ARISTA O-235

Tri radio, 4X4 5GHz - 2X2 2.4GHz - 2x2 Dual-band scan radio Wi-Fi 6 access point

Key Specifications

- Full featured Wi-Fi 6, 6 Stream AP
- 4x4:4 5GHz Radio + 2x2:2 2.4 GHz Radio
- Up to 0.6 Gbps throughput for 2.4 GHz radio
- Up to 2.4 Gbps throughput for 5 GHz radio
- Additional 2x2 dual band radio for dedicated RF and WIPS scanning
- Industrial grade, IP67 compliant exterior to withstand outdoor weather conditions
- Integrated omnidirectional antennas
- 20/40/80/160 MHz channel width support
- 5 Gigabit + 1 Gigabit Ethernet ports
- Support for UL/DL MU-MIMO
- Support for UL/DL OFDMA
- 802.3at PoE support
- Integrated BLE

Key Features

- Distributed Data Plane architecture
- Zero-touch deployment through automatic cloud activation and configuration
- Cloud or on premises management plane options
- Operating modes for dedicated access, dedicated security or dual mode
- Support for up to 8 distinct SSIDs per radio
- Integrated firewall, traffic shaping, QoS and BYOD controls per SSID
- Dynamic RF optimization through smart steering, band steering and optimal channel selection
- Application visibility through layer 7 deep packet inspection
- Automated device access logging
- Patented Marker Packets™ technology for rogue AP detection and classification
- Wired VLAN monitoring for "No-WiFi" zone enforcement
- Third party analytics integration with real-time data transfer
- Versatile 3rd radio for WIPS, Scanning and Client Connectivity Tests

Aesthetic Design and High Performance

Arista O-235 is a ruggedized enterprise-grade, outdoor 6 stream Wi-Fi 6 AP with dual concurrent 5 GHz and 2.4 GHz band radios supporting 4 stream 802.11 a/n/ac/ax, 2 stream 802.11 b/g/n/ax and data rates of up to 2.4 Gbps and 0.6 Gbps, respectively. It also has a 2.4GHz Bluetooth Low Energy (BLE) radio.

O-235 Capabilities

O-235 provides Gen 2 Wi-Fi 6 performance improvements to deliver higher capacity and more efficient use of the available spectrum. It provides industry leading user experience and throughput in high density environments. Uplink/Downlink OFDMA channelization allocates bandwidth more efficiently across client devices to provide a better user experience. The ability to serve multiple clients simultaneously through UL/DL MU-MIMO further improves system capacity and user experience.

The O-235 is ideal for delivering high-performance in harsh or outdoor environments such as schools and universities, outdoor sections of hotel and enterprise campuses, warehouses, manufacturing yards, stadiums and sports arenas, malls, public hotspots and other municipal WiFi deployments. It can also be used to cost-effectively extend the range of WiFi access in areas where it is not practical to rollout Ethernet cables, and to implement point-to-point or backhaul mesh WiFi links to interconnect buildings or campuses, while simultaneously providing WiFi access to users.

Arista CloudVision® Managed Wi-Fi

The O-235 is an Arista CloudVision Wi-Fi managed platform. Available as a cloud service or on prem management platform, CloudVision Wi-Fi leverages a purpose-built cloud architecture delivering cloud grade analytics and automation to enterprise Wi-Fi networks. CloudVision ensures high reliability, scalability, security and cost effectiveness.

Versatile, multipurpose 3rd Radio

O-235 comes with a versatile multipurpose 2x2:2 dual band 802.11ac third radio that provides:

- Industry leading, continuous WIPS
- Better RRM decisions from continuous spectral visibility
- Network availability and performance assurance by On-demand and scheduled client connectivity test

Arista O-235

Access

O-235 provides Wi-Fi 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 configure after connecting to the cloud

- Support for up to eight individual SSIDs per radio providing maximum flexibility 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 neighboring 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

O-235 offers complete visibility and control of the wireless airspace ensuring network integrity while actively protecting users without manual intervention.

- O-235 is equipped with industry leading fully integrated wireless intrusion prevention capabilities

- Multifunction third radio provides uninterrupted spectrum scanning or client emulation for always on security coverage alongside dedicated 2.4G/5G client radios.

