFDMA

This capability allows Aruba's APs to handle multiple Wi-Fi 6 capable clients on each channel simultaneously, regardless of device or traffic type. Channel utilization is optimized by handling each transaction via smaller sub-carriers or resource units (RUs), which means that clients are sharing a channel and not competing for airtime and bandwidth.

Aruba Airslice For Extended Application Assurance

Initially, APs in controller-less mode (Instant) can provide SLA-grade performance by allocating radio resources (e.g. time, frequency, spatial streams) 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.
AirSlice for APs in controller mode will be supported in a future software release.

Bi-Directional Multi-User MIMO (MU-MIMO)

Similar to downlink MU-MIMO in Wi-Fi 5 (802.11ac Wave 2), the 550 Series can simultaneously connect clients use downlink - and now - uplink spatial streams. The added benefit is the ability to multiply the number of clients that can now send traffic, thus optimizing client-to-AP spatial stream diversity.

Wi-Fi 6 And MU-MIMO Aware Client Optimization

Aruba's patented AI-powered ClientMatch technology eliminates sticky client issues by placing Wi-Fi 6 capable devices on the best available AP. Session metrics are used to steer mobile devices to the best AP based on available bandwidth, types of applications being used and traffic type - even as users roam.

Aruba Advanced Cellular Coexistence (ACC)

This feature uses built-in filtering to automatically minimize the impact of interference from cellular networks, distributed antenna systems (DAS), and commercial small cell or femtocell equipment.

Intelligent Power Monitoring (IPM)

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

Green AP Energy Efficiency

Aruba Wi-Fi 6 APs utilize analytics from NetInsight to automatically transition in and out of a sleep mode based on client density. Learn more in the Green AP At-A-Glance.

Target Wake Time (TWT)

Ideal for IoTs that communicate infrequently, TWT establishes a schedule for when clients need to communicate with an AP. This helps improve client power savings and reduces airtime contention with other clients.

Standard Features

Aruba Secure Infrastructure

The Aruba 550 Series includes components of Aruba's 360 Secure Fabric to help protect user authentication and wireless traffic. Select capabilities include:

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 550 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.

Simple And Secure Access

To simplify policy enforcement, the Aruba 550 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.

High-Density Connectivity

Like the 530 Series AP, each 550 Series AP provides connectivity for a maximum of 1024 associated clients per radio (3072 in total). In real-world scenarios, the maximum recommended client density is dependent on environmental conditions.

Flexible Operation And Management

A unique feature of Aruba APs is the ability to operate in either controllerless (Instant) or controller-based mode.
In controllerless mode, one AP serves as a virtual controller for the entire network. Learn more about Instant mode in this technology brief.

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. Learn more in the ArubaOS datasheet.

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.

Mounting Details

A mounting bracket has been pre-installed on the back of the AP. This bracket is used to secure the AP to any of the Aruba mount kits (sold separately); see the ordering Information section below for details.

Standard Features

Specifications - Hardware Variants

AP-555: Internal antenna models

Warranty

Aruba Limited lifetime warranty

Configuration Information

Step 1: Select AP Model

Remarks	Description	SKU
Notes:	Add Mount Kit	
	555 Internal Antenna Access Points	
	Aruba AP-555 (EG) Dual Radio 8x8:8 / 4x4:4 802.11ax Internal Antennas Unified Campus AP	JZ353A
	Aruba AP-555 (IL) Dual Radio 8x8:8 / 4x4:4 802.11ax Internal Antennas Unified Campus AP	JZ354A
	Aruba AP-555 (JP) Dual Radio 8x8:8 / 4x4:4 802.11ax Internal Antennas Unified Campus AP	JZ355A
	Aruba AP-555 (RW) Dual Radio 8x8:8 / 4x4:4 802.11ax Internal Antennas Unified Campus AP	JZ356A
	Aruba AP-555 (US) Dual Radio 8x8:8 / 4x4:4 802.11ax Internal Antennas Unified Campus AP	JZ357A
	555 Central Managed Internal Antenna Access Points	
	Aruba CM AP-555 (RW) Dual Radio 8x8:8 / 4x4:4 802.11ax Internal Antennas Unified Campus AP Unified Campus AP	JZ356ACM
	Aruba CM AP-555 (US) Dual Radio 8x8:8 / 4x4:4 802.11ax Internal Antennas Unified Campus AP Unified Campus AP	JZ357ACM
	555 Internal Antenna Access Points - TAA Models	
	Aruba AP-555 (EG) TAA Dual-Radio 8x8:8 / 4x4:4 802.11ax Internal Antennas Unified Campus AP	JZ363A
	Aruba AP-555 (IL) TAA Dual-Radio 8x8:8 / 4x4:4 802.11ax Internal Antennas Unified Campus AP	JZ364A
	Aruba AP-555 (JP) TAA Dual-Radio 8x8:8 / 4x4:4 802.11ax Internal Antennas Unified Campus AP	JZ365A
	Aruba AP-555 (RW) TAA Dual-Radio 8x8:8 / 4x4:4 802.11ax Internal Antennas Unified Campus AP	JZ366A
	Aruba AP-555 (US) TAA Dual-Radio 8x8:8 / 4x4:4 802.11ax Internal Antennas Unified Campus AP	JZ367A

