

Overview

Arista 7050SX 10/40G Data Center Switch Series

HPE and Arista share a common vision around the need to deliver secure hybrid IT solutions and experiences built on industry-leading software-defined infrastructure—helping customers to operate their workloads with speed and agility to grow their business. This partnership will provide our customers with proven networking solutions that are superior to legacy alternatives and that complement HPE compute, storage, virtualization and cloud offerings.

The Arista 7050SX switches are members of the Arista 7050X series and key components of the Arista portfolio of data center switches. The Arista 7050X series are purpose-built 10/40GbE data center switches in compact and energy efficient form factors with wire speed Layer 2 and Layer 3 features combined with low latency and advanced features for software-defined cloud networking.

Increased adoption of 10 Gigabit Ethernet servers, coupled with applications using higher bandwidth, is accelerating the need for dense 10 and 40 Gigabit Ethernet switching. The 7050SX series switches support flexible combinations of 10G and 40G that allow customers to design large leaf and spine networks to accommodate both east-west traffic patterns found in modern data centers, high performance compute, and big data environments.

Featuring a choice of seven different 1RU and two 2RU models, the 7050SX series delivers high density 1/10G SFP+ based ports and 10/40G ports using QSFP+. Or embedded optics with MXP multi-speed ports for higher density. Each MXP port can enable a choice of 3x 40GbE or 12x 10GbE.

All models in the 7050SX series deliver rich Layer 2 and Layer 3 features with wire speed performance of up to 2.56 Tbps. The Arista 7050SX switches offer low latency from 550ns in cut-through mode, and a shared packet buffer pool of up to 16MB that is allocated dynamically to ports that are congested. With typical power consumption of less than 2 watts per 10GbE port, the 7050SX series provides industry-leading power efficiency with airflow choices for back-to-front, or front-to-back. An optional built-in SSD supports advanced logging, data captures, and other services directly on the switch.

Combined with Arista EOS, the 7050X series delivers advanced features for big data, cloud, and virtualized and traditional designs.



Arista 7050SX series of 1/10GbE and 10/40GbE switches.
Top to bottom: 7050SX-64, 7050SX-72, 7050SX-96, 7050SX-128

Product Highlights

Performance

- 7050SX-128: 96 x 1/10GbE and 8x 40GbE
- 7050SX2-128: 96 x 1/10GbE and 8x 40GbE
- 7050SX-96: 48x 1/10GbE and 12x 40GbE
- 7050SX-72: 48x 1/10GbE and 6x 40GbE
- 7050SX-72Q: 48x 1/10GbE and 6x 40GbE
- 7050SX2-72Q: 48x 1/10GbE and 6x 40GbE

Resilient control plane

- High Performance x86 CPU
- Up to 8GB DRAM
- 4GB Flash
- User applications can run in a VM

Built-in solid state storage

Overview

- 7050SX-64: 48x 1/10GbE and 4x 40GbE
- Up to 2.56 terabits per second
- Up to 1.44 billion packets per second
- Wire speed L2 and L3 forwarding
- Latency from 550ns

Data center optimized design

- Typical power under 2W per 10GbE port for lower cost of ownership
- Over 94% efficient power supplies
- Redundant & hot-swap power and fans
- Front-to-rear or rear-to-front cooling
- Tool less rails for simple installation

Cloud networking ready

- VXLAN and VM Tracer
- OpenFlow, DirectFlow and eAPI
- 288K MAC entries
- 144K IPv4 Routes
- 208K IPv4 Host Routes
- Up to 16MB Dynamic Buffer Allocation

Arista Extensible Operating System (EOS)

The Arista 7050X runs the same Arista EOS software as all Arista products, simplifying network administration. Arista EOS is a modular switch operating system with a unique state sharing architecture that cleanly separates switch state from protocol processing and application logic. Built on top of a standard Linux kernel, all EOS processes run in their own protected memory space and exchange state through an in-memory database. This multi-process state sharing architecture provides the foundation for in-service-software updates and self-healing resiliency.

With Arista EOS, advanced monitoring and automation capabilities such as Zero Touch Provisioning, VMTracer and Linux based tools can be run natively on the switch with the powerful x86 CPU subsystem.

