

Key Features

High Performance

- Up to 176 gigabits per second
- Up to 132 million packets per second
- 768 MB of packet memory
- As low as 3 microsecond latency

Arista Extensible Operating System

- Support for virtualized environments
- Access to Linux tools
- API for custom extensions

High Software Reliability

- Fine-grained software modularity
- Health monitoring and self healing
- In-service software upgrades (ISSU)

High Hardware Availability

- Redundant hot-swappable power
- Redundant hot-swappable fans
- Redundant management ports

Flexible Airflow/Mounting Options

- Front-to-rear airflow
- Reversible airflow option
- Hot or cold-aisle port facing options

Non-blocking 1-Gigabit Port Density

- 48 100/1000BASE-T ports in 1U
- 4 1/10GbE SFP+ Uplinks

Layer 4-7 Integration

- Citrix NetScaler VPX Integration
- L4-7 Load Balancing and Security

Full Range of SFP+ PHY Options

- 10GBASE-R optical PHYs
- 10GBASE-CR copper cables
- 1000BASE-X optical PHYs

Overview

The Arista 7048 switch offers unmatched performance for high-density data center deployments. Offered with 48 100/1000BASE-T and four 1/10GbE SFP+ ports, the switch allows for a non-blocking design with 40 Gbps of uplink bandwidth. The 7048 switch forwards at layer 2/3/4 with low latency at wire speed. Redundant power and cooling options along with a robust software architecture provide the foundation for a data center-class product. The switch comes with both front-to-back and back-to-front airflow options for energy efficiency. All SFP+ ports accommodate a full range of 10GbE twinax copper cables and optical 1/10GbE transceivers.



Arista 7048 Front View : 48-port 1000BASE-T (RJ-45) with 4 1/10GbE SFP+ uplinks



Arista 7048 Rear View : Redundant and hot-swappable fans and power supplies

Deep Buffer Architecture

The Arista 7048 switches are designed to handle fair allocation of bandwidth to all traffic flows in the datacenter. With 768 MB of packet buffer memory, the architecture scales in congestion scenarios and all ports can simultaneously buffer up to 50ms of traffic without any drops. The deep buffer architecture of the 7048 also provides a platform for lossless asymmetric connections when 10GbE nodes communicate with 1GbE nodes in the datacenter.

Arista EOS™

The Arista 7048 switches run Arista EOS™, a data center-class operating system with a fine-grained modular protected memory architecture that ensures the highest levels of reliability and availability. Each process is monitored and restarted automatically in response to failure, while in-service software upgrades (ISSU) allow individual software components to be updated without disrupting system operation. Arista EOS allows users to take advantages of Linux tools and add custom extensions.

Integrated L4-L7 Load Balancer Functionality

Arista EOS allows you to extend the 7048 platform with Citrix NetScaler VPX server load balancer appliance integration. Load balancing is performed in software on the high-performance control plane of the switch delivering a unique application delivery platform while reducing total cost of ownership.

Layer 2 Feature Set

- 16K L2 Forwarding Entries
- 802.1w Rapid Spanning Tree
- 802.1s Multiple Spanning Tree Protocol
- RPVST+*
- 802.3ad Link Aggregation/LACP
 - 16 ports/channel
 - 256 groups per system
- MLAG-Multi-Chassis Link Aggregation*
- 802.1Q VLANs/Trunking
 - 4094 VLANs
 - 100K VLAN Ports
- 802.1AB Link Layer Discovery Protocol
- Port Mirroring
- Jumbo Frames (9216 Bytes)
- 802.3x PAUSE
- Static MAC Addresses
- IGMP Snooping v2
- MAC Security

Layer 3 Feature Set

- 14K IPv4 Routes
- 4K IPv6 Routes*
- Static Routes
- OSPF
- BGP*
- VRRP*
- L2/3/4 Access Lists (up to 16K)*
- ECMP-Equal Cost Multipath Routing

Network Management

- Dual 10/100/1000 Mgmt Ports
- RS-232 Serial Console Port
- USB Port
- SNMP v2, v3
- Telnet & SSHv2
- Syslog
- TACACS+
- RADIUS
- AAA
- Control Plane ACLs
- Network Time Protocol (NTP)
- File download via SCP, HTTP, HTTPS, FTP & TFTP Client
- Familiar Industry Standard CLI

IEEE Compliance

- 802.1D Bridging and Spanning Tree
- 802.1p QOS/COS
- 802.1Q VLAN Tagging
- 802.1w Rapid Spanning Tree
- 802.1s Multiple Spanning Tree Protocol
- 802.1AB Link Layer Discovery Protocol
- 802.3ad Link Aggregation with LACP
- 802.3x Flow Control
- 802.3u 100BASE-T
- 802.3ab 1000BASE-T
- 802.3z Gigabit Ethernet
- 802.3ae 10 Gigabit Ethernet