- Arista's patented Marker Packets™ help accurately detect rogue access points on any network while minimizing false positives

- Third radio used as a dedicated security sensor for 24x7x365 scanning and automated over-the-air (OTA) prevention

- Deterministic rogue AP detection and prevention by monitoring all WiFi and non-WiFi VLANs.

- Over-the-air and on-the-wire prevention techniques assure automatic and reliable threat prevention to keep unauthorized clients and rogue APs off the network without impacting authorized connections.

- Access Points autonomously scan for wireless threats and enforce security policy even if disconnected from the cloud management plane

- VLAN monitoring enables a virtual connection to non-WiFi networks for complete network rogue detection and prevention

Analytics

The O-235 collects telemetry on connected and unconnected WiFi clients and supports immersive guest network experiences that help Arista's customers develop and reinforce the relationship with their end customers.

- 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 notifications and real time notifications sent to 3rd party systems that alert to the presence of enrolled devices.

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Physical Specifications

Property	Specification
Physical Dimensions	211.1mm X 209.4mm X 52.2mm/8.3" X 8.2" X 2.1"
Weight	1.2kg / 2.6 lb
Operating Temperature	-20°C ~ +65°C (-4°F ~ +104°F)
Storage Temperature	-25°C ~ +70°C (-40°F ~ +158°F)
MTBF	82,687 @ 65°C 290,461 @ 25°C
Humidity	0-95% non-condensing
Power consumption	27 W (max) / 12 W (min) / 23.4 W (avg)
Chipset	Qualcomm IPQ8071A 1GHz quad core ARM processor with QCN5154 x2 and QCN5124 QCA9882 (multipurpose third radio)
Processor and RAM	1 GB RAM and 512 MB Flash

Port	Description	Connector Type	Speed/Protocol
LAN1	5 GbE, 802.3at compliant PoE, MACsec capable*	IP67 rated weatherproof RJ-45	100M/1G/2.5G/5G Ethernet
LAN2	1 GbE	IP67 rated weatherproof RJ-45	100M/1G Ethernet
Reset	Reset to factory default settings	Pin hole push button	Hold down and power cycle the device to reset

MACsec capabilities will be activated via a future software update.

Operational Specifications

Input Power	802.3at PoE - Full function 802.3af power – Reduced Function (No USB; Both 5Ghz & 2.4GHz limited to 2x2 operation; Tx power reduced by 6dB for both radios)
Number of Radios	2 access radios; one 2x2:2 2.4GHz and one 4x4:4 5GHz radio for simultaneous dual band access. 1 multi-function 2x2 radio for continuous WIPS and client connectivity tests
Max Clients Supported	1024 (512 clients per radio) (dependent upon use cases)
MU-MIMO	4X4 on 5GHz radio and 2X2 on 2.4GHz radio
Number of Spatial Streams	4 for 5GHz radios, 2 for 2.4GHz radio, 2 for multipurpose radio
RF Transmit Power	29dBm on 5GHz radio (max) and 26dBm on 2.4GHz radio (max); Actual power for Tx will depend on Country Regulatory Domain
80+80MHz Non-Contiguous Channel Bonding	Yes
Bandwidth Agility	Yes
3G/4G Macro and Small Cells Interference Mitigation	Yes
Frequency Bands	2.4-2.4835 GHz, 4.9-5.0GHz, 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, TELEC, KCC, NCC and ANZ regarding certifications.

WiFi Specifications

IEEE 802.11a/n/ac/ax			
Frequency Band	Scanning	Transmission	
	All regions	USA & Canada (FCC/IC)	Europe (ETSI)
5GHz Band	4.92 ~ 5.08 GHz 5.15 ~ 5.25 GHz 5.25 ~ 5.35 GHz 5.47~ 5.725 GHz 5.725~ 5.825 GHz	5.15 ~ 5.25 GHz 5.25 ~ 5.35 GHz 5.725~ 5.825 GHz	5.15 ~ 5.25 GHz 5.25 ~ 5.35 GHz 5.47~ 5.725 GHz
Dynamic Frequency Selection	DFS and DFS2		
Modulation Type	OFDM / OFDMA		
Peak Data Rates	Up to 2.4 Gbps		
Antenna	Integrated modular high efficiency PIFA antenna x4 (peak gain: 3.9 dBi)		