High Availability

The Arista 7050X series switches were designed for high availability from both a software and hardware perspective. Key high availability features include:

- 1+1 hot-swappable power supplies and four N+1 hot-swap fans
- Color coded PSU's and fans
- Live software patching
- Self healing software with Stateful Fault Repair (SFR)
- Smart System Upgrade (SSU) and Accelerated Software Update (ASU)
- Up to 64 10GbE or 40GbE ports per link aggregation group (LAG)
- Multi-chassis LAG for active/active L2 multi-pathing
- Up to 128-way ECMP routing for load balancing and redundancy

- Solid State Drive option
- Store logs and data captures
- Leverage linux tools with no limitations

Advanced provisioning and monitoring

- CloudVision
- Zero Touch Provisioning (ZTP)
- LANZ for microburst detection
- DANZ Advanced Mirroring for visibility
- sFlow

Arista Extensible Operating System

- Single binary image for all products
- Fine-grained truly modular network OS
- Stateful Fault Containment (SFC)
- Stateful Fault Repair (SFR)
- Full Access to Linux shell and tools
- Extensible platform - bash, python, C++

Overview



Arista 7050X 2RU Rear View: Rear-to-front airflow model (blue)



Arista 7050X 1RU Rear View: Rear-to-front airflow model (blue) Front-to-rear airflow (red)



Arista 7050X hot swap and reversible power supplies

Dynamic buffer allocation

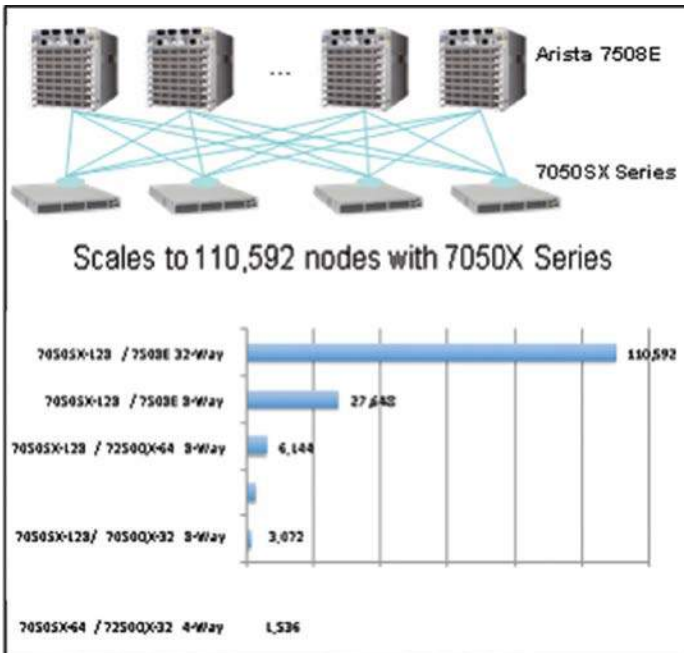
In cut-through mode, the Arista 7050SX switches forward packets with a latency of 550 nanoseconds to 650 nanoseconds. Upon congestion, the packets are buffered in shared packet memory that has a total size of 12 Mbytes. Unlike other architectures that have fixed per-port packet memory, the 7050X Series use Dynamic Buffer Allocation (DBA) to allocate up to 6.7MB of packet memory to a single port for lossless forwarding. The 7050SX2-128 and 7050SX2-72Q have an enhanced 16Mbyte buffer that is optimized for more demanding environments.

Scaling Data Center Performance:

