Arista

DCS-7050SX2-72Q-F

Datasheet

Product Overview

- Arista's 7050SX2-72Q-F is part of the 7050X Series, a premium line of data center switches built for speed and efficiency.

- This switch targets cloud data centers, high-performance computing, and enterprises running bandwidth-intensive services.

- It delivers 48 × 10G SFP+ and 6 × 40G QSFP+ ports, supports up to 1.44 Tbps switching capacity, and features sub-microsecond latency.

- Key features include dynamic buffer allocation for bursty workloads, energy-efficient design, and flexible port configuration.

- Optional built-in SSD and support for advanced logging provide enhanced monitoring, while Arista EOS delivers stable management and automation.

- The DCS-7050SX2-72Q-F ensures scalable, low-latency networking for modern data centers, supporting rapid growth and high-availability requirements.

Product Highlights

- **Unified Arista EOS:** Runs the modular, resilient EOS operating system, enabling reliable, consistent network operations across all Arista products.

- **High Availability Design:** Supports 1+1 hot-swappable power supplies, N+1 hot-swap fans, and live software patching for continuous uptime.

- **Dynamic Buffer Allocation:** Up to 16MB flexible packet buffer dynamically allocates memory per port to manage network congestion effectively.

- **Scalable Performance:** Delivers rapid Layer 2 and Layer 3 wire-speed switching, with flexible support for large-scale ECMP, MLAG, and VXLAN deployments.

Detailed Features

DCS-7050SX2-72Q-F

Component	Specification
10GbE SFP+ Ports	48
40GbE QSFP+ Ports	6
Switching Capacity	1.44 Tbps
Packet Buffer	16 MB
Power Supplies	2 × PWR-500AC-F

Robust Modular Operating System

Arista EOS brings a unified, modular Linux-based architecture, isolating processes for stability. Its in-memory database enables quick state sharing, supporting event-driven actions and facilitating reliable, self-healing operations. Advanced monitoring and automated provisioning run natively via a powerful x86 subsystem, reducing operational overhead.

High-Availability Hardware Design

The DCS-7050SX2-72Q-F is engineered for resilient operation. Hot-swappable 1+1 power supplies and four N+1 fans ensure redundancy. Features like live software patching, colored PSU indicators, and Self Healing Software with Stateful Fault Repair guarantee continuous, interruption-free network service in demanding environments.

Scalable Multilayer Switching

This model delivers line-rate switching at both Layer 2 and Layer 3, with support for up to 128-way ECMP and 64-port MLAG. By leveraging open standards and advanced multipath design options, network architects can deploy simple, scalable two-tier topologies with predictable performance, supporting thousands of servers.

Flexible Unified Forwarding Table

A single forwarding table structure for MAC, IP, host, and multicast entries can be flexibly partitioned as needed per deployment scenario. Predefined configuration profiles maximize resource allocation for diverse topologies and enable efficient network virtualization, supporting evolving cloud architectures.

Intelligent Buffer Management

The switch employs advanced Dynamic Buffer Allocation, offering up to 16MB of shared packet memory. In cut-through mode, it reduces latency to 550ns, and the buffer is dynamically assigned per congestion status. This ensures effective performance in burst-prone, big data, or HPC environments most affected by traffic spikes.

Advanced Automation and Analytics

With features like Advanced Event Management (AEM) and Arista LANZ, network operators automate responses to network events and monitor latency or congestion in real time. These tools support smarter troubleshooting and help maintain peak application performance, addressing modern NOC requirements.

Virtualization and SDN Ready

Full support for VXLAN bridging, routing, and wire-speed gateway enable easy migration to virtualized cloud networks. Integration with orchestration suites, VM Tracer, and programmable APIs make the switch suitable for evolving software-defined infrastructure and ensure compatibility with next-gen datacenter designs.

Eco-Efficient and Future-Proof

Designed for energy-conscious operations, each port consumes less than 2 watts at 10G. Airflow options for front-to-back and back-to-front cooling adapt to any rack setup. The switch supports seamless upgrade paths and Smart System Upgrade for live, zero-downtime updates, reducing ongoing TCO and environmental impact.

Technical Specifications

Product Specifications

Feature	Value
Network Ports	48 × 10 Gigabit Ethernet SFP+
Uplink Ports	6 × 40 Gigabit Ethernet QSFP+
Management Ports	1 × Gigabit Management RJ45, 1 × RS-232 RJ45, 1 × USB Type A
CPU	Quad-Core x86
VLAN IDs	4096
Packet Buffer	16 MB
Airflow Direction	Front-to-Back
Fan Module Options	4 × FAN-7000-F Fan Modules Included
Power Supplies Included	2 × PWR-500AC-F
Power Supply Options	PWR-500AC-R is the B-F Airflow Option

Feature	Value
Switching Capacity	1.44 Tbps
Forwarding Rate	1080 Mpps
MAC Address Table Size	288,000
Latency	550 ns
DRAM	Up to 8 GB
Flash	4 GB
Part Number	DCS-7050SX2-72Q-F

Product Comparison

Feature	DCS-7050SX2-72Q-F	Arista DCS-7050CX3-32S-F	C1-N9K-C9236C
10GbE SFP+ Ports	48	0	0
40GbE QSFP+ Ports	6	32	36
Switching Capacity	1.44 Tbps	6.4 Tbps	7.2 Tbps
Latency	550 ns	<800 ns	<1 µs
Management Ports	1 × Mgmt RJ45, 1 × RS-232 RJ45, 1 × USB A	1 x Mgmt RJ45, 1 x USB	1 x Mgmt RJ45, 1 x Console
Packet Buffer	16 MB	22 MB	40 MB
Power Supplies	2 × PWR-500AC-F	2 (Hot-swappable)	2 (Hot-swappable)
Fan Modules	4 (Hot-swappable, Front-to-Back)	4 (Hot-swappable)	4 (Hot-swappable)
Maximum VLANs	4096	4094	4096
Advanced Virtualization	VXLAN, Multichassis LAG, ECMP	VXLAN routing	VXLAN, NVGRE, OTV

Accessories

Category	Accessories
Included Accessories	- 2 × PWR-500AC-F Power Supply - 4 × FAN-7000-F Fan Modules - Rack Mount Kit
Optional Accessories	- 10Gb SFP+ Transceiver - 40Gb QSFP+ Module - SSD Log Module

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References

[1] Arista Networks. (2023). Arista 7050SX-128/64 Data Center Switch Series Datasheet. Retrieved from https://www.arista.com/assets/data/pdf/Datasheets/7050SX-128_64_Datasheet_S.pdf