



E-Rate Quick Solution Guide

Overview

E-Rate is a US government sponsored program. The sole purpose of this program is to provide funding to K-12 schools and libraries, for ensuring equal and fair access to the Internet, especially within poorer communities. Funding for this program is determined by Congress and the FCC, per year, based upon a fiscal calendar that begins on July 1st, and ends June 30th. Funds are administered by the not for profit Universal Service Administrative Company (USAC).

Schools and libraries within the United States receive E-rate funds based on the size of the student population, the need/project proposal, and a discount rate that is predetermined by the federally funded school lunch subsidy program. To receive E-Rate funding, schools and libraries must determine their need for equipment and services, and apply for E-rate funds, with well documented project proposals. USAC reviews these proposals and allocates yearly funds.

K-12 schools can receive up to \$165 per student, and/or a minimum of \$25,000 for small community schools. Allocation of funds are applied with a discount percentage based on how each school, and/or school district is rated within the aforementioned lunch program. E-Rate discounting determines the funding amount a school can receive (this discounting should not be confused with a discount a service provider may offer when bidding on an E-rate project).

Category One and Category Two Internet Equipment Vendors

There are two categories of Internet equipment and services that schools can use the funding for. Category One is for wide area communication/broadband equipment. Products and services including routers, cable modems, WAN appliances, and Internet subscription services apply to Category One funds. Category Two is for Local Area Network (LANs) communications equipment. Products and services including switches, hubs, WiFi Access Points, cables, connectors, security appliances, and operations tools are applicable under Category Two.

Arista Networks as a Category Two Equipment Provider

Arista Networks offers a broad line of LAN equipment including Switches, WiFi Access Points, Optical Interconnects, WiFi Software Subscription services, Network Detection and Response Security detection, and Network Observability (Traffic Monitoring) solutions. All of these offerings enable Local Area access to the Internet, with best-in-class performance, simplified topologies, and tightly integrated operations management. These Arista products are applicable within the E-rate category two equipment and services definitions. Please contact Arista and/or one of Arista's resellers for applicability of these products with schools and libraries that have need for LAN communications.

All of the products mentioned at the bottom of this document are 100% eligible as E-rate category 2 offerings.

Arista Highly Values E-Rate

Arista believes that everyone deserves equal and affordable access to the Internet, especially within underprivileged school communities. As Arista now offers tier one, category two products, Arista has become an active vendor within the E-rate program. Arista is educating many of their E-Rate value added resellers about their world class product offerings, and is working with these resellers on providing competitive RFP's, and pricing quotes.

Schools have many of the same requirements as for profit companies with regards to reliability, software quality and 7x24 access to service centers. Arista offers the exact same operating system, operations management software, WiFi subscription services, manufacturing quality, and support across all of their products. Arista category two products are enterprise class, premium grade networking products that are designed to service customers for approximately 5-7 years based upon common technology life cycles (Moore's Law) .



Arista E-Rate Unique Product Differentiators

Clearly many schools qualifying for E-rate funding do not have the staff or expertise to install, configure, and/or maintain many of the more sophisticated switches, security devices, and WiFi access points. Arista has worked tirelessly over the past 10 years to simplify the skills required to manage switches, routers and WiFi networks, in addressing these staffing limitations. Networking, while complex, can be automated based upon well known standard use cases.

A majority of Arista category two products can be auto configured, updated, and maintained without the need of highly trained network specialists. As an example, Arista has a residential subscriber customer, where over 7000 Access Points were installed in less than a month. This customer relied upon Arista’s default installation, configuration and automated operations management features; this was the main reason they selected Arista.

WiFi Access Points

Arista’s WiFi Access Points easily plug into wired PoE (Power of Ethernet) switch ports and are seamlessly configured from the cloud, without the need of trained technicians on site. Arista refers to this as Zero Touch Provisioning. Further, Arista’s Access Points auto calibrate and re-tune based changes that are taking place on site, whether there are new neighboring Access Points that are contending for the same channels, or the school has moved the classroom furniture around and the RF signals need to be re-calibrated. Diagnostics is also simple as Arista offers a graphical user interface that traces problems, and identifies root causes with 80%+ accuracy (very few false positives). This diagnostics leverages Arista’s patent pending built into artificial intelligence for better predicting outage and security conditions.

Further, Arista has built in Wireless Intrusion Protection (WIPs), for students who may try to hack into the network, with their own consumer grade AP, and/or attempt malicious client hacks. Arista’s built in WIPs, detects rogue clients, Access Points, and other bad actors. Once detected, the rogue device is automatically removed from the mainstream network, an alert is sent to inform the administrator including location information on where the security breach has been detected.