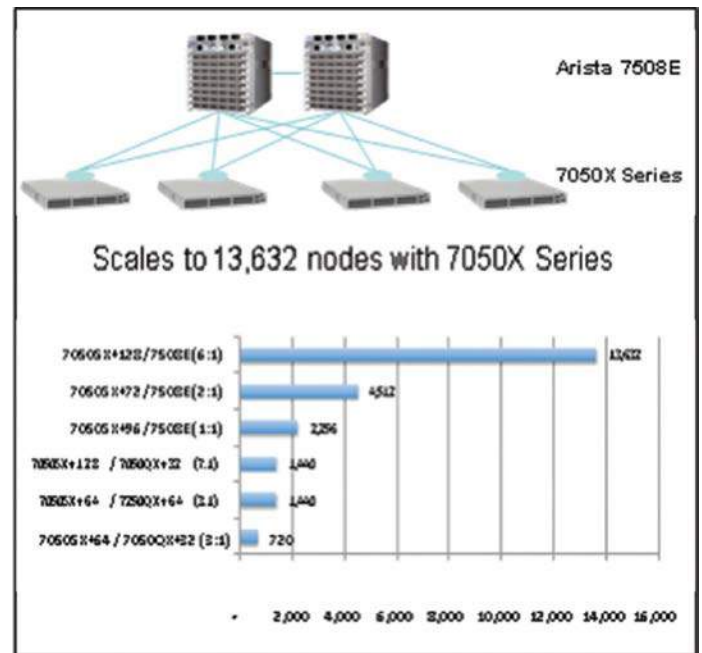
The Arista 7050X series delivers line rate switching at layer 2 and layer 3 to enable dramatically faster and simpler network designs for data centers that dramatically lowers the network capital and operational expenses. When used in conjunction with the Arista 7000 series of fixed and modular switches it allows networks to scale to over 110,000 10G servers in a low-latency two-tier network that provides predictable and consistent application performance. The flexibility of the L2 and L3 multi-path design options combined with support for open standards provides maximum flexibility, scalability and network wide virtualization. Arista EOS advanced features provide control and visibility with single point of management.

Number of 10GbE nodes interconnected using Arista leaf-spine designs

Overview



Arista leaf-spine design with L3 ECM



Arista Leaf-Spine Design with L2 MLAG

Maximum Flexibility for Scale Out Network Designs

Scale out network designs enable solutions to start small and evolve over time. A simple two-way design can grow as far as 64-way without significant changes to the architecture. The Arista 7050SX include enhancements that allow for flexible scale-out designs:

- Up to 128-way ECMP and 64-way MLAG provide scalable designs and balance traffic evenly across large scale 2 tier leaf-spine designs
- Custom hash algorithms for efficient hashing, persistent hashing and custom lookups for tunneled protocols.
- Flexible allocation of L2 and L3 forwarding table resources for more design choice
- Wide choice of dense 10G/40G ports for single port multi-speed flexibility
- VXLAN routing, bridging and gateway for physical to virtualization communication to enable next generation data center designs
- DANZ, sFlow and multi-port mirroring to detect micro-burst congestion and provide network wide visibility and monitoring

Software Defined Networking

Arista Software Defined Cloud Networking (SDCN), combines the principles that have made cloud computing the unstoppable force that it is: automation, self service provisioning, and linear scaling of both performance and economics coupled with the trend in Software Defined Networking that delivers: network virtualization, custom programmability, simplified architectures, and lower capital expenditure. This combination creates a best-in-class software foundation for maximizing the value of the network to both the enterprise and service provider data center. A new architecture for the most mission-critical location within the IT infrastructure that simplifies management and provisioning, speeds up service delivery, lowers costs and creates opportunities for competitive differentiation, while putting control and visibility back in the hands of the network and systems administrators.

Smart System Upgrade

Smart System Upgrade is a network application designed to address one of the most complicated and challenging tasks facing data center administrators - network infrastructure maintenance. Changes to the underlying network infrastructure can affect large numbers of devices and cause significant outages. SSU provides a fully customizable suite of features that tightly couples data center infrastructure to technology partners allowing for intelligent insertion and removal, programmable updates to software releases and open integration with application and infrastructure elements.

Advanced Event Management (AEM)

Simplifying the overall operations, AEM provides the tools to customize alerts and actions. AEM is a powerful and flexible set of tools to automate tasks and customize the behavior of EOS and the operation of the overall data center switching infrastructure.

Overview

AEM allows operators to fully utilize the intelligence within EOS to respond to real-time events, automate routine tasks, and automate actions based on changing network conditions.

Enhanced Features for High Performance Networks

The Arista 7050X delivers a suite of advanced traffic control and monitoring features to improve the agility of modern high performance environments, with solutions for data monitoring, and next-generation virtualization.