Step 2: Add Powering Accessories (Optional)

Remarks	Description	SKU
Notes:	Add AC power cord Most devices are PoE powered from switch so these are optional	
	Compatible with 555 AP models	
	AP-POE-BTSR 1-Port Smart Rate 802.3bt 60W midspan injector	R1C73A
	AP-AC2-48C 48V/50W AC/DC desktop style power adapter with type C connector	R3K01A
	Compatible with 555C AP models	
	Aruba CM AP-POE-BTSR 1-Port Smart Rate 802.3bt 60W midspan injector	R1C73ACM
	Aruba CM AP-AC2-48C 48V/50W AC/DC desktop style power adapter with type C connector C connector	R3K01ACM
	Select three-prong AC power cord for injector or AC adapter	
	PC-AC-ARG AC power cord 250V/10A 1.8m C13 to IRAM 2073	JW113A
	PC-AC-AUS AC power cord 250V/10A 1.8m C13 to AS3112	JW114A
	PC-AC-BR AC power cord 250V/10A 1.8m C13 to NBR 14136	JW115A
	PC-AC-CHN AC power cord 250V/10A 1.8m C13 to GB2099	JW116A
	PC-AC-DEN AC power cord 250V/10A 1.8m C13 to AFSNIT 107-2-D1	JW117A
	PC-AC-EC AC power cord 250V/10A 1.8m C13 to CEE7/7	JW118A
	PC-AC-IN AC power cord 250V/6A 1.8m C13 to IS1293	JW119A

Configuration Information

PC-AC-IL AC power cord 250V/10A 1.8m C13 to SI32	JW120A
PC-AC-IT AC power cord 250V/10A 1.8m C13 to CEI 23-50	JW121A
PC-AC-JPN AC power cord 125V/12A 1.8m C13 to JISC 8303	JW122A
PC-AC-KOR AC power cord 250V/7A 1.8m C13 to KSC 8305	JW123A
PC-AC-NA AC power cord 125V/10A 1.8m C13 to NEMA 5-15P	JW124A
PC-AC-SWI AC power cord 220V/10A 1.8m C13 to SEV 1011	JW125A
PC-AC-TW AC power cord 125V/7A 1.8m C13 to CNS 10917	JW126A
PC-AC-UK AC power cord 250V/10A 1.8m C13 to BS1363	JW127A
PC-AC-ZA AC power cord 250V/10A 1.8m C13 to SANS 164-1	JW128A

Step 3: Select Mountin Kits

For 555 Series Std (Min 0 // max 99) User Selection (min 0 // max 99)

