

# **Key Specifications**

- 2x2 MU-MIMO with two spatial streams per radio
- Third 2x2 MIMO radio for dedicated RF and WIPS scanning
- 802.11ac Wave 2 support
- Up to 300 Mbps for 2.4 GHz radio
- Up to 867 Mbps for 5 GHz radio
- · Integrated omnidirectional antennas
- 20/40/80 MHz channel width support
- Integrated BLE
- 2x Gigabit Ethernet port
- Full Operational Capacity with 802.3at PoE+

# **Key Features**

- 100% controller-free
- Zero-touch deployment through automatic cloud activation and configuration
- Cloud-defined operating modes for dedicated access, dedicated security or dual-mode
- Support for up to eight distinct SSIDs per radio
- Integrated layer 2 and application firewall, per-user bandwidth controls, and QoS per SSID
- Dynamic RF optimization through smart steering, band steering and optimal channel selection
- · Automated device access logging
- Non-WiFi VLAN monitoring for extended rogue access point detection
- Third party analytics integration for real-time data transfer
- Self-healing wireless mesh networking

#### **Top Performance at the Best Price**

Arista C-110 is an enterprise-grade 2x2 MU-MIMO tri-radio 802.11ac access point with dual concurrent 5 GHz and 2.4 GHz radios supporting 802.11a/n/ac Wave 2, 802.11b/g/n, two spatial streams, and data rates of up to 876 Mbps and 300 Mbps, respectively. It also contains a third 2x2 MIMO 802.11ac radio for dedicated multifunction scanning and a fourth 2.4 GHz Bluetooth Low Energy (BLE) radio.

#### Why Choose the C-110?

The C-110 provides best value among high-performing, modern access points designed for cost-conscious organizations. Built using the latest 802.11ac Wave 2 chipsets, the C-110 is perfect for medium density environments looking for the high performance and advanced features of current access points without the high cost. Common deployment scenarios include small and medium schools, distributed remote offices, small meeting rooms, and enterprise campuses. The C-110 provides access to advanced access point features like role-based firewalls and application visibility without the high cost typically associated with Wave 2 devices. The C-110 is also a perfect fit for organizations in need of future-ready dedicated security sensors.

## iBeacon Bluetooth Low Energy Support

The Arista C-110 supports the iBeacon Bluetooth Low Energy (BLE) standard. BLE is used for proximity based services on mobile devices via an application ecosystem. C-110 can be configured to advertise a unique identifier through iBeacon at a periodic interval.

#### **Arista Cloud Managed WiFi**

The Arista C-110 is an Arista Cloud managed platform and leverages a purpose built cloud architecture to produce enterprise-grade wireless networks for every application required, ensuring high reliability through an approach that is automated, scalable, secure and cost effective.

#### What Really Matters

The future of WiFi requires intelligent, self-reliant access points that support high-performing, highly reliable networks without the need for antiquated controllers. This approach removes the complexity, instability and high costs associated with enterprise WiFi today.



Arista C-110

#### Access

The C-110 creates WiFi networks that require less time and resources to deploy and maintain compared to traditional devices, resulting in significant cost savings.

- Plug and play provisioning using either Cloud or On-premise deployments Arista Access Points take less than two minutes to activate
  and configue after connecting to the cloud
- · Support for up to eight individual SSIDs per radio providing maximum fl xibility in network design
- Network controls like NAT, Firewall and QoS implemented at the Access Point, ensuring faster and more reliable networks
- Continuous scanning of all 2.4 GHz and 5 GHz channels by a dedicated 2x2 third radio provides a dynamic, 360 degree view of the RF
  environment to assist in RF optimization and client handling
- Network availability and performance assurance using the third radio as a client to conduct on-demand and scheduled connectivity and performance tests
- · Smart steering addresses sticky client issues by automatically pushing clients with low data rates to a better access point
- · Band steering manages channel occupancy, pushing clients to the 5 GHz channel for optimal throughput
- · Smart load balancing distributes load evenly across neighbouring APs to optimize the use of network resources
- Arista Wi-Fi's distributed data plane architecture continues to serve users and secure the network even if connection with the management plane is interrupted
- Interference avoidance from LTE/3G small/macro cells in commonly used TDD/FDD frequency bands

## Security

The C-110 offers complete visibility and control of the wireless airspace that keeps the integrity of the network in check and actively protects users without manual intervention.

