Arista

Arista DCS-7020SR-24C2-R

Datasheet

Product Overview

- The Arista 7020R Series is engineered to deliver high performance and power-efficient switching for today's dense data center needs.

- Ideal for high-density deployments in enterprise and service provider data centers, it serves IT distributors, integrators, and end users.

- It boasts non-blocking throughput up to 1.04 Tbps, 24 SFP+ for 10G, and 2 QSFP for 100G with deep packet buffers.

- Featuring advanced L2/L3 switching, extensive QoS, and automation, it meets complex network policy demands for mixed 1G/10G environments.

- Unified Arista EOS reduces operational complexity, providing seamless management and consistent feature sets across devices.

- The 7020R Series supports scalable, flexible designs and reliable, low-latency performance for big data, cloud, and media workloads.

Product Highlights

- **Unified Arista EOS:** Consistent, modular network operating system delivers seamless management and advanced automation across all Arista switches.

- **Data Center High Availability:** Hot-swappable power, fans, and N+1 redundancy safeguard continuous operations and simplify onsite servicing.

- **High-Performance Switching:** Line-rate L2/L3 switching with up to 1.04 Tbps throughput and ultra-deep shared buffers for congestion-free networking.

- **Flexible Scale-Out Architecture:** Supports large L2/L3 tables, multipath designs, and modular growth to meet evolving data center needs.

Detailed Features

Arista DCS-7020SR-24C2-R

Component	Specification
Downlink Ports	24 x 10G SFP+
Uplink Ports	2 x 100G QSFP
Packet Buffer	3 GB
Switching Capacity	1.04 Tbps
Redundancy	Hot-swappable power/fans

Unified EOS Operating System

Arista EOS delivers a single, modular architecture built on a standard Linux kernel. All processes are separated for improved fault isolation. This design provides the foundation for high availability, rapid service updates, and robust automation capabilities such as Zero Touch Provisioning, VMTracer, and native Linux tools running directly on the switch.

Continuous Operations & Redundancy

7020R Series switches are designed for true 24/7 data center service. With features like hot-swappable dual power supplies, four hot-swap fans, and color-coded hardware, the system achieves N+1 redundancy and platinum-level efficiency. Live patching and Stateful Fault Repair prevent service interruptions, maximizing uptime.

High-Scale Performance & Efficiency

With non-blocking switching up to 1.04 Tbps, the 7020R enables high-density 1G/10G edge deployments. Flexible multi-path L2/L3 and advanced virtualization make scaling simple. Deep packet buffers prevent congestion in bursty environments. Power consumption remains under 1W per gigabit, optimizing long-term efficiency.

Comprehensive Network Control

Arista EOS empowers operators with advanced tools for monitoring, automation, and policy enforcement. Integrated QoS, robust security features, and centralized management remove the complexity of mixed or evolving environments. Operators can implement policies consistently and monitor performance from a single point of control.

Cloud Ready Software Architecture

Software Defined Cloud Networking (SDCN) enables linear performance scaling, instant provisioning, and seamless network virtualization. Open APIs and support for VMware, OpenStack, and other orchestration platforms extend integration and automate workflows for enterprise and service provider clouds.

Optimized Scale-Out Design

The 7020R Series supports versatile network architectures with up to 24 x 10G SFP+ ports and scalable L2/L3 tables. This flexibility supports traffic balancing across 2-tier leaf-spine fabrics and allows seamless expansion up to 128-way designsideal for dynamic, high-growth environments.

Advanced Packet Handling & Telemetry

A deep buffer VOQ architecture removes head-of-line blocking and minimizes packet loss. With advanced queuing and scheduling, the switch fairly allocates bandwidth for critical data, multicast, or storage traffic. Integrated sFlow, packet capture, and multi-port mirroring ensure complete visibility and help optimize application delivery.