Remarks	Description	SKU
	Compatible with 555 AP models	
	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
	Compatible with 555C AP models	
	Aruba CM AP-MNT-A Campus AP mount bracket kit (individual) type A: flat rail 9/16 rail 9/16	R3J15ACM
	Aruba CM AP-MNT-MP10-A Campus AP mount bracket kit (10-pack) type A: flat rail 9/16 flat rail 9/16	JZ370ACM
	Aruba CM AP-MNT-B Campus AP mount bracket kit (individual) type B: flat rail 15/16 rail 15/16	R3J16ACM
	Aruba CM AP-MNT-MP10-B Campus AP mount bracket kit (10-pack) type B: flat rail 15/16 flat rail 15/16	Q9G69ACM
	Aruba CM AP-MNT-C Campus AP mount bracket kit (individual) type C: profile rail 9/16 profile rail 9/16	R3J17ACM
	Aruba CM AP-MNT-MP10-C Campus AP mount bracket kit (10-pack) type C: profile rail 9/16 profile rail 9/16	Q9G70ACM
	Aruba CM AP-MNT-D Campus AP mount bracket kit (individual) type D: solid surface surface	R3J18ACM
	Aruba CM AP-MNT-MP10-D Campus AP mount bracket kit (10-pack) type D: solid surface solid surface	Q9G71ACM
	Aruba CM AP-MNT-E Campus AP mount bracket kit (individual) type E: wall-box wall-box	R3J19ACM
	Aruba CM AP-MNT-MP10-E Campus AP mount bracket kit (10-pack) type E: wall-box wall-box	R1C72ACM
	Aruba CM AP-MNT-MP10-X Campus AP mount adapter kit (10-pack)	R3T20ACM
Notes:	Qty 1 Mounting kits above should be selected for every 10 Access Points.	
	AP-MNT-A Campus AP mount bracket kit (individual) type A: suspended ceiling rail flat 9/16 flat 9/16	R3J15A
	AP-MNT-B Campus AP mount bracket kit (individual) type B: suspended ceiling rail flat 15/16 flat 15/16	R3J16A
	AP-MNT-C Campus AP mount bracket kit (individual) type C: suspended ceiling rail profile 9/16 profile 9/16	R3J17A
	AP-MNT-D Campus AP mount bracket kit (individual) type D: solid surface	R3J18A

Configuration Information

	AP-MNT-E Campus AP mount bracket kit (individual) type E: wall-box	R3J19A
	AP-MNT-MP10-X Campus AP mount adapter kit (10-pack)	R3T20A
Notes:	Access Points do not include a Mount. Qty 1 Mount kits should be selected	

Step 4: Add Cosmetic Snap-On Cover (Optional)

For 555 Series Std (Min 0 // max 99) User Selection (min 0 // max 99)

Remarks	Description	SKU
	Compatible with 555 AP models	
	AP-MNT-MP10-B1 Campus AP mount bracket kit (10-pack) type B1 - suspended ceiling rail thick 15/16	R6T34A
	AP-555-CVR-20 20-pack for AP-555 White Non-glossy Snap-on Covers	JZ369A
Notes:	Kit contains 20 optional snap-on covers	
	Compatible with 555C AP models	
	Aruba CM AP-555-CVR-20 20-pk White Non-glossy Snap-on Covers	JZ369ACM
Notes:	Kit contains 20 optional snap-on covers	

Step 5: Add Other Accessories (Optional)

For 555 Series Std (Min 0 // max 99) User Selection (min 0 // max 99)

Remarks	Description	SKU
	Compatible with 555 AP models	
	AP-MOD-SERU Micro-USB TTL3.3V to RJ45 RS232 AP Console Adapter Module	R6Q99A
	AP-CBL-SERU Micro-USB TTL3.3V to USB2.0 AP Console Adapter Cable	JY728A
	Compatible with 555 AP models	
	Aruba CM AP-CBL-SERU AP console adapter cable for custom micro-USB console port console port	JY728ACM

Technical Specifications

RF Performance Table		
Band, rate	**Maximum transmit power (dBm) per transmit chain[6]**	**Receiver sensitivity (dBm) per receive chain[6]**
2.4GHz, 802.11b		
1Mbps	18	-98
11Mbps	18	-89
2.4GHz, 802.11g		
6Mbps	18	-92
54Mbps	16	-75
2.4GHz, 802.11n HT20		
MCS0	18	-92
MCS7	14	-73
2.4GHz, 802.11ax HE20		
MCS0	18	-92
MCS11	10	-64
5GHz, 802.11a		
6Mbps	18	-91
54Mbps	16	-74
5GHz, 802.11n HT20		
MCS0	18	-91
MCS7	14	-72
5GHz, 802.11n HT40		
MCS0	18	-88
MCS7	14	-69
5GHz, 802.11ac VHT20		
MCS0	18	-91
MCS9	12	-68
5GHz, 802.11ac VHT40		
MCS0	18	-88
MCS9	12	-65
5GHz, 802.11ac VHT80		
MCS0	18	-85
MCS9	12	-62
5GHz, 802.11ac VHT160		
MCS0	18	-82
MCS9	12	-59
5GHz, 802.11ax HE20		
MCS0	18	-91
MCS11	10	-62
5GHz, 802.11ax HE40		
MCS0	18	-88
MCS11	10	-58
5GHz, 802.11ax HE80		
MCS0	18	-85
MCS11	10	-56
5GHz, 802.11ax HE160		
MCS0	18	-82
MCS11	10	-53

