Overview

HPE SN2700M Switch

With an increasing need to access data faster and accommodate growing workloads, rising levels of east-west traffic, and new storage arrays based on flash storage technologies, a high bandwidth, low-latency, zero packet loss network becomes paramount. The HPE SN2700M switches offer a 100GbE-based network platform capable of delivering unbelievable networking speed and agility to keep pace with the most intense workloads small- to large-scale enterprises can produce. With port speeds spanning from 1Gb/s to 100 Gb/s and a switching capacity of 6.4Tb/s from 32 ports at 100GbE, the switch enables non-blocking throughput at wire-speed transfers-across all packet sizes. All this enables the SN2700M to deliver a landmark 4.76 Bpps processing capacity and an uncompromising 300ns cut-through latency in a compact 1RU form factor. The M-Series are perfect for Top-Of-Rack (TOR) deployments and optimized for virtualized environments, hyperconverged infrastructure, and storage deployments.

With HPE M-Series Ethernet switches give you the right network bandwidth with consistent performance for high-performance and storage workloads. Delivering the highest feature set at the right price allows you to get the most out of your Ethernet infrastructure to best support a variety of use cases, including media and entertainment; streaming video, financial services industry, virtualized data centers, and next generation storage, including software-defined storage and NVMe flash. With HPE M-Series switches, you can:

- **Optimize Storage**— modernize your network to eliminate limitations and bottlenecks that can be caused by the addition of flash storage.
- **Enjoy efficient network performance**— avoid packet loss, provide predictable performance with line-rate packet delivery across all ports and all packet sizes
- **Realize breakthrough economics**— make better use of your data center resources with the highest port density per rack unit and the industry's lowest power consumption.
- **Accelerate business innovation**— utilize 1/10/40Gbps Ethernet connectivity for existing workloads and enhance connectivity utilizing built-in 25/50/100Gbps capabilities to respond quickly to business needs and to stay on the leading edge of Ethernet switching technology.

The M-Series SN2700 switch provides a high density 100GbE switching solution in single Rack Unit (RU) for the growing demands of today's storage, database, and data center environments. The SN2700 carries a unique design to accommodate the highest rack performance. Available in 16 or 32 ports, the SN2700 carries a switching capacity of 6.4Tb/s with 4.76Bpps processing capacity.

SN2700M is available in following models:
- HPE SN2700M 100GbE 32QSFP28
    - Power-to-Connector and Connector-to-Power Airflow
    - TAA SKU option
    - ONIE SKU option
- HPE SN2700M 100GbE 16QSFP28
- HPE SN2700M 100GbE 16p Upgrade E-LTU.

