Arista

Arista DCS-7020SR-24C2-F

Datasheet

Product Overview

- The Arista 7020R Series, a trusted name in data center networking, delivers high performance and efficiency for demanding environments.

- Designed for modern data centers, the series is ideal for organizations requiring scalable, robust, and consistent network deployments.

- Key hardware includes 24 x 10G SFP+ ports, up to 1.04 Tbps non-blocking throughput, and deep 3GB dynamic packet buffers for handling peak loads.

- Feature highlights include broad QoS support, flexible interface options (SFP+/RJ45), and integration with Arista EOS for policy enforcement.

- Simplified management is achieved through advanced automation, monitoring, and provisioning—removing the challenges of mixed device networks.

- Perfect for scaling cloud, video, and big data applications, the 7020R Series secures reliable data transmission and high-performance operations.

Product Highlights

- **Unified EOS Operating System:** Runs Arista EOS for a consistent, simplified network management experience across all Arista devices.

- **Comprehensive High Availability:** Includes 1+1 hot-swappable power supplies, redundant fans, and live patching for continuous operation.

- **Flexible Scale-Out Design:** Supports 24 × 10G SFP+ or 48 × 1G RJ45, L2/L3 multi-pathing, and VXLAN for agile network topologies.

- **Advanced Automation Tools:** Integrated Zero Touch Provisioning, sFlow monitoring, and CloudVision streamline provisioning and troubleshooting.

Detailed Features

Arista DCS-7020SR-24C2-F

Component	Specification
Switching Capacity	880 Gbps
Forwarding Rate	300 Mpps
Ports	24 × 10 Gigabit Ethernet SFP+
Uplink Ports	2 × 100 Gigabit Ethernet QSFP28
Power Supplies	2 × PWR-500AC-F (included)

Advanced EOS Architecture

Arista EOS separates the switch state from protocol and application logic, allowing non-disruptive updates and protected memory space for every process. This design increases reliability and enables self-healing software, reducing downtime across critical deployments.

Continuous High Availability

1+1 hot-swappable power supplies, four hot-swap fans, and SFR (Stateful Fault Repair) assure hardware and software resilience. 128-way ECMP, multi-chassis LAG, and live patching keep data centers always on, preventing single failure points.

Unmatched Data Center Scalability

Delivering line-rate L2/L3 switching, Arista 7020R supports scaling to over 80,000 1G servers with the 7000 Series. Its L2/L3 multi-pathing and open standard compatibility expand design flexibility and ease future network growth.

Software Defined Cloud Networking

Arista SDCN combines automation, self-service provisioning, and software-defined features for cloud adoption. It equips enterprises and service providers with network virtualization, programmability, cost-effective operations, and future-ready cloud integration.

Flexible Scale-Out Infrastructure

Supports 24 × 1/10G or 48 × 1G RJ45, and wide L2&L3 table resources. VoQ architecture with deep buffering minimizes head-of-line blocking. Multi-speed uplinks enable even traffic balance in large leaf-spine networks.

Comprehensive Monitoring and Event Management

Features like sFlow, integrated packet capture, multi-port mirroring, and Advanced Event Management (AEM) provide end-to-end network visibility. Automated alerts and actions adapt to dynamic VLAN or traffic changes for seamless operation.

Next Generation Provisioning and VM Integration

Zero Touch Provisioning and VMTracer features automate both hardware and virtual server onboarding. Open architecture integrates easily with VMware, OpenStack, and Microsoft OMI, supporting cloud and legacy systems.

Deterministic Network Performance

Deep buffer virtual output queue (VoQ) and scheduled traffic allocation provide low-latency, congestion-free handling for real-time, multicast, and storage data. Robust Quality of Service can prioritize mission-critical applications end-to-end.

Technical Specifications

Product Specifications

Feature	Value
Network Ports	24 × 10 Gigabit Ethernet SFP+
Uplink Ports	2 × 100 Gigabit Ethernet QSFP28
Management Ports	1 × Gigabit Management RJ45, 1 × RS-232 RJ45, 1 × USB Type A
IPv4/IPv6 Host Routes	Up to 80,000
IPv4/IPv6 Routes	Up to 200,000
VLAN IDs	4096
CPU	Multi-core x86
Switch Version	Arista EOS
Airflow Direction	Front to Back (F-B)
Fan Module Options	3 × FAN-7000-F included (F-B), FAN-7000-R optional for B-F
Power Supplies Included	2 × PWR-500AC-F included (F-B)
Power Supply Options	PWR-500AC-R (B-F Option)

Feature	Value
Packet Buffer	3 GB
Switching Capacity	880 Gbps
Forwarding Rate	300 Mpps
MAC Address Table Size	256,000
Latency	From 3.8 microseconds
DRAM	8 GB DRAM
Flash	4 GB Flash
Model Number	DCS-7020SR-24C2-F
Part Number	DCS-7020SR-24C2-F

Product Comparison

Feature	Arista DCS-7020SR-24C2-F	Arista DCS-7160-32CQ-F	DCS-7050SX3-48C8-R
Fixed Ports	24 × 10G SFP+	32 × 100G QSFP28	48 × 25G SFP28 + 8 × 100G QSFP28
Uplink Ports	2 × 100G QSFP28	32 × 100G QSFP28	8 × 100G QSFP28
Switching Capacity	880 Gbps	6.4 Tbps	4.8 Tbps
Forwarding Rate	300 Mpps	4.7 Bpps	3.6 Bpps
MAC Address Table	256,000	288,000	288,000
Packet Buffer	3 GB	22 MB	32 MB
Power Redundancy	Yes, 1+1 hot-swappable	Yes, 2+1 hot-swappable	Yes, 2+1 hot-swappable
Airflow Direction	Front to Back (F-B)	Front to Back or Back to Front	Front to Back or Back to Front
Management Features	Arista EOS, CloudVision, ZTP, sFlow	Arista EOS, CloudVision, ZTP, sFlow	Arista EOS, CloudVision, ZTP, sFlow
Application Scenario	Data center edge/spine, storage	High-density spine or core switching	High-density leaf/core data center

Accessories

Category	Accessories
Included Accessories	- 2 × PWR-500AC-F Power Supplies - 3 × FAN-7000-F Fan Modules - Rack Mount Kit
Optional Accessories	- PWR-500AC-R Power Supply (B-F Option) - SFP+ Transceivers - QSFP28 Cables

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References

[1] Arista Networks. (2024). Arista 7020R Series Datacenter Switches Datasheet. Retrieved from https://www.arista.com/assets/data/pdf/Datasheets/7020R-48_Datasheet.pdf