Wi-Fi Antennas

- Integrated downtilt omni-directional antennas for 4x4 MIMO in 2.4GHz with peak antenna gain of 4.3dBi, and 8x8 MIMO in 5GHz with peak antenna gain of 5.8dBi in 5GHz. In tri-radio mode, the peak gain of the antennas for each of the 4x4 5GHz radios is 5.5dBi (radio 0L, lower half of 5GHz) and 5.6dBi (radio 0U, upper half of 5GHz). Built-in antennas are optimized for horizontal ceiling mounted orientation of the AP. The downtilt angle for maximum gain is roughly 30 degrees.

Technical Specifications

A mix of horizontally and vertically polarized antenna elements is used

Combining the patterns of each of the antennas of the MIMO radios, the peak gain of the combined, average pattern is 2.4dBi in 2.4GHz and 0.7dBi in 5GHz (dual-radio mode).
In tri-radio mode, the peak gain of the combined, average pattern is 1.1dBi (radio 0L, lower half of 5GHz) and 3.6dBi (radio 0U, upper half of 5GHz)

Reliability

Mean Time Between Failure (MTBF): 962,134hrs (110yrs) at +25C operating temperature.

Wi-Fi Radio Specifications

- AP type: Indoor, dual/tri-radio, 5GHz and 2.4GHz 802.11ax 4x4 MIMO
- 5GHz radio (dual-radio operation): Eight spatial stream Single User (SU) MIMO for up to 4.8Gbps wireless data rate with individual 8SS HE80 (or 4SS HE160) 802.11ax client devices, or with eight 1SS or four 2SS HE80 802.11ax MU-MIMO capable client devices simultaneously
- 5GHz radio (tri-radio operation): Four spatial stream Single User (SU) MIMO for up to 2.4Gbps wireless data rate with individual 4SS HE80 (or 2SS HE160) 802.11ax client devices, or with four 1SS or two 2SS HE80 802.11ax MU-MIMO capable client devices simultaneously
- 2.4GHz radio: Four spatial stream Single User (SU) MIMO for up to 1,150Mbps wireless data rate with individual 4SS HE40 802.11ax client devices or with two 2SS HE40 802.11ax MU-MIMO capable client devices simultaneously
- Support for up to 1,024 *associated* client devices per radio (typical recommended limit for *active* clients is 200), and up to 16 BSSIDs per radio
- Supported frequency bands (country-specific restrictions apply):
  - 2.400 to 2.4835GHz (radio 1)
  - 5.150 to 5.250GHz (radio 0 and 0L)
  - 5.250 to 5.350GHz (radio 0 and 0L)
  - 5.470 to 5.725GHz (radio 0 and 0U)
  - 5.725 to 5.850GHz (radio 0 and 0U)
- 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 37 resource units (for an 80MHz channel)
- 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: HT20/40
- 802.11ac very high throughput (VHT) support: VHT20/40/80/160
- 802.11ax high efficiency (HE) support: HE20/40/80/160

Wi-Fi Radio Specifications

- Supported data rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n: 6.5 to 600 (MCS0 to MCS31, HT20 to HT40), 800 with 256-QAM
  - 802.11ac: 6.5 to 1,733 (MCS0 to MCS9, NSS = 1 to 4, VHT20 to VHT160), 2,166 with 1024-QAM
  - 802.11ax (2.4GHz): 3.6 to 1,147 (MCS0 to MCS11, NSS = 1 to 4, HE20 to HE40)
  - 802.11ax (5GHz): 3.6 to 4,804 (MCS0 to MCS11, NSS = 1 to 8, HE20 to HE160)