- · Every Arista access point is equipped with the industry's only fully integrated wireless intrusion prevention capabilities
- · Runs complete spectrum scans while simultaneously serving wireless clients with dedicated third radio
- Arista's patented Marker Packets<sup>™</sup> are used to accurately detect access points on any network with the fewest false positives in the industry
- Third radio used as a dedicated security sensor for 24x7x365 scanning and automated over-the-air (OTA) prevention
- · VLAN monitoring enables a virtual connection to non-WiFi networks for complete network rogue detection and prevention
- Automatic prevention combines over-the-wire and over-the-air techniques to keep unauthorized clients off network and authorized clients on it
- · Access points continue to scan for wireless threats and enforce security policy even if their connection with the cloud is interrupted

#### Analytics

The C-110 collects massive amounts of data and supports immersive guest network experiences that develop and reinforce the relationship between them and the brand.

- Reports of customer footfall, demographic, loyalty and other analytics provide insightful and actionable information.
- Supports proximity marketing programs that trigger when certain devices are present, which includes automatic messaging vis MMS in-browser notific tions and real time notific tions sent to 3rd party systems that alert to the presence of enrolled devices.



## **Physical Specifications**



Property	Specification
Physical Dimensions	220mm x 220mm x 52mm/7.7" X 7.7" X 1.7"
Weight	0.9kg / 2lb
Operating Temperature	0°C − 45°C (32°F − 113°F)
Storage Temperature	-20°C – 65°C (-4°F – 149°F)
MTBF	535,205 hr @ 40°C 1,081,559 hr @ 25°C
Humidity	5%-95% non-condensing
Power consumption	16W (max) / 6.5W (min) / 13.8W (avg)
Chipset	Qualcomm IPQ4029 SOC
Processor and RAM	Qualcomm IPQ4029 717 MHz quad-core ARM processor with 256 MB RAM and 64 MB Flash

	Port	Description	Connector Type	Speed/Protocol
POWER (704) 1897 (704) 1897 (704)	Reset	Reset to factory default	Pin hole push	Hold down and power cycle the
	neset	settings	button	device to reset
LAN1 (PoE)			3.5mm overall diam-	
DAVE	Power	12V 1.5A	eter/1.35mm center	N/A
			pin/hole	
		Gigabit Ethernet port that can		10/100/1000 Mbps Gigabit
	LAN2	be used for wired extension	RJ-45	Ethernet
		for an SSID.		
				10/100/1000 Mbps Gigabit
				Ethernet
				802.3af/at Class 0 PoE/PoE+
		Gigabit Ethernet port used		PoE input voltage: 48V
		to connect to the wired LAN		If using PoE (802.3af):
		and communicate with the		USB port and LAN2 port
	LAN1/	Arista Cloud or Server. This	RJ-45	disabled
	PoE	port can also be used to		• 2.4 GHz radio - 1x1 mode with
		power the device using the		15 dBm transmit power
		802.3at (PoE+)/ 802.3af (PoE)		• 5 GHz radio - 2x2 mode with
		standard.		15 dBm transmitpower (12
				dBm per chain)
				Scanning radio - 1x1 mode
				with 12 dBm transmit power