SN2700M offers cost-effective options with entry at 16-ports and a pay as you grow with a software license. Offering more flexibility to customers to add capacity when needed.
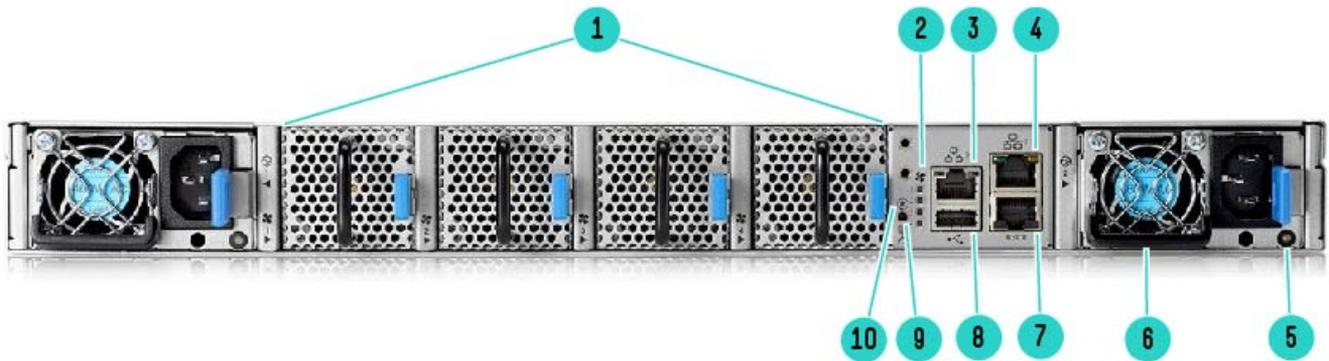
Overview
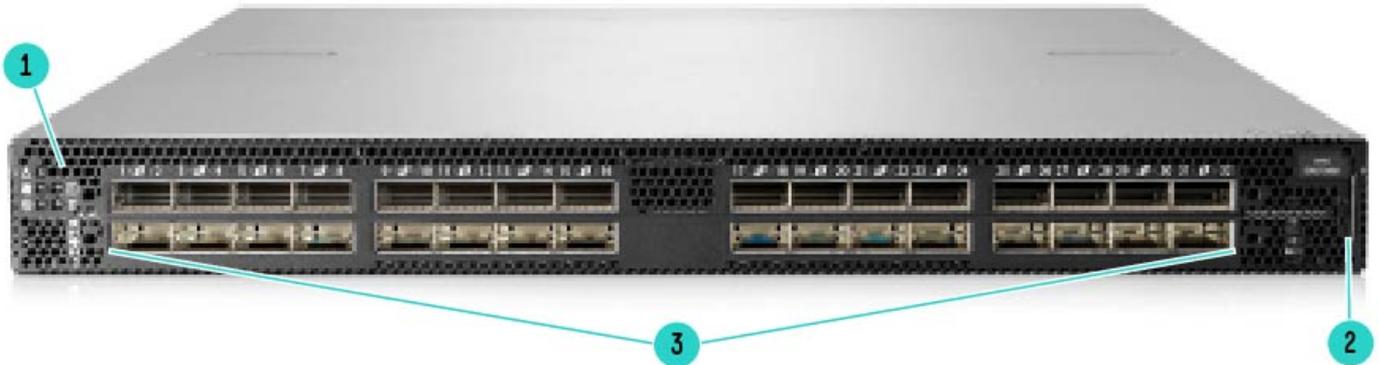
HPE M-Series SN2700M - Front View

1. Status LEDs
2. Inventory Information Pull-out tab

3. QSFP/QSFP28 Ports (1-32)

NOTE: Port Connectivity options, all ports support 1GbE – 100GbE (100GbE QSFP28 can be configured as 100GbE or 40GbE)
- Each odd numbered QSFP28 port can breakout (Optical/DAC/AOC) into four 10 GbE sub-ports.
- Each odd numbered QSFP28 port can breakout (Optical/DAC/AOC) into four 25 GbE sub-ports.

HPE M-Series SN2700M – Rear View

1. Fans (4 Units)
2. Fans Status LEDs
3. MGMT0 Port
4. MGMT1 Port
5. Power Supply

6. Power Supply
7. Serial Console Port (115200 BAUD rate)
8. USB Port
9. System Health LED
10. Reset button

Overview

Key Features and Benefits

- HPE M-Series SN2700M offers cost-effective options with entry at 16-ports 100GbE and a pay-as-you-grow software license. It offers more flexibility to add capacity when needed for diverse deployment and tighter budgets.
- SN2700M switches are ideal for modern server and storage networks, supporting up to 64 ports with breakout cables of 10 or 25, 32 ports of 50, or 16 ports of 40 or 100GbE delivering predictable performance and zero packet loss at line-rate across each port and packet size.
- SN2700M can be deployed to support 1GbE and 10GbE ports and is designed to be able to evolve over time to support 25, 40, 50, and 100GbE speeds. This helps future-proof your network architecture and allows for implementing significant speed upgrades to the architecture over time.
- SN2700M provides ultra-low cut-through latency of under 300ns port-to-port. This is an advantageous for flash storage which moved the latency bottleneck from storage media to the network, as well as for the bursty nature of today's software-defined and cloud-driven data center traffic flows.
- It provides high port density in a single rack unit, allowing for higher capacity and efficiency, simplifying scale-out environments and saving on total cost of ownership. Unique breakout cables fan out individual switch ports to multiple device ports.
- Provides wire-rate performance with zero packet loss across all frame sizes, avoiding any negative impact on applications that could occur with frame loss as unexpected packet loss is unacceptable in modern data centers, especially within a storage network.
- Capable of forwarding 100% capacity wire rate performance with zero packet loss across all ports concurrently at 100GbE speeds while transferring data across both Layer 2 and Layer 3 networks.
- Designed to use less electric power than competing switches, with less than 6 watts per port, providing one of the industry's lowest power draws, producing less heat than competing products, and allowing reduced OPEX cost.
- Provides enough switching bandwidth to transport all ports at 100GB/s bandwidth concurrently. This allows the switches to avoid head-of-line blocking which can reduce a switches overall performance and throughput.