Technical Specifications

- 802.11n/ac packet aggregation: A-MPDU, A-MSDU
- Transmit power: Configurable in increments of 0.5dBm
- Maximum (aggregate, conducted total) transmit power (limited by local regulatory requirements):
  - 2.4GHz band: +24dBm (18dBm per chain)
  - 5GHz band: +27dBm in dual-radio mode, +24dBm in tri-radio mode (18dBm per chain)
  - **Notes:** Conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain.
- Advanced Cellular Coexistence (ACC) minimizes the impact of interference from cellular networks
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance
- Space-time block coding (STBC) for increased range and improved reception
- Low-density parity check (LDPC) for high-efficiency error correction and increased throughput
- Transmit beam-forming (TxBF) for increased signal reliability and range
- 802.11ax Target Wait Time (TWT) to support low-power client devices

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Additional Wi-Fi Features

Each AP also includes the following standards-based technologies:

- Transmit beamforming (TxBF) increases signal reliability and range
- Passpoint Wi-Fi (Release 2) (Hotspot 2.0) offers seamless cellular-to-Wi-Fi carryover for guests
- Dynamic Frequency Selection (DFS) optimizes use of available RF spectrum
- Maximum Ratio Combining (MRC) improves receiver performance
- Cyclic Delay/Shift Diversity (CDD/CSD) provides greater downlink RF performance
- Space-Time Block Coding increases range and improved reception
- Low-Density Parity Check (LDPC) provides a high-efficiency error correction for increased throughput

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Environmental Specifications

- Operating conditions
  - Temperature: 0C to +50C / +32F to +122F
  - Humidity: 5% to 93% non-condensing
  - AP is plenum rated for use in air-handling spaces
  - ETS 300 019 class 3.2 environments
- Storage and transportation conditions
  - Temperature: -40C to +70C / -40F to +158F
  - Humidity: 5% to 93% non-condensing
  - ETS 300 019 classes 1.2 and 2.3 environments

Regulatory Model Numbers

- AP-555: APIN0555

Minimum Operating System Software Versions

- ArubaOS
- Aruba InstantOS 8.5.0.0

Certifications

- UL2043 plenum rating
- Wi-Fi Alliance:
  - Wi-Fi CERTIFIED a, b, g, n, ac
  - Wi-Fi CERTIFIED ax[1]
  - WPA, WPA2 and WPA3 - Enterprise with CNSA option, Personal (SAE), Enhanced Open (OWE)

Technical Specifications

- WMM, WMM-PS, Wi-Fi Vantage, W-Fi Agile Multiband
- Wi-Fi Location[2]
- Passpoint (release 2)

- Bluetooth SIG
- Ethernet Alliance (POE, PD device, class 4)

Notes:

[1]Will require software update. Certification effort will be kicked off as soon as the Wi-Fi Alliance starts the program

[2]Not available initially; will require a software upgrade

Other Interfaces

- E0, E1: HPE SmartRate port (RJ-45, maximum negotiated speed 5Gbps)
  - Auto-sensing link speed (100/1000/2500/5000BASE-T) and MDI/MDX
  - 2.5Gbps and 5Gbps speeds comply with NBase-T and 802.3bz specifications
  - POE-PD: 48Vdc (nominal) 802.3af/at/bt POE (class 3 or higher)
  - 802.3az Energy Efficient Ethernet (EEE)

- Link aggregation (LACP) support between both network ports for redundancy and increased capacity
- POE power can be drawn from either port (single source, or set to prioritize) or both ports simultaneously (set to combine)
- DC power interface: 48Vdc (nominal, +/- 5%), accepts 1.35mm/3.5mm center-positive circular plug with 9.5mm length
- USB 2.0 host interface (Type A connector)
  - Capable of sourcing up to 1A / 5W to an attached device

- Bluetooth Low Energy (BLE5.0) and Zigbee (802.15.4) radio
  - BLE: up to 8dBm transmit power (class 1) and -99dBm receive sensitivity (125kbps)
  - Zigbee: up to 8dBm transmit power and -97dBm receive sensitivity
  - A pair of integrated omnidirectional antennas (polarization diversity) with roughly 30 degrees downtilt and peak gain of 4.5dBi

- Visual indictors (two multi-color LEDs): for System and Radio status
- Reset button: factory reset, LED mode control (normal/off)
- Serial console interface (proprietary, micro-B USB physical jack)
- Kensington security slot

