ARISTA O-435E Tri radio, 2X2 2.4GHz, 5GHz, 6GHz - 2X2 Tri-band Multi-function Radio Wi-Fi 7 access point

Data Sheet

Key Specifications

- Full featured Wi-Fi 7, 6 Stream AP
- Three 2x2:2 access radios (6 GHz, 5 GHz & 2.4 GHz)
- Full support for Wi-Fi 7 on all three access radios
- Up to 160 MHz channel width support for 5 GHz and 320 MHz for 6 GHz operation
- Up to 0.7 Gbps data rate for 2.4 GHz, up to 2.88 Gbps for 5 GHz, and up to 5.75 Gbps for 6 GHz radios. Aggregate data rate 9.3 Gbps
- 2x2 tri-band multi-function radio for security, network assurance, spectrum analysis, packet capture, locationing and troubleshooting
- 1x5 Gigabit 802.3bt PoE ++ port
- 1x5 Gigabit 802.3af PoE PSE port
- PoE++ for full functionality and PoE+ with reduced functionality
- Industrial grade, IP67 compliant exterior to withstand outdoor weather conditions
- 6 N-Type external connectors to support a variety of external antenna choices
- HADM, BLE 5.3, OpenThread*, Matter*, ZigBee* capable IoT radio
- WPA3/OWE capable
- In-built L1+L5 GNSS module
- Support for 802.11az Fine Time Measurement
- TPM for secure storage

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 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 realtime data transfer
- Versatile 3rd radio for WIPS, Scanning and Client Connectivity Tests
- Self-healing wireless mesh networking

Aesthetic Design and High Performance

Arista O-435E is a ruggedized enterprise-grade, outdoor 6 stream Wi-Fi 7 AP with concurrent 6 GHz, 5 GHz and 2.4 GHz band radios supporting 2 stream 802.11be operation. The O-435E has integrated IoT support, integrated GNSS and an additional multi-function, tri-band radio to provide security, network assurance and AI/ML driven troubleshooting.

O-435E Capabilities

O-435E provides Wi-Fi 7 performance improvements to deliver higher capacity and more efficient use of the available spectrum. Utilizing the latest W-Fi 7 technologies, Multi-link operation, Preamble Puncturing, Uplink/ Downlink OFDMA, Uplink/Downlink MU-MIMO coupled with 2 spatial streams in all operating bands, the O-435E delivers high performance even in challenging environments.

The O-435E is a Standard Power access point which supports Automated Frequency Co-ordination (AFC) for operating in the 6 GHz band. The O-435E 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 Wi-Fi deployments. It can also be used to cost-effectively extend the range of Wi-Fi access in areas where it is not practical to rollout Ethernet cables, and to implement point-to-point or backhaul mesh Wi-Fi links to interconnect buildings or campuses, while simultaneously providing Wi-Fi access to users.

Arista CloudVision® Managed Wi-Fi

The O-435E is an Arista CloudVision Cognitive Unified Edge (CV-CUE) managed platform. Available as a cloud service or on-premises management platform, CV-CUE 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, multifunction Radio*

O-435E includes a multi-function, 2x2:2 tri-band 802.11ax 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-435E

**** Hardware is capable of technology. Software support will be provided in future upgrades.***

Access

O-435E is a building block of a self-driving Wi-Fi network , powering AI/ML based continued adaptations, saving time and resources resulting in significant cost savings and increased satisfaction.

- Plug and play provisioning using either Cloud or On-premises deployments - Arista Access Points take less than two minutes to activate and configure after connecting to the cloud
- Network controls like NAT, Firewall and QoS implemented at the Access Point, ensuring faster and more reliable networks
- Continuous scanning of all 2.4GHz, 5GHz and 6GHz channels by a dedicated 2x2 multi-function 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 multi-function 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 5GHz and 6GHz channels 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/CBRS in commonly used TDD/FDD frequency bands

Security

O-435E offers complete visibility and control of the wireless airspace ensuring network integrity while actively protecting users without manual intervention.

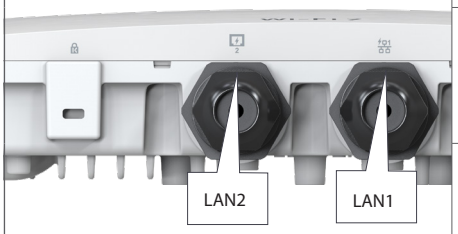
- O-435E is equipped with industry leading fully integrated wireless intrusion prevention capabilities
- Multi-function radio provides uninterrupted spectrum scanning or client emulation for always on security coverage alongside dedicated 2.4GHz, 5GHz and 6GHz access radios
- Arista's patented Marker Packets™ help accurately detect rogue access points on any network while minimizing false positives
- Multifunction 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 Wi-Fi and non-Wi-Fi VLANs
- OTA 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-Wi-Fi networks for complete network rogue detection and prevention

Analytics

O-435E provides real-time telemetry by granular state steaming and Cognitive Analytics provides correlation analysis and trend analysis using predictive algorithms across wireless and wired networks. Compliance and Risk analysis is supported by continuous assessment and report of deviations.