IEEE 802.11b/g/n/ax			
Frequency Band	Scanning	Transmission	
	All regions	USA & Canada (FCC/IC)	Europe (ETSI)
2.4GHz Band	2400 ~ 2483.5 MHz	2400 ~ 2473.5 MHz	2400 ~ 2483.5 MHz
Modulation Type	DSSS / OFDM / OFDMA		
Peak Data Rates	Up to 0.6 Gbps		
Antenna	Integrated modular high efficiency PIFA antenna x2 (peak gain: 3 dBi)		

Receive Sensitivity

5GHz

Mode	Rate	Sensitivity (dBm)
802.11a	6 Mbps	-93
	54 Mbps	-76
11n_HT20	MCS 0	-94
	MCS 7	-76
11n_HT40	MCS 0	-91
	MCS 7	-73
11ac_VHT20	MCS 0	-94
	MCS 8	-72
11ac_VHT40	MCS 0	-91
	MCS 9	-68
11ac_VHT80	MCS 0	-88
	MCS 9	-65
11ax_HE20	MCS 0	-94
	MCS 11	-65
11ax_HE40	MCS 0	-91
	MCS 11	-62
11ax_HE80	MCS 0	-88
	MCS 11	-59

2.4GHz

Mode	Rate	Sensitivity (dBm)
802.11b	1 Mbps	-98
	11 Mbps	-89
802.11g	6 Mbps	-92
	54 Mbps	-76
11n_HT20	MCS 0	-94
	MCS 7	-76
11n_HT40	MCS 0	-91
	MCS 7	-73
11ax_HE20	MCS 0	-94
	MCS 11	-64
11ax_HE40	MCS 0	-91
	MCS 11	-62

Aggregate Transmit Power

5GHz

Mode	Rate	Power (dBm)
802.11a	6 ~ 18 Mbps	29
	24 ~ 54 Mbps	29
802.11n_HT20	MCS 0 ~ 4	29
	MCS 5 ~ 7	29
802.11n_HT40	MCS 0 ~ 4	29
	MCS 5 ~ 7	29
802.11ac_VHT20	MCS 0 ~ 4	29
	MCS 5 ~ 7	29
	MCS 8 ~ 9	29
802.11ac_VHT40	MCS 0 ~ 4	29
	MCS 5 ~ 7	29
	MCS 8 ~ 9	28
802.11ac_VHT80	MCS 0 ~ 4	29
	MCS 5 ~ 7	29
	MCS 8 ~ 9	28
802.11ax_HE20	MCS 0 ~ 4	29
	MCS 5 ~ 7	29
	MCS 8 ~ 9	29
	MCS 10- 11	28
802.11ax_HE40	MCS 0 ~ 4	29
	MCS 5 ~ 7	29
	MCS 8 ~ 9	28
	MCS 10- 11	28
802.11ax_HE80	MCS 0 ~ 4	29
	MCS 5 ~ 7	28
	MCS 8 ~ 9	28
	MCS 10 ~ 11	28

2.4GHz

Protocol	Rate	Power (dBm)
802.11b	1 ~ 11 Mbps	26
802.11g	6 ~ 18 Mbps	26
	24 ~ 54 Mbps	26
802.11n_HT20	MCS 0 ~ 4	26
	MCS 5 ~ 7	26
802.11n_HT40	MCS 0 ~ 4	26
	MCS 5 ~ 7	26
802.11ax_HE20	MCS 0 ~ 4	26
	MCS 5 ~ 7	24
	MCS 8 ~ 9	24
	MCS 10 ~ 11	24
802.11ax_HE40	MCS 0 ~ 4	26
	MCS 5 ~ 7	24
	MCS 8 ~ 9	23
	MCS 10 ~ 11	23