Models

HPE M-Series SN2700M Ethernet Switch Models

Description	SKU
HPE SN2700M 100GbE 32QSFP28 Switch	Q2F21A
HPE SN2700M 100GbE 32QSFP28 Power to Connector Airflow TAA-compliant Switch	R0P71A
HPE SN2700M 100GbE 32QSFP28 Connector to Power Airflow TAA-compliant Switch	R0P72A
HPE SN2700M 100GbE 32QSFP28 ONIE Connector to Power Airflow Switch	R0P79A
HPE SN2700M 100GbE 32QSFP28 ONIE Power to Connector Airflow Switch	R0P80A
HPE SN2700M 100GbE 32QSFP28 ONIE Power to Connector Airflow DC Switch	R3B02A
HPE SN2700M 100GbE 32QSFP28 ONIE Connector to Power Airflow DC Switch	R3B03A
HPE SN2745M 100GbE 32QSFP28 ONIE Power to Connector Airflow Switch	R3B04A
NOTE: This switch model is not supported in standard HPE racks, but only racks which are less than 23.6" in length. For Standard HPE racks use any SN2700M SKU	
HPE SN2745M 100GbE 32QSFP28 ONIE Power to Connector Airflow DC Switch	R3B05A
NOTE: This switch model is not supported in standard HPE racks, but only racks which are less than 23.6" in length. For Standard HPE racks use any SN2700M SKU	
HPE SN2700M 100GbE 16QSFP28 Switch	Q6M26A
HPE SN2700M 100GbE 16-port Upgrade E-LTU	Q6J39AAE

Standard Features

HPE M-Series SN2700M Ethernet Switch Models
- 16 or 32, 100GbE ports scales up to 64 (16 odd numbered ports x 4) 10GbE & 25GbE connections with breakout cables.
- Extremely Flexible. Support for 1, 10, 25, 40, 50 and 100GbE speeds in a 1U enclosure.
  - QSFP28 50GbE operation is configured as 2x2x25GbE breakout and all 32 ports can operate at 2x50GbE.
- Ultra-low latency with true cut through performance, Zero packet loss performance with DCBX, PFC, ECN support
- Optional per port or global store-and-forward switching for noisy fabric error containment

---

User Interfaces: Command Line & Web Interface
- Industry-standard command line interface (CLI). The CLI is accessed through SSH or Telnet sessions, or directly via the console serial port on the power side panel.
- The CLI can be in one of several modes, and each mode makes available a certain group (or level) of commands for execution.
- Web interface - WebUI that accepts inputs and provides outputs by generating webpages which can be viewed by the user using a web browser for configuration, monitoring, and troubleshooting.
- The inventory in the switch system can be accessed through a SNMP MIB browser. These devices are indexed (entPhysicalIndex) using three levels: Module layer, Device layer & Sensor layer.

System Management

Management Interface
Management interfaces are used in order to provide access to switch management user interfaces (e.g. CLI, WebUI). HPE Switch Management supports out-of-band (OOB) dedicated interfaces (e.g. mgmt0, mgmt1) and in-band dedicated interfaces. In addition, HPE M-Series Switches feature a standard 115200 baud rate RJ45 serial port that provides access to the CLI.

NTP, Clock & Time Zones
Network Time Protocol (NTP) is a networking protocol for clock synchronization between computer systems over packet-switched, variable-latency data networks. NTP is intended to synchronize all participating computers to within a few milliseconds of Coordinated Universal Time (UTC) and is designed to mitigate the effects of variable network latency.

PTP
IEEE Standard for a Precision Clock Synchronization Protocol for Networked Measurement and Control Systems (standard number 1588) defines the means to achieve time synchronization in the orders of sub microseconds.

Standard Features

Software Management

Configuration Management

Onyx's built-in automation infrastructure reduces operational expenses and time to service by minimizing manual operations and eliminating configuration and provisioning errors. Automation tools such as Ansible, SaltStack, ZTP and Puppet enable you to automate fabric configuration and large scale deployments.

