Arista

Arista CCS-720XP-48Y6-F

Datasheet

Product Overview

- Arista's 720XP series, including the CCS-720XP-48Y6-F, delivers high-performance networking for campus environments.

- Designed for enterprises, education, and public sector campuses, it supports desktops, PoE devices, and IoT deployment.

- 48 x 10/100/1000 Mbps PoE RJ45 ports, modular uplinks up to 100Gbps, and managed IEEE 802.3af/at/bt power per port.

- Modular uplink options (SFP+, SFP28, QSFP28) offer flexibility and future-ready scalability for diverse infrastructure needs.

- Centralized management through Arista CloudVision platform enables sub-second telemetry, analytics, and simplified oversight.

- Ideal for distributed sites needing secure, real-time monitoring, the 720XP maximizes uptime for mission-critical campus resources.

Product Highlights

- **Cognitive Management Plane:** Arista EOS CMP streamlines deployment and automates campus switch management with real-time telemetry APIs.

- **Zero Touch Provisioning:** Supports auto provisioning via CloudVision or DevOps tools, easing device onboarding and operations.

- **Hardware-Level Flow Tracking:** FlowTracker offers instant state updates for thousands of device and application flows with hardware scaling.

- **Dynamic Load Balancing:** DLB and open L2 MLAG/L3 ECMP features deliver high availability and optimized network resource utilization.

Detailed Features

Arista CCS-720XP-48Y6-F

Component	Specification
Switching Capacity	700 Gbps
Ethernet Ports	48 x 10/100/1000 Mbps PoE RJ-45
Uplink Ports	6 x 25 Gbps SFP28
PoE Standard	802.3af/at, up to 30W per port
Airflow Direction	Front-to-Back

High-Performance Switching Platform

The Arista CCS-720XP-48Y6-F leverages a robust switching architecture offering 700 Gbps bandwidth and ultra-low latency. It meets the demands of high-density user environments and supports seamless scaling with 6 x 25G SFP28 uplink ports for optimized campus backbone connections.

Comprehensive Power Over Ethernet Support

Featuring 48 x 10/100/1000 Mbps PoE RJ-45 ports, the switch delivers up to 30W per port and an overall PoE budget up to 1850W (with dual PSU). This capability is ideal for powering multiple access points, IP phones, and IoT sensors reliably in dense deployments.

Unified Network Operating System

Running on Arista EOS, a single binary modular OS, the 720XP series offers advanced Layer 2/3 features, EVPN, and robust segmentation. EOS architecture separates protocol processing and logic, enabling in-service software updates for maximum uptime and resilience.

Advanced Telemetry and Diagnostics

Integrated FlowTracker monitors over a thousand concurrent network flows in real time, scaling to 32K in hardware. Device fingerprinting, application flow visibility, and performance diagnostics empower IT staff to quickly detect and resolve network issues with minimal disruption.

Flexible Load Balancing and Topology Design

Open standards-based L2 MLAG, L3 ECMP, and Dynamic Load Balancing allow administrators to optimize link usage and network resilience. Interoperability with other platforms simplifies mixing new and legacy infrastructure in evolving campus networks.

Granular Network Segmentation and Security

Supports 802.1X and RADIUS authentication, automated segmentation via 802.1Q or VXLAN, and wire-speed VRF isolation. Hardware-assisted VXLAN de-encapsulation also enhances WiFi segmentation and secures network boundaries for all connected devices.

Centralized Management with CloudVision

CloudVision offers unified management for campus, WiFi, data center, and multi-cloud. Operators can use automated provisioning, continuous compliance checks, and real-time predictive analytics from a single interface, improving efficiency and compliance.

Platform Extensibility and Integration

Arista EOS supports native scripting (Bash, Python, C++, GO) and open APIs (gRPC/GNMI, OpenConfig), facilitating effortless integration with modern DevOps tools and custom automation solutions. This adaptability future-proofs the switching platform and streamlines lifecycle management.

Technical Specifications

Product Specifications

Feature	Value
Network Ports	48 x 10/100/1000 Mbps Ethernet PoE RJ-45 (802.3af/at, up to 30W per port)
Uplink Ports	6 x 25 Gbps SFP28
Management Ports	1 x Console RJ-45, 1 x Gigabit Management RJ-45, 1 x USB
Product Family	720XP Series
CPU	Dual Core x86
Switching Bandwidth	700 Gbps
Packet Buffer	6 MB
VLAN IDs	4096
Switch Version	Arista EOS
Airflow Direction	Front-to-Back

Feature	Value
Fan Module Options	3 x FAN-7000-F (Front-to-Back Airflow, included)
Power Supplies Included	2 x PSU slots (1 x PWR-1021-AC-RED installed, Front-to-Back Airflow)
Power Supply Options	PWR-1021-AC-RED, PWR-621-AC-RED, PWR-621-AC-BLUE (B-F), PWR-1021-AC-BLUE (B-F), PWR-721-DC-RED (DC)
PoE Budget	982W (with 1 x 1050W AC PSU), 1850W (with 2 x 1050W AC PSU), 1110W (with dual 650W AC), 857W (with dual 500W DC)
Switching Capacity	198 Gbps (396 Gbps FDX Throughput)
Forwarding Rate	294 Mpps
MAC Address Table Size	112,000
Latency	1.2 microseconds
DRAM and Flash	4 GB System Memory, 4 GB System Flash
Part Number	CCS-720XP-48Y6-F

Product Comparison

Feature	Arista CCS-720XP-48Y6-F	NVIDIA Mellanox MSN2700-CB2F	BR-G730-48-64G-F
Fixed Ethernet Ports	48 x 10/100/1000 Mbps PoE RJ-45	32 x 100 GbE QSFP28	48 x 10/25 GbE SFP28
Uplink Ports	6 x 25 Gbps SFP28	2 x 40/100 GbE QSFP28	8 x 40/100 GbE QSFP28
Switching Bandwidth	700 Gbps	6.4 Tbps	2.56 Tbps
Forwarding Rate	294 Mpps	4.77 Bpps	1.9 Bpps
PoE Capability	Yes, IEEE 802.3af/at/bt, up to 30W per port	No	Depends on configuration
Management OS	Arista EOS	Cumulus Linux/MLNX-OS	Third-party supported OS
Layer 3 Routing	Full L2/L3, VRF, EVPN	Advanced (MPLS, BGP, OSPF)	Static, RIP, OSPF, BGP
MAC Table Size	112,000	N/A (depends on profile)	256K
Redundant Power	Supported (2 x PSU slots)	Supported	Supported

Feature	Arista CCS-720XP-48Y6-F	NVIDIA Mellanox MSN2700-CB2F	BR-G730-48-64G-F
Target Scenario	Enterprise campus, PoE device aggregation	Data center spine/leaf	High-performance aggregation/access

Accessories

Category	Accessories
Included Accessories	- 1 x PWR-1021-AC-RED Power Supply - 3 x FAN-7000-F Fan Modules - Console Cable
Optional Accessories	- SFP28 Optical Modules - Additional Power Supply Units - Rack Mount Kit

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References

[1] Arista Networks. (2024). CCS-720XP Series Switches Datasheet. Retrieved from https://www.arista.com/assets/data/pdf/Datasheets/CCS-720XP-Datasheet.pdf