Physical Specifications

Property	Specification
Physical Dimensions	262mm X 256mm X 59mm/10.3" X 10.1" X 2.3"
Weight	2 Kg / 4.4 lbs
Operating Temperature	-40°C ~ +65°C (-40°F ~ +149°F)
Storage Temperature	-40°C ~ +70°C (-40°F ~ +158°F)
MTBF	263780 hours @ 65 °C 1077089 hours @ 25 °C
Humidity	5-95% non-condensing
Power consumption	33 W (max)
RAM and Flash	3 GB RAM and 512 MB Flash
Chipset	Qualcomm IPQ8071A 1GHz quad core ARM processor with QCN5154 x2 and QCN5124 QCA9882 (multipurpose third radio)



Port	Description	Connector Type	Speed/Protocol
LAN1	5 GbE, PoE++ compliant, MACsec capable*	IP67 rated weath-erproof RJ- 45	100M/1G/2.5G/5G Ethernet Recommended cabling - CAT6
LAN2	PSE	IP67 rated weath-erproof RJ- 45	100M/1G/2.5G/5G 802.3af PoE Recommended cabling - CAT6
Reset	Reset to factory default settings	Pin hole push button	Hold down and power cycle the device to reset
Console Port	Establish 'config shell' terminal session via serial connection	RJ-45	RS232 Serial (115200 bps) Data bits:8; Stop bits: 1 Parity: None Flow Control: None

** MACsec capabilities will be activated via a future software update.*

Operational Specifications

Input Power	This is an 802.3bt Class 6 device. 802.3bt Class 6 PoE++ • Full function 802.3at Class 4 PoE+ • LAN2 PSE off
Number of Radios	3 access radios; one 2x2:2 2.4 GHz, 5 GHz, and 6 GHz radios for simultaneous tri-band access. 1 multi-function 2x2 radio for continuous WIPS and client connectivity tests
Max Clients Supported	1280 (256 clients on 2.4 GHz radio, 512 clients on 5 GHz radio and 512 clients on 6 GHz radio)
MU-MIMO	2X2 on 2.4 GHz, 5 GHz, and 6 GHz radios
Number of Spatial Streams	2 for 6 GHz radio, 2 for 5 GHz radio, 2 for 2.4 GHz radio, 2 for multipurpose radio
Maximum EIRP	26 dBm on 5 GHz radio (max), 25 dBm on 6 GHz radio (max), and 26 dBm on 2.4 GHz radio (max)[1]
80+80 MHz Non-Contiguous Channel Bonding	No
Bandwidth Agility	No
3G/4G Macro and Small Cells Interference Mitigation	Yes
Frequency Bands[2]	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, CB, TELEC, KCC regarding certifications.

[1] Max EIRP will be restricted to Country/Regulatory domain limits

[2]The frequency ranges are restricted to Country/Regulatory domain limits

Wi-Fi Specifications

IEEE 802.11ax/be			
Frequency Band	Scanning	Transmission	
	All regions	USA & Canada (FCC/IC)	Europe (ETSI)
6 GHz	5.925 GHz – 6.425 GHz 6.425 GHz - 6.525 GHz 6.525 GHz – 6.875 GHz 6.875GHz - 7.125 GHz	5.925 GHz – 6.425 GHz 6.425 GHz - 6.525 GHz 6.525 GHz – 6.875 GHz 6.875GHz - 7.125 GHz	5.925 GHz – 6.425 GHz
Modulation Type	OFDM / OFDMA		
Peak Data Rate	5.75 Gbps		
Antenna	External with N type connectors		

IEEE 802.11a/n/ac/ax/be			
Frequency Band	Scanning	Transmission	
	All regions	USA & Canada (FCC/IC)	Europe (ETSI)
5 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
Modulation Type	DSSS / OFDM / OFDMA		
Peak Data Rate	2.88 Gbps		
Antenna	External with N type connectors		