Saving, Loading & restore to factory defaults of the Configuration Files

HPE Smart Fabric Orchestrator

The HPE Smart Fabric Orchestrator validates the integrity, interoperability and compliance of HPE storage, servers and network fabric infrastructures before or during deployment, eliminating human errors during any configurations update or adding new devices. The pre-upgrade check option verifies and reports what components in your SAN need an update to meet the specified version requirement, further assisting in keeping the SAN and fabric infrastructure in ideal health by making informed decisions with better supportability and predictability. The Single Point of Connectivity Knowledge (SPOCK) checks are done against the HPE SPOCK database file currently installed in the Smart Fabric Orchestrator. Checks are easy, with simple mouse-hover color indicators for the components.

Logging

Logging of system events in several severity level over a configurable period of time in size and time based files.

End-to-end Fabric management with NEO®

NEO™ management platform extends management throughout the entire fabric, with end-to-end capabilities for both switches and NICs. Use NEO to enable even greater visibility into the complete data transport path, from the server, through the network fabric and to the server/client.

Debugging

Support save sysdmp file collects configuration, status, counters, log files, What-Just-Happened logs, and WireShark traces for Ethernet modules to enable timely review of problems and facilitate service support. There are 31 per port packet counters and an additional 22 discard packet classification counters to help you identify why there are packet processing problems, should they occur.

What Just Happened (WJH)

As an innovative network telemetry technology, 'What Just Happened' (WJH) monitors and alerts on data plane anomalies to reduce system downtime. With built-in capabilities to inspect packets across all ports at line-rate, multi-terabit speeds, WJH avoids time-consuming data collection and manual searches for network problems. In addition, a streaming WJH telemetry application, supported by NEO™ and other management applications, can be installed as a Docker container.

Link Diagnostic Per Port

Enables an insight into the physical layer components - see information such as a cable status (plugged/unplugged), speed mismatch, auto-negotiation failures, signal quality failures, link training failures, forward error code mismatch, etc.

Signal Degradation Monitoring

A system can monitor the bit error rate (BER) in order to ensure a quality of the link and take an automatic action to disable offending ports.

Telemetry

Sampling (histograms) – a network administrator can enable a sampling of the port buffer occupancy, record occupancy changes over time, and provide information for different levels of buffer occupancy, and amount of time the buffer has been occupied during the observation period.

Thresholds – thresholds may be enabled per port to record the network time when port buffer occupancy crosses the defined threshold and when buffer occupancy drops below it.

Standard Features

User Management and Security
- Different user account types with different privileges
- RADIUS, TACACS+ & LDAP support
- System Secure Mode - configures the switch system to run secure algorithms in compliance with FIPS 140-2 requirements
- USA Department of Defense certification – UC APL
- Storm Control
- Access Control Lists (ACLs L2-L4 & user defined)
- 802.1X - Port Based Network Access Control
- SSH server strict mode – NIST 800-181A
- CoPP (IP filter)
- Port isolation

Cryptographic (X.509, IPSec) and Encryption
Configuring, generating and modifying x.509 certificates used in the system.

802.1x Protocol
Authenticate hosts (or supplicants) and to allow connection only to a list of allowed hosts pre-configured on an authentication server

Network Management Interfaces
SNMP, JSON & XML
Puppet Agent
built-in agent for the open-source "Puppet" configuration change management system

Additional Management & Automation Features
- Zero Touch Provisioning
- Ansible, SALT Stack
- FTP \ TFTP \ SCP
- AAA , RADIUS \ TACACS+ \ LDAP
- JSON & CLI , Enhanced Web UI
- SNMP v1,2,3
- In-band Management
- DHCP, SSHv2, Telnet
- SYSLOG
- Dual ONYX™ Software images
- Events history

Linux Docker Containers - Run your applications as a Linux docker image embedded in the switch flash:
- Full SDK access through the container
- Persistent container & shared storage.

Standard Features

Software Components, Standard, Base Models

Ethernet Switching

Interface Isolation
Group interfaces in sets where traffic from each port is isolated from other interfaces in the group.

Link Aggregation Group (LAG)
Several same speed links are combined into a single logical entity with the accumulated bandwidth of the originating ports

---

MLAG
Extending the implementation of the LAG to more than a single chassis provides another level of redundancy that extends from the link level to the node level. Up to two switches are supported in an MLAG configuration.