Precise Data Analysis

Arista Latency Analyzer (LANZ) is an integrated feature of EOS. LANZ provides precise real-time monitoring of micro-burst and congestion events before they impact applications, with the ability to identify the sources and capture affected traffic for analysis.

Virtualization

Supporting next-generation virtualized data centers requires tight integration with orchestration tools and emerging encapsulation technologies such as VXLAN. The 7050X builds on the valuable tools already provided by the Arista VM Tracer suite to integrate directly into encapsulated environments. Offering a wire-speed gateway between VXLAN and traditional L2/3 environments, the 7050X makes integration of non-VXLAN aware devices including servers, firewalls and load-balancers seamless and provides the ability to leverage VXLAN as a standards based L2 extension technology for non-MPLS environments.

Unified Forwarding Table

Cloud network scalability is directly impacted by the size of a switches forwarding tables. In many systems a 'one size fits all' approach is adopted using discrete fixed size tables for each of the common types of forwarding entry. The Arista 7050X leverages a common Unified Forwarding Table for the L2 MAC, L3 Routing, L3 Host and IP Multicast forwarding entries, which can be partitioned per entry type. The ideal size of each partition varies depending on the network deployment scenario. The flexibility of the UFT coupled with the range of pre-defined configuration profiles available on the 7050X ensures optimal resource allocation for all network topologies and network virtualization technologies.

Features and Benefits

Layer 2 Features

- 802.1w Rapid Spanning Tree
- 802.1s Multiple Spanning Tree Protocol
- Rapid Per VLAN Spanning Tree (RPVST+)
- 4096 VLANs
- Q-in-Q
- 802.3ad Link Aggregation/LACP
 - 64 ports/channel
 - 104 groups per system
- Multi-Chassis Link Aggregation (MLAG)
 - 64 ports per MLAG
- Custom LAG Hashing
- 802.1AB Link Layer Discovery Protocol
- 802.3x Flow Control
- Jumbo Frames (9216 Bytes)
- IGMP v1/v2/v3 snooping
- Storm Control
- RAIL

Layer 3 Features

- Routing Protocols: OSPF, OSPFv3, BGP, MP-BGP, IS-IS, and RIPv2
- 64-way Equal Cost Multipath Routing (ECMP) ²
- Resilient ECMP Routes
- VRF
- BFD
- Route Maps

Extensibility

- Linux tools
 - Bash shell access and scripting
 - RPM support
 - Custom kernel modules
- Programmatic access to system state
 - Python
 - C++
- Native KVM/QEMU support

Standards 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
- 802.3ab 1000BASE-T
- 802.3z Gigabit Ethernet
- 802.3ae 10 Gigabit Ethernet
- 802.3ba 40 Gigabit Ethernet
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
- RFC 4861 Neighbor Discovery for IP Version 6 (IPv6)
- RFC 4862 IPv6 Stateless Address Autoconfiguration

Overview

- IGMP v2/v3
- PIM-SM / PIM-SSM / PIM-BIDIR
- Anycast RP (RFC 4610)
- VRRP
- Virtual ARP (VARP)
- Policy Based Routing
- uRPF
- Selective Route Download

Advanced Monitoring and Provisioning

- Zero Touch Provisioning (ZTP)
- Latency Analyzer and Microburst Detection (LANZ)
 - Configurable Congestion Notification (CLI, Syslog)
 - Streaming Events (GPB Encoded) *
 - Capture/Mirror of congested traffic*
- Advanced Monitoring
 - Port Mirroring (4 active sessions)
 - L2/3/4 Filtering on Mirror Sessions
 - Mirror to EOS/SSD
- Advanced Event Management suite (AEM)
 - CLI Scheduler
 - Event Manager
 - Event Monitor
 - Linux tools
- Optional SSD for logging and data capture
- Integrated packet capture/analysis with TCPDump
- RFC 3176 sFlow
- Restore & configure from USB
- Blue Beacon LED for system identification
- Software Defined Networking (SDN)
- Openflow 1.0 ¹
- Openflow 1.3 ¹
- Arista DirectFlow ³
- eAPI
- OpenStack Neutron Support
- IEEE 1588 PTP (Transparent Clock and Boundary Clock)