Regulatory Compliance

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

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

Technical Specifications

Power Sources And Power Consumption

- The AP supports direct DC power and Power over Ethernet (POE; on port E0 and/or E1)
- When POE power is supplied to both Ethernet ports, the AP can be configured to combine or prioritize power sources
- When both DC and POE power sources are available, DC power takes priority over POE
- Power sources are sold separately; see the ordering Information section below for details
- When powered by DC, 802.3bt (class 5) POE or 2x 802.3at (class 4) POE, the AP will operate without restrictions.
- When powered by 1x 802.3at (class 4) POE and with the IPM feature disabled, the AP will disable the USB port, disable the other Ethernet port, operate the 5GHz radio in 4x4 mode, and disable tri-radio operation
- In the same configuration but with IPM enabled, the AP will start up in unrestricted mode, but may dynamically apply restrictions depending on the POE budget and actual power. The feature restrictions and order can be programmed.
- Operating the AP with an 802.3af (class 3 or lower) POE source is not supported.
- Maximum (worst-case) power consumption:
  DC powered: 38.5W
  POE powered (802.3bt or dual 802.3at): 38.2W
  POE powered (802.3at, IPM enabled): 25.1W
  All numbers above are without an external USB device connected. When sourcing the full 5W power budget to such a device, the incremental (worst-case) power consumption for the AP is up to 5.7W (POE powered) or 6W (DC powered).
- Maximum (worst-case) power consumption in idle mode (dual-radio operation): 18W (POE) or 18W (DC). In tri-radio mode, this increases to 18W (POE) or 18W (DC).
- Maximum (worst-case) power consumption in deep-sleep mode: 3W (POE) or 3W (DC)

Mechanical Specifications

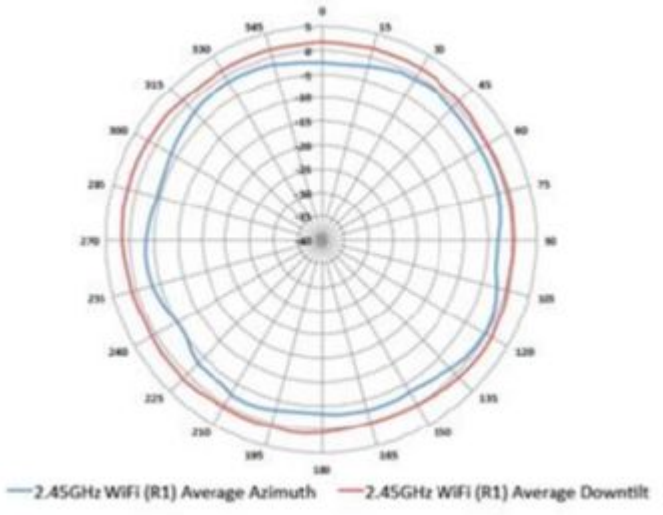
- Dimensions/weight (AP-555; unit, excluding mount bracket):
  260mm (W) x 260mm (D) x 58mm (H) / 10.2" (W) x 10.2" (D) x 2.3" (H)
  1,570g / 55.4oz
- Dimensions/weight (AP-555; shipping):
  320mm (W) x 303mm (D) x 108mm (H) / 12.6" (W) x 11.9" (D) x 4.3" (H)
  2,230g / 78.7oz

Technical Specifications

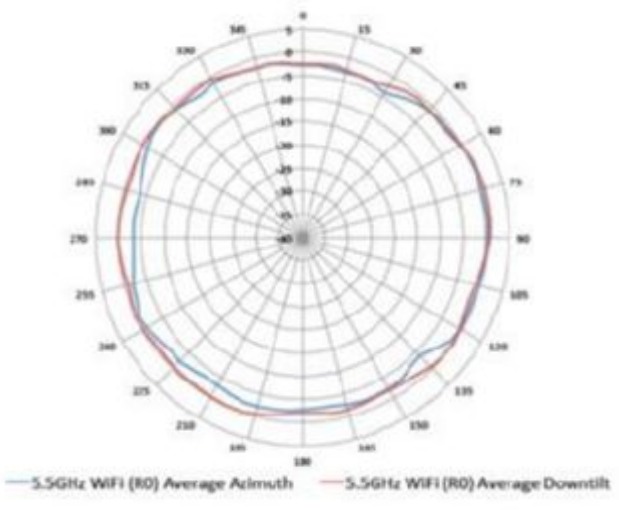
Antenna Patterns

Horizontal Planes (Top View)