IEEE 802.11b/g/n/ax/be			
Frequency Band	Scanning	Transmission	
	All regions	USA & Canada (FCC/IC)	Europe (ETSI)
2.4 GHz	2.4 – 2.4835 GHz	2.4 – 2.4735 GHz	2.4 – 2.4835 GHz
Modulation Type	DSSS / OFDM / OFDMA		
Peak Data Rate	700 Mbps		
Antenna	External with N type connectors		

Power values

(with external antenna gains of 5dBi for 2.4 GHz, 6dBi for 5 GHz, and 5dBi for 6 GHz)

2.4 GHz	Maximum EIRP (dBm)		Receive Sensitivity (dBm)	
802.11b				
1 Mbps	26		-99	
1 Mbps	26		-11	
802.11g				
6 Mbps	26		-96	
54 Mbps	25		-97	
802.11n	**HT20**	**HT40**	**HT20**	**HT40**
MCS 0	26	26	-96	-94
MCS 7	24	24	-77	-75
802.11ac	**VHT20**	**VHT40**	**VHT20**	**VHT40**
MCS 0	26	26	-97	-94
MCS 8/9	23	24	-77	-75
802.11ax	**HE20**	**HE40**	**HE20**	**HE40**
MCS 0	26	26	-96	-94
MCS 11	22	22	-66	-64
802.11be	**EHT20**	**EHT40**	**EHT20**	**EHT40**
MCS 0	26	26	-97	-94
MCS 13	20	19	-67	-64
5 GHz	**Maximum EIRP (dBm)**		**Receive Sensitivity (dBm)**	
802.11a				
6 Mbps	26		-93	
54 Mbps	23		-94	

5 GHz	Maximum EIRP (dBm)					Receive Sensitivity (dBm)				
802.11n	**HT20**	**HT40**				**HT20**	**HT40**			
MCS 0	26	26				-93	-91			
MCS 7	23	23				-74	-93			
802.11ac	**VHT20**	**VHT40**	**VHT80**			**VHT20**	**VHT40**	**VHT80**		
MCS 0	26	26	26			-93	-91	-88		
MCS 8/9	23	23	23			-70	-67	-63		
802.11ax	**EHT20**	**EHT40**	**EHT80**	**EHT160**		**EHT20**	**EHT40**	**EHT80**	**EHT160**	
MCS 0	26	26	26	26		-93	-91	-89	-87	
MCS 11	22	22	22	23		-63	-62	-68	-67	
802.11be	**EHT20**	**EHT40**	**EHT80**	**EHT160**		**EHT20**	**EHT40**	**EHT80**	**EHT160**	
MCS 0	26	26	26	26		-92	-90	-88	-87	
MCS 13	21	26	26	26		-57	-57	-55	-54	
6 GHz	**Maximum EIRP (dBm)**					**Receive Sensitivity (dBm)**				
802.11ax	**HE20**	**HE40**	**HE80**	**HE160**		**HE20**	**HE40**	**HE80**	**HE160**	
MCS 0	25	25	25	25		-94	-91	-88	-86	
MCS 11	20	20	20	20		-64	-61	-69	-66	
802.11be	**EHT20**	**EHT40**	**EHT80**	**EHT160**	**EHT320**	**EHT20**	**EHT40**	**EHT80**	**EHT160**	**EHT320**
MCS 0	25	25	25	25	25	-94	-91	-88	-86	-83
MCS 13	19	19	19	19	19	-58	-57	-55	-53	-53

Regulatory Specifications

RF and Electromagnetic Compatibility (EMC)

Country	Certification
USA	FCC Part 15.247, Part 15.407, Part 15, Subpart B
Canada	RSS-102, RSS-247, RSS-248, ICES-003
Europe	EN 300 328, EN 300 440, EN 301 893, EN 62311, EN 50385, EN 50665, EN 301 489-1, EN 301 489-17, EN 55032, EN 55035, EN 303 413, EN 303 687, CISPR 32, CISPR 35 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 & Environmental

Country	Certification
USA, Canada	UL62368-1, 3rd Edition; CAN/CSA C22.2 No 62368-1:19
European Union (EU)	IEC/EN 62368-1 2nd edition
Taiwan	CNS 15598-1, RoHS
International	IEC 62368-1: 2018

Ordering Information

Access Point

Part Number	Description
AP-O435E	O-435E 2x2 tri radio 802.11be (WiFi 7) access point. Antennas not included.
AP-O435E-SS-5Y	O-435E AP with 5 years bundled Cognitive Cloud SW subscription. Antennas not included.
AP-O435E-SS-3Y	O-435E AP with 3 years bundled Cognitive Cloud SW subscription. Antennas not included.

Mounting Options

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

External Antennas

For details of compatible antennas, see Antenna Selection Guide

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