- RFC 4443 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification

SNMP MIBs

- RFC 3635 EtherLike-MIB
- RFC 3418 SNMPv2-MIB
- RFC 2863 IF-MIB
- RFC 2864 IF-INVERTED-STACK-MIB
- RFC 2096 IP-FORWARD-MIB
- RFC 4363 Q-BRIDGE-MIB
- RFC 4188 BRIDGE-MIB
- RFC 2013 UDP-MIB
- RFC 2012 TCP-MIB
- RFC 2011 IP-MIB
- RFC 2790 HOST-RESOURCES-MIB
- RFC 3636 MAU-MIB
- RMON-MIB
- RMON2-MIB
- HC-RMON-MIB
- LLDP-MIB
- LLDP-EXT-DOT1-MIB
- LLDP-EXT-DOT3-MIB
- ENTITY-MIB
- ENTITY-SENSOR-MIB
- ENTITY-STATE-MIB
- ARISTA-ACL-MIB
- ARISTA-QUEUE-MIB
- RFC 4273 BGP4-MIB
- RFC 4750 OSPF-MIB
- ARISTA-CONFIG-MAN-MIB
- ARISTA-REDUNDANCY-MIB
- RFC 2787 VRRPv2MIB
- MSDP-MIB
- PIM-MIB
- IGMP-MIB
- IPMROUTE-STD-MIB
- SNMP Authentication Failure trap
- ENTITY-SENSOR-MIB support for DOM (Digital Optical Monitoring)
- User configurable custom OIDs

Virtualization Support

- VXLAN Gateway (draft-mahalingam-dutt-dcops-vxlan-01)
- VXLAN Routing
- VXLAN Bridging
- VXLAN Tunnel Endpoint
- VM Tracer VMware Integration
 - VMware vSphere support
 - VM Auto Discovery
 - VM Adaptive Segmentation
 - VM Host View

See EOS release notes for latest supported MIBs

Security Features

- IPv4 / IPv6 Ingress & Egress ACLs using L2, L3, L4 fields
- MAC ACLs

Overview

- ACL Drop Logging
- ACL Counters
- Control Plane Protection (CPP)
- DHCP Relay / Snooping
- MAC Security
- TACACS+
- RADIUS

Quality of Service (QoS) Features

- Up to 8 queues per port
- 802.1p based classification
- DSCP based classification and remarking
- Explicit Congestion Notification (ECN)
- QoS interface trust (COS / DSCP)
- Strict priority queueing
- Weighted Round Robin (WRR) Scheduling
- Per-Priority Flow Control (PFC)
- Data Center Bridging Extensions (DCBX)
- 802.1Qaz Enhanced Transmissions Selection (ETS) *
- ACL based DSCP Marking
- ACL based Policing
- Policing/Shaping
- Rate limiting
- Audio Video Bridging (AVB) *

Network Management

- CloudVision
- 10/100/1000 Management Port
- RS-232 Serial Console Port
- USB Port
- SNMP v1, v2, v3
- Management over IPv6
- Telnet and SSHv2
- Syslog
- AAA
- Industry Standard CLI
- Accelerated Software Upgrade (ASU) ⁴

System Resources	7050X Series	7050X2 Series
STP Instances	64 (MST)/510 (RPVST+)	
IGMP Groups	288K, with 8K unique groups	
ACLs	4K	11K
Egress ACLs	1K	756
ECMP	64-way, 1K groups	128-way, 2K groups
Forwarding Resources	Base Mode	UFT Modes
MAC Addresses	32K	288K
IPv4 Hosts	16K	208K
IPv4 Routes - Unicast	16K	144K
IPv4 Routes - Multicast	16K	104K *
IPv6 Hosts	16K	104K
IPv6 Routes - Unicast	8K	77K *
IPv6 Routes - Multicast	4K	52K *