# **Operational Specifications**

Operational Specific tions		
Input Power	12V DC/1.5A (3.5mm overall diameter/1.35mm center pin/hole)/802.3at (PoE+)/ 802.3af (PoE)	
Number of Radios	3 WiFi Radios: One 2.4 GHz and 5 GHz radio each for simultaneous dual band client access. A third dual-band radio dedicated to non-access smart scanning; WIPS, RF optimization, Remote Troubleshooting, and network assurance functions.  1 BLE Radio: A fourth Bluetooth Low Energy radio for proximity based services on mobile devices via an application ecosystem.	
Max Clients Supported	512 clients per radio (dependent upon use cases)	
MIMO	2x2 for 2.4/5GHz Radios	
Number of Spatial Streams	2 for 2.4/5GHz Radios	
RF Transmit Power	20 dBm per radio chain (max); Actual power for Tx will depend on Country Regulatory Domain	
Simultaneous MU-MIMO Clients	Two 1x1 MU-MIMO clients	
Users in a MU-MIMO group with a 2x2 client	1	
Bandwidth Agility	Yes	
Frequency Bands	2.4-2.4835 GHz, 4.9-5.0 GHz, 5.15-5.25 GHz (UNII-1), 5.25-5.35 GHz, 5.47-5.6 GHz, 5.650-5.725 GHz (UNII-2), 5.725-5.85 GHz (UNII-3)	
Dynamic Frequency Selection	Supported in compliance to all latest amendments from FCC, CE, IC, CB, TELEC, KCC regarding certific tions.	

# Frequency, Modulation, and Data Rates

IEEE 802.11b/g/n			
	Scanning	Scanning Transmission	
Frequency Band	All regions	USA & Canada (FCC/IC)	Europe (ETSI)
	2400 ~ 2483.5 MHz	2400 ~ 2473.5 MHz	2400 ~ 2483.5 MHz
Modulation Type	DSSS, OFDM	DSSS, OFDM	
Peak Data Rates	Up to 300 Mbps (MCS 0-15)		
Antenna	Integrated modular high efficie y	PIFA antenna x4 (peak gain: 6.0 dBi)	

IEEE 802.11a/n/ac			
Frequency Band	Scanning Transmission		nission
	All regions	USA & Canada (FCC/IC)	Europe (ETSI)
	4.92 ~ 5.08 GHz		
	5.15 ~ 5.25 GHz	5.15 ~ 5.25 GHz	5.15 ~ 5.25 GHz
	5.25 ~ 5.35 GHz	5.25 ~ 5.35 GHz	5.25 ~ 5.35 GHz
	5.47 ~ 5.725 GHz	5.725 ~ 5.825 GHz	5.47 ~ 5.725 GHz
	5.725 ~ 5.825 GHz		
Dynamic Frequency Selection	DFS and DFS2		
Modulation Type	OFDM		
Peak Data Rates	Up to 867 Mbps (MCS 0-15)		
Antenna	Integrated modular high efficie y PIFA antenna x4 (peak gain: 6.5 dBi)		



# Maximum Aggregate Transmit Power For 2.4 GHz

MCS Index	Transmit Power(dBm)		
802.11b			
1 Mbps -11 Mbps	21		
802.11g			
6 Mbps -48 Mbps	21		
54 Mbps	20		
802.11n HT20	802.11n HT20		
MCS 0,1,2,3,4,5	21		
MCS 6	20		
MCS 7	19		
802.11n HT40			
MCS 0,1,2,3,4,5	21		
MCS 6	20		
MCS 7	19		

## Country-Wise Max Transmit Powers (dBm)

Countries	2.4 GHz	5 GHz
Australia	20	23
Canada	30	23
India	20	20
Israel	20	20
Japan	20	20
UAE	20	17
USA	20	23