And Arista Access Points offer contact tracing records, where administrators can easily determine by time of day and location, those students that may be exposed to health risks (Covid 19 as an example). This feature is called P-tracer and leverages Arista built in location intelligence.

Top K-12 Schools, WiFi Feature Requirements

E-Rate K-12 WiFi Features	Arista Product Offerings
Wireless Intrusion Prevention (WIPs)	Standard feature with AP’s
Auto tuning and recalibration	Standard feature with AP’s
Auto configure of newly added AP’s	Standard feature with AP’s
WiFi 6 IoT battery preservation mgmt	Standard feature with 802.11ax AP’s
Contact tracing and location tracking	Standard feature with AP’s
QOS mgmt for student/teacher application bandwidth prioritizations	Standard feature with AP’s
Dynamic PoE compatibility with switches	Standard feature between AP’s & switches
Indoor/Outdoor AP Product Line	Arista has both indoor/outdoor AP’s with same software infrastructure

Arista Fixed and Modular Ethernet Switches

Arista's award winning Extensible Operating System (EOS®) runs in all of Arista switches. EOS is self healing, can be upgraded without any downtime, and provides real time telemetry for proactive alerting based on traffic forwarding issues. This ensures that students have a high quality network, and one that they can depend on for any Internet based learning activities.

Further, Arista offers dynamic Power of Ethernet within their modular 750 class Ethernet switch. This again is a plug and play feature where the school can plug almost any device they choose into Ethernet ports, and not have to worry whether it needs power, and if it does, how to manage Ethernet power, with other devices on the network also requiring PoE. Dynamic PoE has become critically important as schools are adding entrance scanners, network based security devices, IP cameras, WiFi access points, and building controllers.

Top K-12 Schools, Ethernet Switching Requirements

E-Rate K-12 WiFi Features	Arista Product Offerings
Cognitive Power over Ethernet	720XP 2RU and Modular 750 class switches
Versatile 1RU and 2RU PoE switch for classroom connectivity	Fixed, scalable 10 Mbps to 100 Gbps wire rate switches with POE
Common operating system for simplified administration	Extensible Operating System (EOS)
Zero downtime when installing security patches	EOS
Tightly secure segmentation for protecting school, and staff from malicious behaviors	Arista Macro Segmentation Services
Hot swappable power supplies and fans for minimizing network downtime	Standard feature across majority of switches
Simplified, graphically driven operation management dashboards	Arista CloudVision®
Indoor/Outdoor AP Product Line	Arista has both indoor/outdoor AP's with same software infrastructure

Top K-12 Local Area Networking Solution Requirements

E-Rate K-12 WiFi Features	Arista Product Offerings
Integrated wired/wireless management	CloudVision
Root cause analytics	CloudVision
Cloud subscription and On-Prem Services	CloudVision
Simplified licensing/pricing	Single SKU for all WiFi features
Zero Trust Security	WIPs, ACL's, Segmentation all included