* Not currently supported in EOS

NOTE 1: Not supported on 7050SX2-128 and 72Q

NOTE 2: Up to 128-way ECMP on 7050SX2-128 and 7050SX2-72Q

NOTE 3: Not currently supported on 7050SX2-128 and 72Q

See EOS release notes for latest supported MIBs

Configuration

Ordering Information

Switch

Description	HPE SKU	Arista SKU
Arista 7050X2 96SFP+ 8QSFP+ FB AC Switch	JH783A	DCS-7050SX2-128-F
Arista 7050X2 96SFP+ 8QSFP+ BF AC Switch	JH784A	DCS-7050SX2-128-R
Arista 7050X2 48SFP+ 6QSFP+ FB AC Switch	JH942A	DCS-7050SX2-72Q-F
Arista 7050X2 48SFP+ 6QSFP+ BF AC Switch	JH943A	DCS-7050SX2-72Q-R
Arista 7050 96SFP+ 8QSFP+ FB AC Switch	JH781A	DCS-7050SX-128-F
Arista 7050 96SFP+ 8QSFP+ BF AC Switch	JH782A	DCS-7050SX-128-R
Arista 7050X 48SFP+ 6QSFP+ F-B AC Switch	JH585A	DCS-7050SX-72Q-F
Arista 7050X 48SFP+ 6QSFP+ B-F AC Switch	JH586A	DCS-7050SX-72Q-R
Arista 7050X 48SFP+ 4QSFP+ F-B AC Switch	JH581A	DCS-7050SX-64-F
Arista 7050X 48SFP+ 4QSFP+ B-F AC Switch	JH582A	DCS-7050SX-64-R
Arista 7050X 48SFP+ 4QSFP+ Front-to-Back DC Switch	JQ397A	DCS-7050SX-64-F-DC

NOTE: Switches sold in the US are manufactured at a US facility and comply with TAA requirements.

Optional components

Description	HPE SKU	Arista SKU
Arista 7000 F-B Fan Module	JH856A	FAN-7000-F
Arista 7000 B-F Fan Module	JH857A	FAN-7000-R
Arista 7300 Series Front-to-Back Fan Module	JL402A	FAN-7002-F
Arista 7300 Series Back-to-Front Fan Module	JL403A	FAN-7002-R
Arista 2 Post 2RU Rack Mount Kit	JH862A	KIT-2POST
Arista 2 Post 1RU Rack Mount Kit	JH863A	KIT-2POST-1U-NT
Arista 4 Post Rack Mount Kit	JH864A	KIT-4POST-NT
Arista 7000 Accessory Kit	JH865A	KIT-7000
Arista 7001 1RU Accessory Kit	JH866A	KIT-7001
Arista 7002 2RU Accessory Kit	JH867A	KIT-7002
Arista 500W F-B AC Power Supply	JH882A	PWR-500AC-F
Arista 500W B-F AC Power Supply	JH883A	PWR-500AC-R
Arista 500W Front-to-Back DC Power Supply	JH597A	PWR-500-DC-F
Arista 500W Back-to-Front DC Power Supply	JH599A	PWR-500-DC-R
Arista Expanded L3 Software Fix-2 E-LTU	JH601AAE	LIC-FIX-2-FLX
Arista Enhanced L3 Software 10G Fix-2 E-LTU	JH606AAE	LIC-FIX-2-E
Arista Provisioning Software 10G Fix-2 E-LTU	JH608AAE	LIC-FIX-2-Z
Arista Virtualization Software 10G Fix-2 E-LTU	JH609AAE	LIC-FIX-2-V
Arista FlexRoute L3 Lite Software Fix-2 E-LTU	JQ049AAE	LIC-FIX-2-FLX-L

Service

Description	HPE SKU	Arista SKU
Arista A-Care 7050TX-48 NBD Software 1 Month Support E-LTU	JH511AAE	SVC-7050TX-48-1M-NB
Arista A-Care 7050TX-48 4H Software 1 Month Support E-LTU	JH512AAE	SVC-7050TX-48-1M-4H
Arista A-Care 7050TX-48 2H Software 1 Month Support E-LTU	JH513AAE	SVC-7050TX-48-1M-2H
Arista A-Care 7050TX-64 NBD Software 1 Month Support E-LTU	JH514AAE	SVC-7050TX-64-1M-NB
Arista A-Care 7050TX-64 4H Software 1 Month Support E-LTU	JH515AAE	SVC-7050TX-64-1M-4H
Arista A-Care 7050TX-64 2H Software 1 Month Support E-LTU	JH516AAE	SVC-7050TX-64-1M-2H