Radiation Patterns
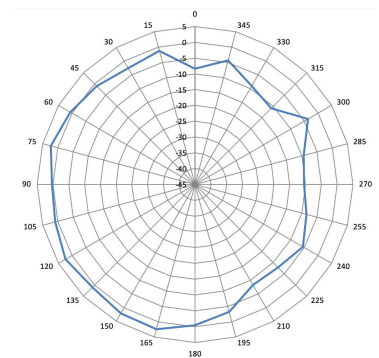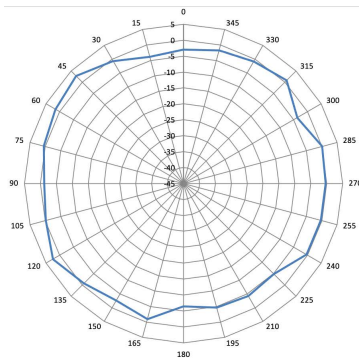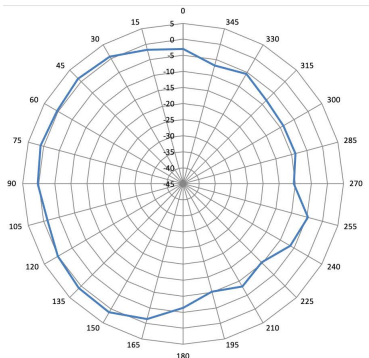
2.4GHz - Peak Gain: 3dBi
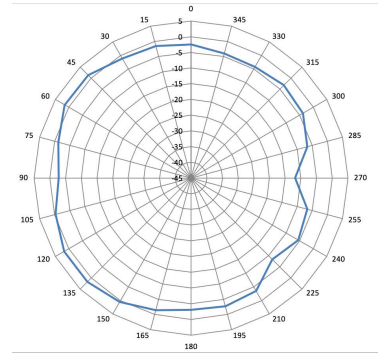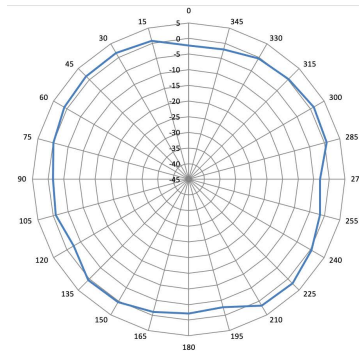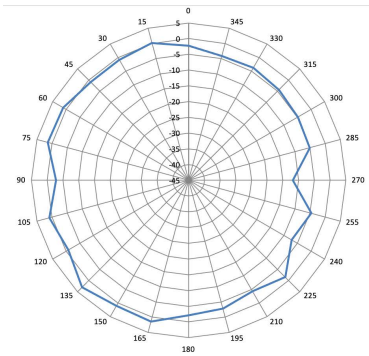
YZ-CUT XZ-CUT XY-CUT
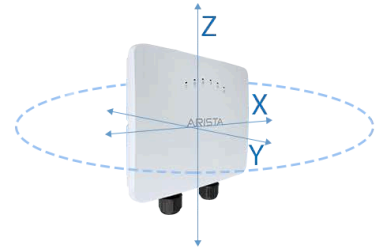
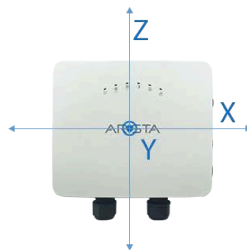### 5GHz - Peak Gain: 3.9dBi

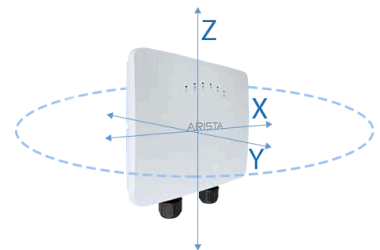

YZ-CUT XZ-CUT XY-CUT

Regulatory Specifications

RF and Electromagnetic

Country	Certification
USA	FCC Part 15.247, 15.407
Canada	IC
Europe	CE EN300.328, EN301.893, EN301 489-1, EN55032, EN62311 Countries covered under Europe certification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom.

*For complete country certification records, please visit the site: https://www.arista.com/en/support/product-certificate

Safety

Country	Certification
USA	UL 60950 UL 2043
Canada	cUL 60950
European Union (EU)	EN 60950, EN 62368-1
Taiwan	CNS14336-1

Ordering Information
Access Point

Part Number	Description
AP-O235	O-235 4x4 tri radio 802.11ax (WiFi 6) access point with internal antennas
AP-O235-SS-5Y	O-235 AP with 5 years bundled Cognitive Cloud SW subscription
AP-O235-SS-3Y	O-235 AP with 3 years bundled Cognitive Cloud SW subscription

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