VLANs
L2 segment of the network which defines a broadcast domain and is identified by a tag added to all Ethernet frames running within the domain

---

Voice VLAN
Provide QoS to voice and data traffic in a scenario where a terminal is connected to an IP phone which is in turn connected to the port on the switch

---

QinQ
Segregate the traffic of different customers in their infrastructure, while still giving the customer a full range of VLANs for their internal use by adding a second 802.1Q VLAN tag to an already tagged frame

---

Spanning Tree
Rapid Spanning Tree Protocol (RSTP) provides for rapid recovery of connectivity following the failure of a bridge/bridge port or a LAN. The following are supported: BPDU Filter, BPDU Guard, Loop Guard, Root Guard, MSTP and RPVST

Virtual routing and forwarding functions (VRFs)
Virtual routing and forwarding (VRF) is a technology included in IP (Internet Protocol) network routers that allows multiple instances of a routing table to exist in a router and work simultaneously. This increases functionality by allowing network paths to be segmented without using multiple devices. Because traffic is automatically segregated, VRF also increases network security. Currently, Onyx™ supports 64 VRF instances.

OpenFlow - Support for OpenFlow 1.3
OpenFlow is a network protocol that facilitates direct communication between network systems via Ethernet. Software Defined Networks (SDN) allows a centralist management of network equipment. OpenFlow allows the SDN controller to manage SDN equipment. The OpenFlow protocol allows communication between the OpenFlow controller and OpenFlow agent.

VXLAN
VXLAN (Virtual eXtensible Local Area Network) addresses the requirements of the L2 and L3 data center network infrastructure in the presence of virtual networks in a multi-tenant environment. It runs over the existing networking infrastructure and provides a means to "stretch" a L2 broadcast domain over a layer 3 network.

Standard Features

IGMP Snooping
Snooping and updating tables based on the IGMP protocol used by hosts and adjacent routers on IP networks to establish multicast group memberships.

Link Layer Discovery Protocol (LLDP)
A vendor-neutral Link Layer protocol in the Internet Protocol Suite used by network devices for advertising their identity, capabilities, and neighbors on a IEEE 802 LAN

Quality of Service (QoS)
QoS Classification, QoS ReWrite, Queuing and Scheduling, RED & ECN are supported

Access Control List
An Access Control List (ACL) is a list of permissions attached to an object, to filter or match switches packets. When the pattern is matched at the hardware lookup engine, a specified action (e.g. permit/deny) is applied

Other QOS features:
- 802.3X Flow Control
- WRED, Fast ECN & PFC
- 802.1Qbb Priority Flow Control
- 802.1Qaz Enhanced Transmission Selection
- DCBX and Application TLV support
- Advanced QoS- qualification, Rewrite, Policers
- 802.1AB Station and Media Access Control Connectivity Discovery

Advanced and user-mode Shared buffer management

Port Mirroring
Port mirroring enables data plane monitoring functionality which allows the user to send an entire traffic stream for testing.

---

sFlow
sFlow (ver. 5) is a procedure used for statistical monitoring of traffic in networks. MLNX-OS supports an sFlow sampling mechanism (agent), which includes collecting traffic samples and data from counters. The sFlow datagrams are then sent to a central collector.

RDMA over Converged Ethernet (RoCE)
Remote Direct Memory Access (RDMA) is the remote memory management capability that allows server to server data movement directly between application memory spaces without CPU involvement. Simplified RoCEv2 switch configuration automation supported by just one command: roce {lossy | semi-lossless | lossless}.

Priority Flow Control
Provides an enhancement to the existing pause mechanism in Ethernet. The global Ethernet pause option stops all traffic on a link. PFC creates eight separate virtual links on the physical link and allows any of these links to be paused and restarted independently, enabling the network to create a no-drop class of service for virtual links.

Shared Buffers
All successfully received packets by a switch are stored on internal memory from the time they are received until the time they are transmitted. The packet buffer is fully shared between all physical ports and is hence called a shared buffer. Buffer configuration is applied in order to provide lossless services and to ensure fairness between the ports and priorities.