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Arista A-Care 7050TX2-128 2H Software 1 Month Support E-LTU	JH724AAE	SVC-7050TX2-128-1M-2H
Arista A-Care 7050TX2-128 4H Software 1 Month Support E-LTU	JH725AAE	SVC-7050TX2-128-1M-4H
Arista A-Care 7050TX2-128 NBD Software 1 Month Support E-LTU	JH726AAE	SVC-7050TX2-128-1M-NB
Arista A-Care 7050X 48XGT 6QSFP+ NBD Software 1 Month Support E-LTU	JL422AAE	SVC-7050TX-72Q-1M-NB
Arista A-Care 7050X 48XGT 6QSFP+ 4H Software 1 Month Support E-LTU	JL423AAE	SVC-7050TX-72Q-1M-4H
Arista A-Care 7050X 48XGT 6QSFP+ 2H Software 1 Month Support E-LTU	JL424AAE	SVC-7050TX-72Q-1M-2H

Service, and support

HPE Pointnext's full portfolio of Consulting services as well as Support Services are available. The support services include Installation and Startup Services, Next Business Day Exchange, Next Business Day Onsite and 24x7 Onsite parts, Engineer and 4-hour committed response as well as Datacenter Care and Flex Capacity. (Arista A-Care services can also be purchased. Learn more at [arista.com](http://www.arista.com)). For service depot locations, please see: <http://www.arista.com/en/service>.

Warranty

The Arista 7050SX switches come with a one-year limited hardware warranty that covers parts, repair, or replacement with a 10-business-day turnaround after the unit is received. Learn more at <http://www.arista.com>

Technical Specifications

Technical Specifications

	7050SX2-128	7050SX2-72Q	7050SX-128	7050SX-96	7050SX-72Q	7050SX-72	7050SX-64
Ports	96 x SFP+ 8 x QSFP+	48 x SFP+ 6x QSFP+	96 x SFP+ 8 x QSFP+	48 x SFP+ 4 x MXP	48 x SFP+ 6x QSFP+	48 x SFP+ 2x MXP	48 x SFP+ 4 x QSFP+
Total 40GbE ports	8	6	8	12	6	6	4
Total 10GbE ports	96	72	96	96	72	72	64
Throughput	2.56 Tbps	1.44 Tbps	2.56 Tbps	1.92 Tbps	1.44 Tbps	1.44 Tbps	1.28 Tbps
Packets/second	1440 Mpps	1080 Mpps	1440 Mpps	1440 Mpps	1080 Mpps	1080 Mpps	960 Mpps
Latency	550 ns	550 ns	550 ns	550 ns	550 ns	550 ns	550 ns
CPU	Quad-core x86						
System memory	8 gigabytes	8 gigabytes	8 gigabytes	4 gigabytes	4 gigabytes	4 gigabytes	4 gigabytes
Flash storage memory	4 gigabytes	4 gigabytes	4 gigabytes	4 gigabytes	4 gigabytes	4 gigabytes	4 gigabytes
SSD storage (optional)	No	No	100 gigabytes	120 gigabytes	No	120 gigabytes	120 gigabytes
Packet buffer memory	16MB		12MB (Dynamic buffer allocation)				
10/100/1000 management ports	2	1	2	1	1	1	1
RS-232 serial ports	1 (RJ-45)						
USB ports	1	1	1	1	2	1	1
Hot-swappable fans	2 (1+1 redundant)						
Hot-swappable fans	4 (N+1 redundant)						
Reversible airflow	Yes						
Typical / max power*	214W/396W	127W/251W	235W/415W	159W/290W	144W/261W	144W/267W	140W/220
Size	19 x 3.5 x 18.1 in(48.3 x 8.8 x45.9 cm)	19 x 1.75 x 16 in(48.3 x 4.4 x40.6 cm)	19 x 3.5 x 18.1 in(48.3 x 8.8 x45.9 cm)	19 x 1.75 x 16 in(48.3 x 4.4 x40.6 cm)			
Weight	33 lb (15.1 kg)	17.3 lb (7.8 kg)	33 lb (15.1 kg)	20 lb (9.1 kg)	17.3 lb (7.8 kg)	19 lb (8.6 kg)	19 lb (8.6 kg)
Minimum EOS version	TBD	TBD	4.13.0	4.14.2	4.15.4	4.14.2	4.14.0