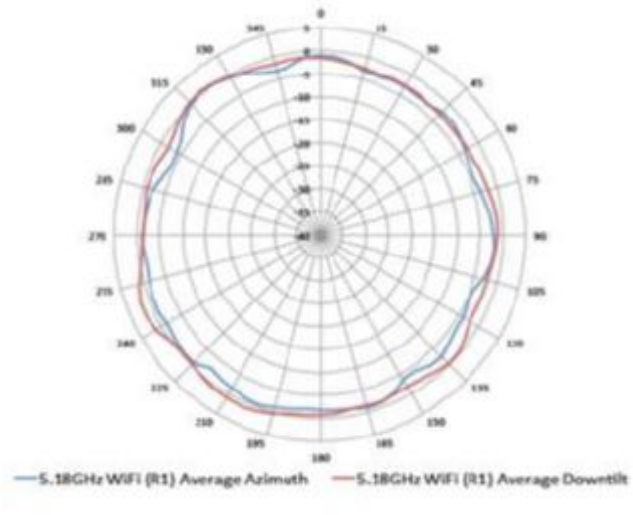
Showing azimuth (0 degrees) and 30 degrees downtilt patterns (averaged patterns for all applicable antennas)



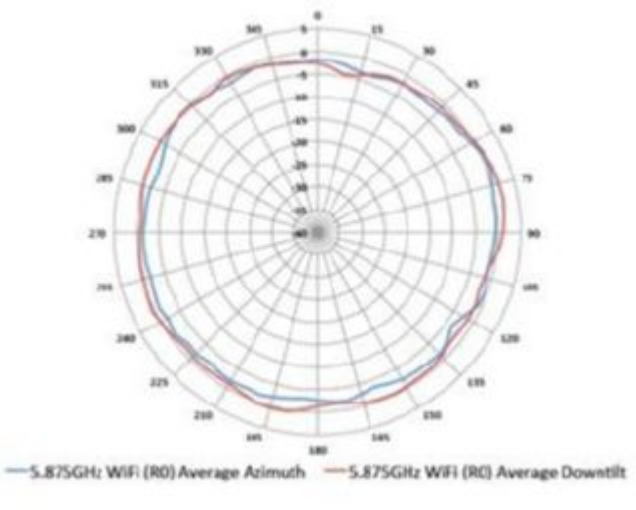
2.45GHz Wi-Fi (Radio 1)



5.5GHz Wi-Fi (Dual-Radio Mode, Radio 0)



5.18GHz Wi-Fi (Radio 0L, Tri-Radio Mode)

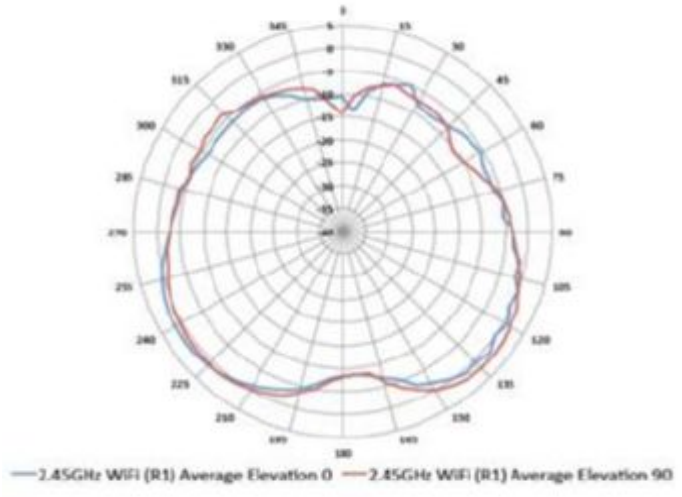


5.875GHz Wi-Fi (Radio 0U, Tri-Radio Mode)