Standard Features

Storm Control
Storm Control is a feature which can be enabled on L2 Ethernet ports and port-channels to monitor inbound traffic to prevent disruptions caused by a broadcast, multicast, or unicast traffic storm on the physical interfaces

Store-and-Forward
Store-and-Forward is used to describe a functionality where a switch receives a complete packet, stores it, and only then forwards it. Since the switch makes forwarding decisions based on the destination address which is at the header of the packet, the switch can make the forwarding decision before receiving the complete packet. This process is called cut-through, as the switch forwards part of the packet before receiving the complete packet. Cut-through and store-and-forward modes are configurable as a switch global or per port option.

IP Routing

IP Interfaces
The following 3 types of IP interfaces are supported:
- VLAN interface
- Loopback interface
- Router port interface

IPv6
IP version 6 (IPv6) is a routing protocol which succeeds IPv4. With the expansion of the Internet and data bases IPv6 addresses consist of 128 bits whose purpose is to allow networks to include a significantly higher number of nodes by increasing the pool of available unique IP addresses. IPv6 packets alleviate overhead and allow for future customizability.

OSPF
Open Shortest Path First (OSPF) is a link-state routing protocol for IP networks. It uses a link state routing algorithm and falls into the group of interior routing protocols, operating within a single autonomous system (AS).

BGP
Border Gateway Protocol (BGP) is an exterior gateway protocol which is designed to transfer routing information between routers. It maintains and propagates a table of routes which designates network reachability among autonomous systems (ASs).

BFD Infrastructure
Many protocols uses slow Hello mechanisms and failure is detection usually seconds after the problem occurs. The BFD goal is to provide low overhead short duration detection of failures between adjacent nodes and single mechanism that can be used for liveness detection over any media.

Standard Features

Policy Rules

Route Map

Route maps define conditions for redistributing routes between routing protocols. A route map clause is identified by a name, filter type (permit or deny) and a sequence number. Clauses with the same name are components of a single route map; the sequence number determines the order in which the clauses are compared to a route.

IP Prefix-List

Prefix-list is a list of entries, each of which can match one or more IP prefixes. A prefix-list is usually used to match a specific IP prefix, mostly in relation to IP route destinations.

Multicast (IGMP and PIM)

Protocol independent multicast (PIM) is a collection of protocols that deal with efficient delivery of IP multicast (MC) data. Those protocols are published in the series of RFCs and define different ways and aspects of multicast data distribution. PIM protocol family includes PIM dense mode (PIM-DM), PIM sparse mode (PIM-SM, which is not supported on Mellanox platforms), Bidirectional PIM (PIM-BIDIR) and Bootstrap router (BSR) protocol.

PIM builds and maintains multicast routing tables based on the unicast routing information provided by unicast routing tables that can be maintained statically or dynamically by IP routing protocols like OSPF and BGP.

VRRP

The Virtual Router Redundancy Protocol (VRRP) is a computer networking protocol that provides for automatic assignment of available IP routers to participating hosts. This increases the availability and reliability of routing paths via automatic default gateway selections on an IP subnetwork.

MAGP

Multi-active gateway protocol (MAGP) is aimed to solve the default gateway problem when a host is connected to a set of switch routers (SRs) via MLAG.
The network functionality in that case requires that each SR is an active default gateway router to the host, thus reducing hops between the SRs and directly forwarding IP traffic to the L3 cloud regardless which SR traffic comes through.

DHCP Relay

Since Dynamic Host Configuration Protocol must work correctly even before DHCP clients have been configured, the DHCP server and DHCP client need to be connected to the same network.
In larger networks, this is not always practical because each network link contains one or more DHCP relay agents. These DHCP-R agents receive messages from DHCP clients and forward them to DHCP servers thus extending the reach of the DHCP beyond the local network.

Standard Features

Feature Summary
Layer 3 Feature Set
- 64 VRFs supported
- IPv4 & IPv6 Routing and Route maps:
- BGP4, MP-BGP, OSPFv2, route maps
- PIM-SM and PIM-SSM (PIM-SM over MLAG)
- User and management VRFs
- BFD (BGP, OSPF, static routes)
- VRRP, Multi Active Gateway Protocol (MAGP)
- DHCPv4/v6 Relay
- Router Port, int Vlan, NULL Interface for Routing
- ECMP, 64-way
- IGMPv2/v3 Snooping Querier
- Consistent/Resilient Hashing

Network Virtualization
- VXLAN EVPN
- VXLAN Hardware VTEP – L2 Gateway
- L2 stretch use case
- Integration with VMware NSX & OpenStack, etc
- Onyx™ certified NSX scale of 1000 VNIs