Next-Generation Analytics & Security

AEM (Automation Event Management) and CloudVision provide turnkey orchestration, real-time alerting, and VM-level visibility. On select models, AlgoMatch enhances access control and policy handling; accelerated sFlow delivers granular telemetry while IPSec support (on 7020SRG-24C2) ensures encrypted data protection.

Technical Specifications

Product Specifications

Feature	Value
Network Ports	24 x 10 Gigabit Ethernet SFP+
Uplink Ports	2 x 100 Gigabit Ethernet QSFP
Management Ports	1 x Gigabit Management RJ45, 1 x RS-232 RJ45, 1 x 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	Back to Front

Feature	Value
Fan Modules	3 x FAN-7000-R Included
Power Supplies Included	2 x PWR-500AC-R Included
Power Supply Options	PWR-500AC-F (Front-to-Back Option)
Packet Buffer	3 GB
Switching Capacity	880 Gbps
Forwarding Rate	300 Mpps
MAC Address Table	256,000
Latency	From 3.8 microseconds
DRAM and Flash	8 GB DRAM, 4 GB Flash
Part Number	DCS-7020SR-24C2-R
Model Number	DCS-7020SR-24C2-R

Product Comparison

Feature	Arista DCS-7020SR-24C2-R	DCS-7050SX2-72Q-F	R8S91A
Downlink Ports	24 x 10G SFP+	72 x 40G QSFP+	48 x 25G SFP28
Uplink Ports	2 x 100G QSFP	6 x 40G QSFP+	6 x 100G QSFP28
Switching Capacity	1.04 Tbps	5.76 Tbps	3.6 Tbps
Forwarding Rate	300 Mpps	4,320 Mpps	2,380 Mpps
Packet Buffer	3 GB	16 MB	16 MB
MAC Address Table	256,000	288,000	288,000
Redundant Power	Yes	Yes	Yes
Management System	Arista EOS	Arista EOS	ArubaOS-CX
Latency	From 3.8 µs	< 1 µs	< 2.1 µs

Accessories

Category	Accessories
Included Accessories	- 2 x PWR-500AC-R Power Supplies - 3 x FAN-7000-R Fan Modules - Rack Mount Kit
Optional Accessories	- PWR-500AC-F Front-to-Back Power Supply - SFP+/QSFP+ Transceivers - Console Cable

Support & Warranty

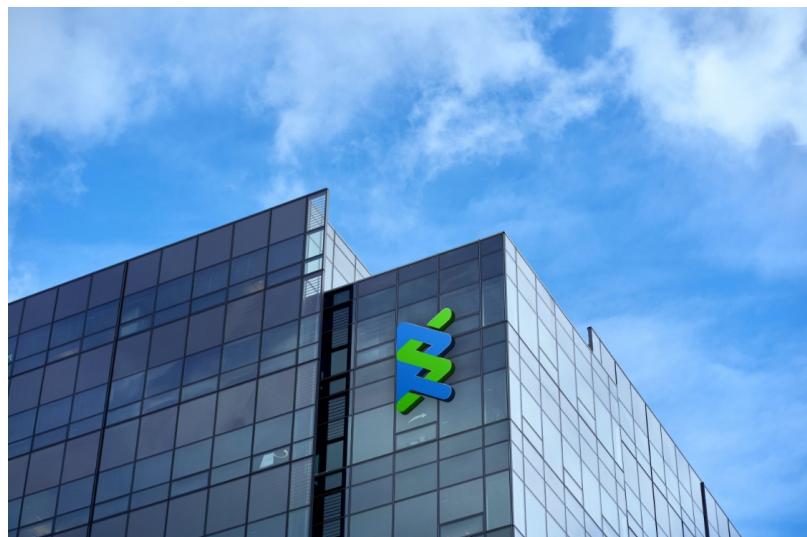| 24/7 Online Service | 3-Year Premium Warranty | Professional Technical Support | 100% Low Price Guarantee | 100% Quality Assurance | 100% Money Back Guarantee |

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References

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