Hardware Capabilities

	7048T-4S Switch
100/1000BASE-T RJ-45 Ports	48
1/10GbE SFP+ Ports	4
Throughput	176 Gbps
Packets/Second	132 Mpps
Packet Buffer Memory	768 MB
Latency (64 byte packets)	3 microseconds
CPU	X86 Dual-Core
Flash Memory	2GB
Main Memory	2GB
Ethernet Mgmt Ports	2
Serial Ports	1
USB Port	1
1+1 PSU Redundancy	Yes
N+1 Fan Redundancy	Yes
Hot Swappable PSUs	Yes
Hot Swappable Fans	Yes
Reversible Airflow Option	Yes
Typical Power Draw	235 watts

Supported SFP Optics and Copper Media

Interface Type	Media	Max Distance
10GBASE-CR	Twinax Copper	7m
10GBASE-SRL	50 micron MMF	100m
10GBASE-SR	50 micron MMF	300m
10GBASE-LRM	62.5 micron MMF	220m
10GBASE-LR	9 micron SMF	10km
1000BASE-SX	50 micron MMF	550m
1000BASE-LX	9 micron SMF	10km
1000BASE-T	Category 5 Copper	100m

Environmental Characteristics

- Operating Temperature: 0 to 40C
- Storage Temperature: -40 to 70C
- Relative Humidity: 5 to 95%
- Operating Altitude: 0-10,000 ft

Physical Characteristics

- Size HxWxD: 1.74 x 17.4 x 20.25" (44 x 440 x 515mm)
- Weight: 22 lbs (10 kgs)

Power Specifications

- Max AC Power Draw: 325W
- Input Voltage Range: 100-240VAC
- Input Current (max): 4-8A
- Input Frequency: 50-60 Hz
- Input Connector: IEC 320-C13

Standards Compliance

- EMI: FCC Part 15 Class A
ICES-003 Class A
VCCI Class A
- Safety: IEC/UL/CSA/EN 60950
CE, UL, TUV Mark
- Other: ROHS-5 compliant

* Supported in a future software release

Ordering Information

Product Number	Product Description
DCS-7048T-4S-F	Arista 7000, 48-port 100/1000BASE-T (RJ-45) + 4 SFP+ ports (5 front-to-rear ¹ airflow fans) & two 760W AC
DCS-7048T-4S-R	Arista 7000, 48-port 100/1000BASE-T (RJ-45) + 4 SFP+ ports (5 rear-to-front ¹ airflow fans) & two 760W AC
PWR-760AC	Redundant 760 Watt AC power supply for Arista 7048 & 7100 series switches
LIC-7048-E	Enhanced Software license for Arista 7048 switches (OSPF, BGP)
LIC-7048-LB*	Load balancer appliance license for Arista 7048 switches
CAB-SFP-SFP-0.5M	10GBASE-CR twinax copper cable, 0.5 meters (SFP+ connectors pre-attached on both ends)
CAB-SFP-SFP-1M	10GBASE-CR twinax copper cable, 1 meter (SFP+ connectors pre-attached on both ends)
CAB-SFP-SFP-2M	10GBASE-CR twinax copper cable, 2 meters (SFP+ connectors pre-attached on both ends)
CAB-SFP-SFP-3M	10GBASE-CR twinax copper cable, 3 meters (SFP+ connectors pre-attached on both ends)
CAB-SFP-SFP-5M	10GBASE-CR twinax copper cable, 5 meters (SFP+ connectors pre-attached on both ends)
CAB-SFP-SFP-7M	10GBASE-CR twinax copper cable, 7 meters (SFP+ connectors pre-attached on both ends)
SFP-10G-SR	10GBASE-SR (Short Reach) SFP+
SFP-10G-SRL	10GBASE-SRL (Short Reach Lite) SFP+
SFP-10G-LRM	10GBASE-LRM (Long Reach Multimode) SFP+
SFP-10G-LR	10GBASE-LR (Long Reach) SFP+
SFP-1G-SX	1000BASE-SX (Short Haul) SFP
SFP-1G-LX	1000BASE-LX (Long Haul) SFP

¹ Front-to-rear implies airflow from the port side to the fan side. Rear-to-front implies airflow from the fan side to the port side
 - Arista 7048 switches ship with two meter C13-C14 power cables. Other power cables must be ordered separately

* Supported in a future software release

Warranty

The Arista 7048 switches include a one year limited hardware warranty, which covers parts, repair or replacement with a 10-business-day turn-around after unit is received.

Service and Support

Additional support services including advanced hardware replacement are available.

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