

# Cognitive Wi-Fi Access Points

## K-12 E-Rate Solution Bundles

Arista develops and manufactures a broad range of enterprise class indoor and outdoor Wi-Fi 7, 6e access points. These products are offered as specialized bundles for the US government funded E-Rate, K-12 program. Of special importance, Arista Access Points address many of the outage and loss of cloud connectivity concerns schools have with their E-learning cloud providers, leveraging Arista's localized, cloud outage proof patented Cognitive Wi-Fi architecture.

Arista's Cognitive Wi-Fi architecture makes the best of both worlds, where all administration is off loaded into the cloud, yet the control and dataplanes remain local within the school, for ensuring continuous access to local resources if and when the cloud connections are impacted. Schools remain operational to all localized resources including their perimeter security cameras, door locks, and cached e-learning content. Further, Arista access points include the most advanced Wi-Fi radio and switching chip technologies, agentic AI for proactive remediation, automated AP tuning and radio management, and authentication and authorization for safeguarding against unauthorized network use.

Table 1: Arista's Cognitive Wi-Fi architecture

Management Plane	Control Plane	Data Plane
<ul style="list-style-type: none"> <li>• Configuration</li> <li>• Monitoring and troubleshooting</li> <li>• Alarms, events and reports</li> <li>• Device management</li> </ul>	<ul style="list-style-type: none"> <li>• Distributed</li> <li>• Connection management</li> <li>• Radio resource management</li> <li>• Roaming</li> <li>• WIPS</li> <li>• Shares control plane data amongst neighbor APs</li> <li>• Highly scalable</li> <li>• Fault tolerant</li> </ul>	<ul style="list-style-type: none"> <li>• Data tunnel management</li> <li>• Packet forwarding</li> <li>• QoS</li> <li>• Firewall</li> <li>• Highly flexible</li> <li>• Standards based (e.g. VxLAN)</li> <li>• Data plane traffic is never sent to the cloud</li> <li>• 802.1x support on AP uplinks</li> </ul>

Arista's AI hyperscale networking uses real-time operations intelligence to provide schools with continuous access point operations and root cause analysis. This reduces downtime, lowers staff costs, and eliminates weekend maintenance, which is critical for schools with limited IT budgets and staff.

Arista access points self-install from the cloud, auto-tune based upon neighboring AP's, and pinpoint root causes immediately where less skilled Wi-Fi administrators can address issues. A license for Arista's CloudVision Unified Edge (CV-CUE) management platform is included with every E-Rate access point bundle (no additional licensing fees) as well as the inclusion of Authentication and Authorization (AA) endpoint services, for isolating bad actors.

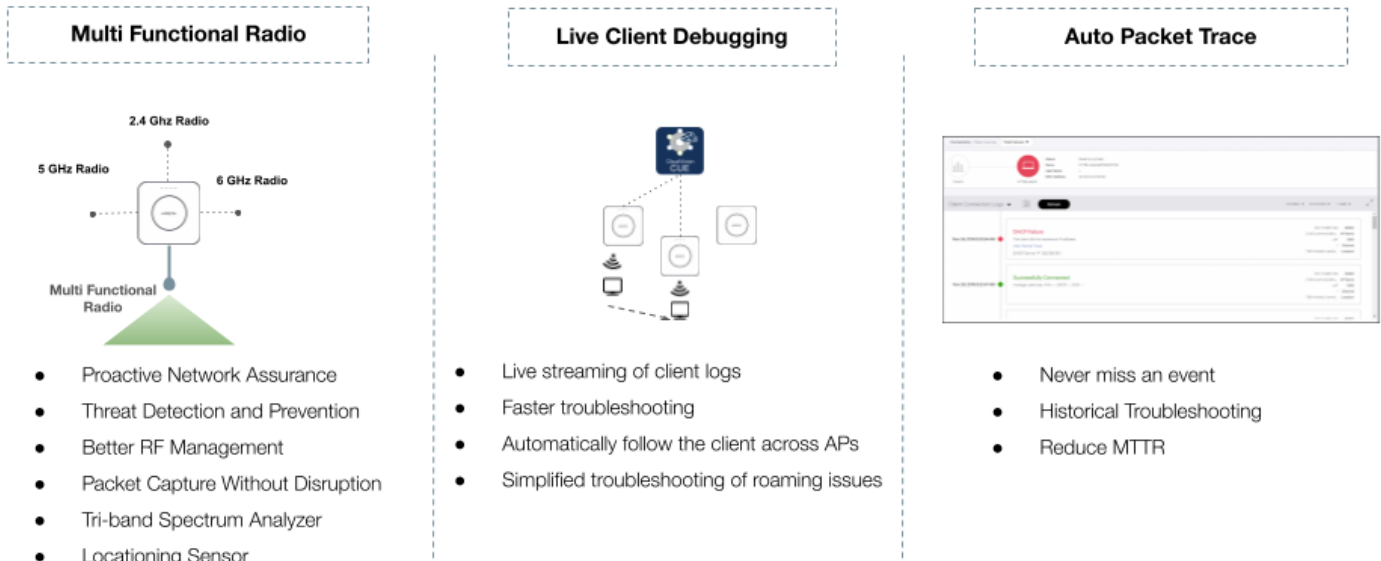


Figure 1: Arista's wireless proactive troubleshooting features.

Arista access points are available in 3, 5, and 7 year E-rate bundles. These bundles (EDU2) include all software features, plus multi-year, service, support, and hardware warranties. These same products are sold in other markets including large healthcare centers, stadiums, large multi-campus universities, and highly secure financial centers. K-12 schools can rest assured that Arista access points are feature rich, with up to 95%-100% reimbursement from the US Government for all included features.

**Arista's E-Rate Wi-Fi access points bundles offer the following:**

- Multi-radio access designs, for multi-radio frequency spectrum coverage (2.4Ghz, 5.0 Ghz, 6.0 Ghz) and non disruptive out-of-band management leveraging a dedicated Wi-Fi radio.
- Per access point operations management license, either cloud or on-premises based.
- Multi-year service and support including 7x24 access to Arista's technical assistance center, hardware warranty replacement, software updates, and software upgrades.
- Cloud based client (students, teachers, IoT devices) authentication and authorization services.
- Advanced RSSI mgmt and tuning for best multi access point deployment signal optimization.
- Automated pro-active troubleshooting and remediation including connectivity checking of DHCP, DNS, Radius, and well known application services.
- Integrated wired and wireless root cause analytics database for AI operations today and into the future.

**Many of the authentication and authorization features included in the Access Point E-Rate bundles include the following:**

- Centralized administration and policy settings optional as either cloud or on premise based.
- 802.1x Authentication methods include EAP-TLS, and TEAP.
- Both machine (IoT, laptop, chromebook etc) and user (student, teacher) authentication methods.
- Broad number of Certificate Mgmt (X.509, PKI, CRL, OSCP, RADsec).
- Directory integration leveraging LDAP include Azure, Okta, Google One, Office 365, and local directory services.
- Per user PSK Method (UPSK) include UPSK onboarding, Local DB authentication, WPA2, WPA3.

Click here for more detailed information on Arista access points. The Wi-Fi 7 and 6E Access Points have 3, 5 and 7 year E-Rate bundles.

[Wi-Fi 7 and 6E Access Points](#)   [Cognitive Wi-Fi Overview](#)   [Access Point Datasheets](#)