* Typical power consumption measured at 25°C ambient with 50% load

NOTE: Performance rated over operation with average packets larger than 200 bytes

Technical Specifications

Power supply specifications

Power supply model	PWR-500AC	PWR-500-DC	PWR-750AC
Input voltage	100-240V AC	40-72V DC	100-240V AC
Typical input current	6.3 - 2.3A	13.1 - 7.3A, 11A at -48V	10 - 4A
Input frequency	50/60 Hz	DC	50/60 Hz
Input connector	IEC 320-C13	AWG #16-12	IEC 320-C13
Efficiency (typical)	94% platinum	-	94% platinum
Compatibility	7050SX-64, 7050SX-72, 7050SX-72Q, 7050SX2 - 72Q7050SX-96, 7050SX-128, 7050SX2-128		7050SX-128

Environmental characteristics

Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	-25°C to 70°C (-13°F to 158°F)
Relative humidity	5% to 95%
Operating altitude	0 to 10,000 ft (0-3000 m)

Standards compliance

EMC	Emissions: FCC, EN55022, EN61000-3-2, EN61000-3-3 or EN61000-3-11, EN61000-3-12 (as applicable) Immunity: EN55024 Emissions and immunity: EN300 386
Safety	UL/CSA 60950-1, EN 60950-1, IEC 60950-1 CB Scheme with all country differences
Certifications	North America (NRTL) European Union (EU) BSMI (Taiwan) RCM (Australia) CCC (PRC) MSIP (Korea) EAC (Customs Union) VCCI (Japan)
European Union Directives	2006/95/EC Low Voltage Directive 2004/108/EC EMC Directive 2011/65/EU RoHS Directive 2012/19/EU WEEE Directive

Supported optics and cables

Interface type	QSFP+ ports
10GBASE-CR	0.5 m-5 m QSFP+ to 4x SFP+ 1
40GBASE-CR4	0.5-5 m QSFP+ to QSFP+

Technical Specifications

40GBASE-AOC	3 m to 100 m
40GBASE-UNIV	150 m (OM3)/150 m (OM4)
40GBASE-SRBD	100 m (OM3)/150 m (OM4)
40GBASE-SR4	100 m (OM3)/150 m (OM4)
40GBASE-XSR4	300 m (OM3)/400 m (OM4)
40GBASE-PLRL4	1 km (1 km 4 x 10 G LR/LRL)
40GBASE-PLR4	10 km (10 km 4 x 10 G LR/LRL)
40GBASE-LRL4	1 km
40GBASE-LR4	10 km
40GBASE-ER4	40 km

1 Not supported on 7050SX-128 QSFP+ ports

Interface type	SFP+ ports
10GBASE-CR	SFP+ to SFP+: 0.5 m-5 m
10GBASE-AOC	SFP+ to SFP+: 3 m-30 m
10GBASE-SRL	100 m (OM3)/150 m (OM4)
10GBASE-SR	300 m (OM3)/400 m (OM4)
10GBASE-LRL	1 km
10GBASE-LR	10 km
10GBASE-ER	40 km
10GBASE-ZR	80 km
10GBASE-DWDM	80 km
100/1000BASE-T, 1GbE SX/LX	Yes

Summary of Changes

Date	Version History	Action	Description of Change
05-Mar-2018	Version 5	Added	SKU added: JQ397A
04-Dec-2017	Version 4	Added	SKUs added: JH601AAE, JH606AAE, JH608AAE, JH609AAE, JQ049AAE, JH511AAE, JH512AAE, JH513AAE, JH514AAE, JH515AAE, JH516AAE, JH724AAE, JH725AAE, JH726AAE, JL422AAE, JL423AAE, JL424AAE
03-Jul-2017	Version 3	Added	SKU added: JQ049A
09-May-2017	Version 2	Changed	Changes made due to wrong information was shown in the document.
06-Mar-2017	Version 1	Created	Document creation.



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