## For 5 GHz

MCS Index	Transmit Power(dBm)	
802.11a		
6 Mbps - 48 Mbps	21	
54 Mbps	20	
802.1	1n HT20	
MCS 0,1,2,3,4,5	21	
MCS 6, 7	20	
802.11	In HT40	
MCS 0,1,2,3,4,5	21	
MCS 6	20	
MCS 7	19	
802.11	n VHT20	
MCS 0,1,2,3,4,5	21	
MCS 6, 7	20	
MCS 8	19	
802.11	n VHT40	
MCS 0,1,2,3,4,5	21	
MCS 6, 7	20	
MCS 8	18	
MCS 9	17	
802.11ac VHT80		
MCS 0,1,2,3,4,5,6,7	19	
MCS 8	18	
MCS 9	17	

## Note:

The actual transmit power will be the lowest of:

- Value specified in the evice Template
- Maximum value allowed in the regulatory domain
- Maximum power supported by the radio



# Receive Sensitivity For 5GHz

MCS Index	Receive Sensitivity	
802.11a (legacy)		
6Mbps	-91	
36Mbps	-78	
48Mbps	-75	
54Mbps	-73	
802.11n HT20	(legacy)	
MCS 0,8	-91	
MCS 1,9	-88	
MCS 2,10	-85	
MCS 3,11	-81	
MCS 4,12	-77	
MCS 5,13	-74	
MCS 6,14	-72	
MCS 7,15	-71	
802.11n H	T40	
MCS 0,8	-87	
MCS 1,9	-85	
MCS 2 ,10	-82	
MCS 3,11	-78	
MCS 4,12	-74	
MCS 5,13	-70	
MCS 6,14	-69	
MCS 7,15	-68	
802.11ac 256QA	AM VHT80	
MCS 0	-84	
MCS 1	-82	
MCS 2	-79	
MCS 3	-75	
MCS 4	-71	
MCS 5	-67	
MCS 6	-66	
MCS 7	-65	
MCS 8	-60	
MCS 9	-58	

## For 2.4GHz

MCS Index	Receive Sensitivity	
802.11b		
Mbps	-94	
11Mbps	-86	
802.11g		
6Mbps	-90	
24Mbps	-81	
36Mbps	-78	
48Mbps	-74	
54Mbps	-73	
802.11n HT20		
MCS 0,8	-90	
MCS 1,9	-87	
MCS 2,10	-84	
MCS 3,11	-80	
MCS 4,12	-77	
MCS 5,13	-73	
MCS 6,14	-71	
MCS 7,15	-69	
802.11n HT40		
MCS 0,8	-86	
MCS 1,9	-84	
MCS 2,10	-81	
MCS 3,11	-77	
MCS 4,12	-74	
MCS 5,13	-70	
MCS 6,14	-68	
MCS 7,15	-66	



# Receive Sensitivity

## For 2.4 GHz

#### MCS Index Receive Sensitivity (dBm) 802.11g 6 Mbps -94 24 Mbps -86 36 Mbps -83 48 Mbps -78 -77 54 Mbps 802.11n HT20 MCS 0, 8 -93 MCS 1,9 -90 MCS 2,10 -88 MCS 3,11 -84 MCS 4.12 -81 MCS 5,13 -77 MCS 6,14 -74 MCS 7, 15 -73 802.11n HT40 MCS 0, 8 -90 MCS 1,9 -87 MCS 2,10 -85 MCS 3,11 -81 MCS 4,12 -78 MCS 5,13 -74 MCS 6,14 -73 MCS 7, 15 -71

#### For 5 GHz

MCS Index	Receive Sensitivity (dBm)	
802.11a		
6 Mbps	-93	
24 Mbps	-85	
36 Mbps	-82	
48 Mbps	-77	
54 Mbps	-76	
	802.11n HT20	
MCS 0, 8	-92	
MCS 1,9	-89	
MCS 2,10	-86	
MCS 3,11	-83	
MCS 4,12	-80	
MCS 5,13	-76	
MCS 6,14	-74	
MCS 7	-72	
	802.11n HT40	
MCS 0, 8	-89	
MCS 1,9	-86	
MCS 2,10	-83	
MCS 3,11	-80	
MCS 4,12	-77	
MCS 5,13	-73	
MCS 6,14	-72	
MCS 7, 15	-70	