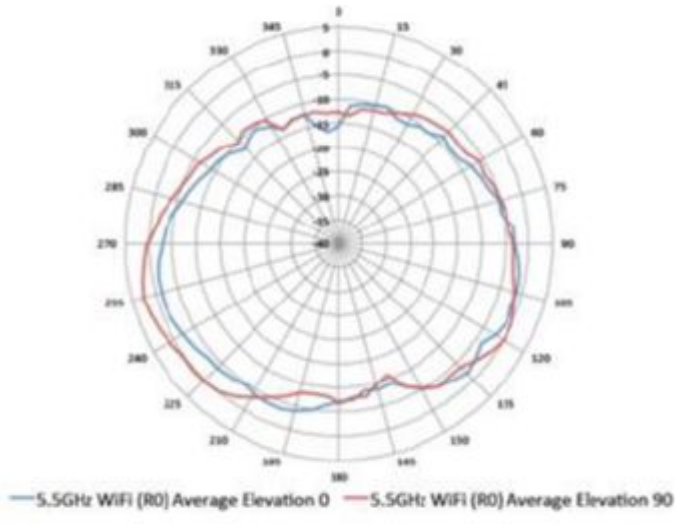
Technical Specifications

Vertical Elevation Planes (Side View, AP Facing Down)

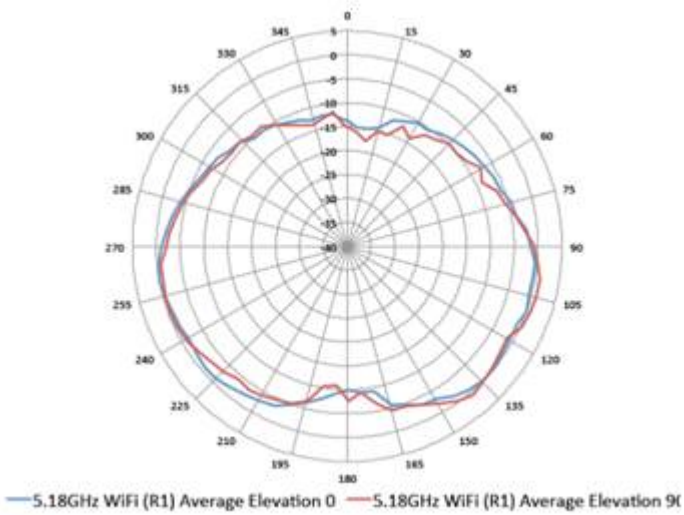
Showing side view with AP rotated 0 and 90 degrees (averaged patterns for all applicable antennas)



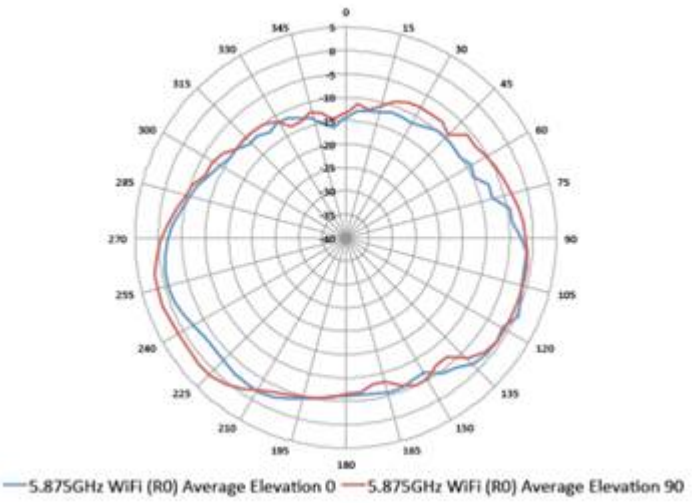
2.45GHz Wi-Fi (Radio 1)



5.5GHz Wi-Fi (Dual-Radio Mode, Radio 0)



5.18GHz Wi-Fi (Radio 0L, Tri-Radio Mode)



5.875GHz Wi-Fi (Radio 0U, Tri-Radio Mode)

Summary of Changes

Date	Version History	Action	Description of Change
08-Sep-2020	Version 6	Changed	Configuration Information section was updated New SKUS were added Obsolete SKUs were removed
09-Dec-2019	Version 5	Changed	Standard Features section was updated
04-Nov-2019	Version 4	Changed	Configuration Information section was updated New SKUS were added
07-Oct-2019	Version 3	Changed	Overview, Standard Features and Configuration Information sections were updated New SKUS were added
03-Jun-2019	Version 2	Changed	Configuration Information Section was updated. New SKUs were added.
02-Apr-2019	Version 1	New	New QuickSpecs

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