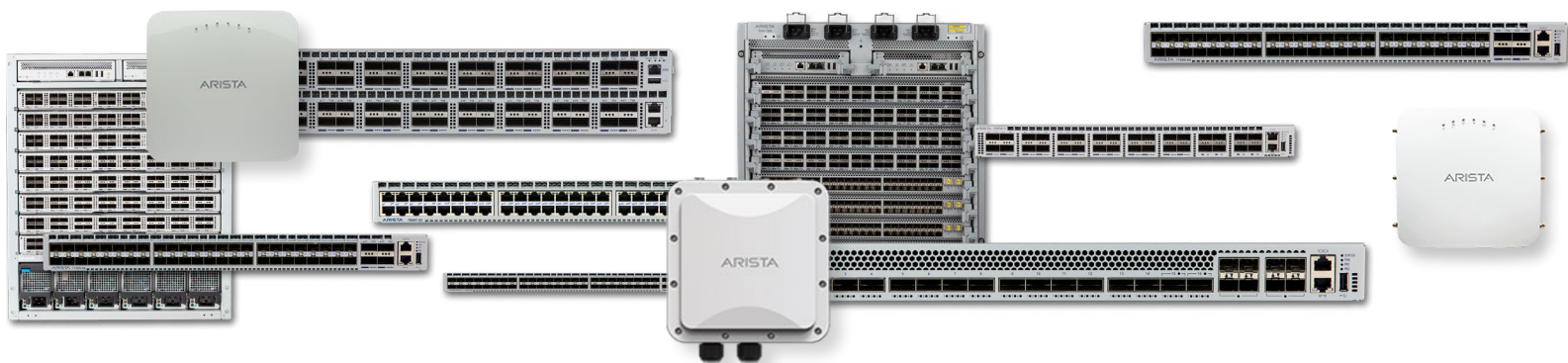
Applicable Arista Products

Arista Fixed and Modular Ethernet Switches

- Arista 720 Series: Power of Ethernet, Fixed switch line, 10/100/1000 Mbps, 10-100 Gbps port options
- Arista 750 Series: Power of Ethernet, 5 slot modular switch, 10/100/1000 Mbps, 1-100 Gbps port options, 400 Gbps ready
- Arista 7010 Series: Power efficient 10/100/1000 Mbps 1 RU, Fixed Switch
- Arista 7020 Series: Universal leaf switch, deep buffers, with 1/10 Gbps port options
- Arista 7050 Series: Multi-layer (L2/L3) 1 and 2RU fixed switches, 10/40 Gbps port options
- Arista 7060 Series: High performance fixed switches with 10/40/100/400 Gbps port options
- Arista 7280 Series: High performance deep buffer switches with 10/40/100/400 Gbps port options
- Arista Extensible Operating System Feature upgrades available
- Arista CloudVision Operations mgmt subscriptions available

Wireless Access Points

- AP-O105: 2x2 dual radio, 802.11ac, outdoor AP with fixed internal antennas
- AP-O105E: 2x2 dual radio, 802.11ac, outdoor AP with N-type external antennas
- AP-C110: 2x2 tri radio, 802.11ac indoor AP with fixed internal antennas
- AP-W118: 2x2 tri radio, 802.11ac indoor AP, including wall plate, with fixed internal antennas
- AP-W118-RW: Remote at home, 2x2 tri radio, 802.11ac indoor AP, with desktop stand, and power supply
- AP-C230: 4x4+2x2, tri radio AP, 802.11ax (WiFi 6) indoor AP with fixed internal antennas
- AP-C230E: 4x4+2x2, tri radio AP, 802.11ax (WiFi 6) indoor AP, with external antenna connectors
- AP-O235: 4x4+2x2, tri radio AP, 802.11ax (WiFi 6) outdoor AP, with IP67 enclosure
- AP-O235E: 4x4+2x2, tri radio AP, 802.11ax (WiFi 6) outdoor AP, with IP67 enclosure
- AP-C250: 8x8 tri radio, 802.11ax (WiFi 6) indoor AP, with dual 2.5 Gbps uplinks, fixed internal antennas
- AP-C260: 8x8 tri radio, 802.11ax (WiFi 6) indoor AP, with dual 5 Gbps uplinks, fixed internal antennas
- Access Point Mounting Kits Available



Where to Get More Information:

- Arista Cloud Networking Product Portfolio: <https://www.arista.com/assets/data/pdf/AristaProductQuickReferenceGuide.pdf>
- Arista Product Overview: <https://www.arista.com/en/products>
- Arista Switch Platforms Overview: <https://www.arista.com/en/products/platforms>
- Arista WiFi Product Overview: <https://www.arista.com/en/products/cognitive-wifi>
- Arista Cognitive Campus (In building networks) White Paper: <https://www.arista.com/assets/data/pdf/Whitepapers/Cognitive-Campus-WP.pdf>
- Arista sales inquiries: us-sales@arista.com

Santa Clara—Corporate Headquarters

5453 Great America Parkway,
Santa Clara, CA 95054

Phone: +1-408-547-5500

Fax: +1-408-538-8920

Email: info@arista.com

Ireland—International Headquarters

3130 Atlantic Avenue
Westpark Business Campus
Shannon, Co. Clare
Ireland

Vancouver—R&D Office

9200 Glenlyon Pkwy, Unit 300
Burnaby, British Columbia
Canada V5J 5J8

San Francisco—R&D and Sales Office 1390

Market Street, Suite 800
San Francisco, CA 94102

India—R&D Office

Global Tech Park, Tower A, 11th Floor
Marathahalli Outer Ring Road
Devarabeesanahalli Village, Varthur Hobli
Bangalore, India 560103

Singapore—APAC Administrative Office

9 Temasek Boulevard
#29-01, Suntec Tower Two
Singapore 038989

Nashua—R&D Office

10 Tara Boulevard
Nashua, NH 03062



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