#### For 5 GHz

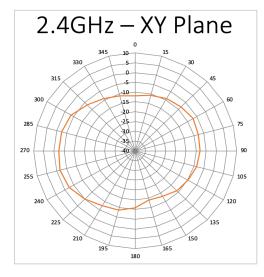
MCS Index	Receive Sensitivity (dBm)
802.11n VHT20	
MCS 0	-91
MCS 1	-88
MCS 2	-86
MCS 3	-83
MCS 4	-80
MCS 5	-75
MCS 6	-74
MCS 7	-72
MCS 8	-68
	802.11n VHT40
MCS 9	-64
	802.11n VHT80
MCS 0	-86
MCS 1	-83
MCS 2	-81
MCS 3	-78
MCS 4	-74
MCS 5	-70
MCS 6	-69
MCS 7	-67
MCS 8	-63
MCS 9	-61

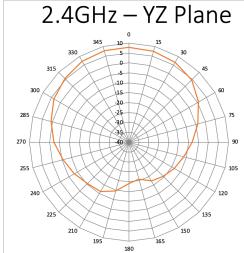


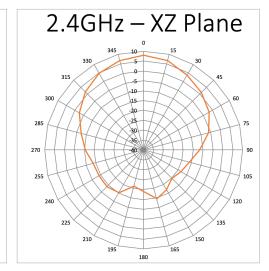
#### **Internal Antenna Radiation Patterns**

2.4 GHz



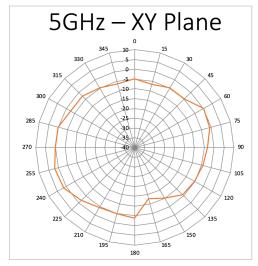


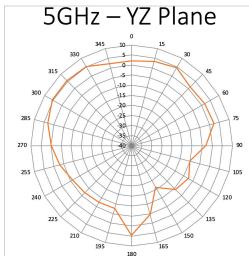


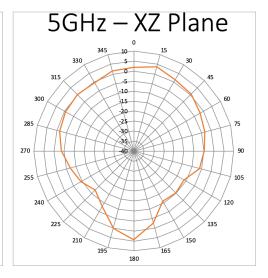


5 GHz









## **Regulatory Specifications**

# **RF and Electromagnetic**

Country	Certification
USA	FCC Part 15.247, 15.407
Canada	IC
Europe	CE EN300.328, EN301.893 Countries covered under Europe certific tion: Austria, Belgium, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Iceland, Luxembourg, Latvia, Lithuania, Malta, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Slovakia, Slovenia, Switzerland, The Czech Republic, UK.

 $<sup>*</sup>For complete country certification {\it records, please visit the site: https://www.arista.com/en/support/product-certificate}$ 

## Safety

Country	Certification
USA	UL 60950
Canada	cUL 60950
European Union (EU)	EN 60950, RoHS

## **Ordering Information**

#### **Access Point**

Part Number	Description
AP-C110-SS-5Y	C-110 2x2:2 tri radio 802.11ac Wave-2 access point with internal antennas and 5 year Cog-
	nitive Cloud SW Subscription
AP-C110-SS-3Y	C-110 2x2:2 tri radio 802.11ac Wave-2 access point with internal antennas and 3 year Cog-
	nitive Cloud SW Subscription
AP-C110	C-110 2x2:2 tri radio 802.11ac Wave-2 access point with internal antennas

## **Mounting Options**

For details of mounting options, see the Access Points Mounting Brackets Guide.

#### **Power**

Part Number	Description
PWR-AP-C110-UN	Universal AC power supply for C-110
PWR-AP-PLUS-NA	One port 802.3at PoE+ injector for use with all Access Point models. Includes USA power cord. Not for outdoor use.

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