Quality of Service (QoS)
- 802.3X Flow Control
- WRED with Fast ECN
- 802.1Qbb Priority Flow Control
- 802.1Qaz ETS
- DCBX – Application TLV support
- Advanced QoS – Qualification, Rewrite, Policers – 802.1AB
- Simplified (one command) RoCE configuration

Security
- Storm control
- Access Control Lists (ACLs L2-L4 & user defined)
- 802.1X - Port Based Network Access Control
- Strict Security mode for DoD Apps & NIST 800 181A compliance
- Port Isolation

Synchronization
- NTP
- PTP IEEE-1588

Docker Container
- Full SDK access through the container
- Persistent container & shared storage
- Container-secured mode of work:
- Limited CPU/memory/SSD usage

Software Defined Network (SDN)
- OpenFlow 1.3
- Supported controllers: ODL, ONOS, FloodLight, RYU, etc.
- NAT
- True hybrid mode with programmable pipeline

Standard Features

Layer 2 Feature Set
- Multi Chassis LAG (MLAG), MLAG with STP support
- Jumbo Frames (9216 Bytes)
- IGMP V2/V3, Snooping, Querier
- VLAN 802.1Q (4K)
- Q-In-Q
- 802.1W Rapid Spanning Tree
- BPDU Filter, Root Guard
- Loop Guard, BPDU Guard
- 802.1s Multiple STP
- Rapid Per VLAN STP and PVRST
- 802.3ad Link Aggregation (LAG) & LACP
- 32 Ports/Channel
- 64 Groups Per System
- Port Isolation
- 802.1AB Link Layer Discovery Protocol (LLDP)
- Store & Forward / Cut-through switching modes
- Head of Queue Life Time Limit (HLL)
- 1/10/25/40/50/100GbE

Monitoring & Telemetry
- High Resolution Streaming Telemetry
- What Just Happened (WHJ) Root Cause Analysis
- sFLOW
- Real Time queue depth histograms & thresholds
- Port mirroring (SPAN & ERSPAN)
- Enhanced Link & phy monitoring
- BER degradation monitoring
- User mode - simplified and advanced shared buffer configuration

Management and Automation
- ZTP
- Ansible, Puppet, SaltStack
- FTP/TFTP/SCP
- AAA, RADIUS / TACACS+ / LDAP
- JASON & CLI, WEB UI
- SNMP v1/v2/v3
- In0band and OOB management
- DHCP, SSHv2, Telnet
- SYSLOG
- USB
- 10/100/1000 Mb/s Ethernet RJ45 mgmt port
- RJ45 Serial console mgmt port (115200 BAUD)
- Dual software images, each in separate flash partitions
- Events history
- Open Network Install Environment (ONIE switch models)

Service and Support

Warranty
(3-3-3) Hardware Warranty; 3-year parts; 3-year on-site (standard business hours, next business day response) and 3-year labor.
NOTE: The hardware warranty covers firmware. For extended hardware support and installation information, please see the "Services and Support" Section.

Service and Support

Achieve maximum return from your IT investment
Get the expertise you need at every step of your IT journey with **HPE Pointnext services and support.** We help you lower your risks and costs using proven best practices, automation and methodologies that have been tested and refined by HPE experts through thousands of deployments globally. With **Advisory Services**, we focus on your business outcomes and goals, partnering with you to design your transformation and build a roadmap tuned to your unique challenges. Our **Professional** and **Operational Services** can be leveraged to speed up time-to-production, boost performance and accelerate your business. HPE Pointnext specializes in flawless and on-time implementation, on-budget execution, and creative configurations that get the most out of software and hardware alike.

Consume IT on your terms
HPE GreenLake Flex Capacity combines the simplicity, agility, and economics of public cloud with the security and performance benefits of on-premises IT. You determine your own "Right Mix" of Hybrid IT and workload placement without having to use.

With its agile pay-per-use service, HPE GreenLake Flex Capacity can help your IT organization:
- Avoid IT expenses stemming from overprovisioning
- Improve time to market by maintaining a safe buffer of capacity, ready for use when you need it
- Keep capacity ahead of demand with regular monitoring—and a simple change order to replenish
- Pay for only the capacity used, not the capacity deployed
- Reduce IT risk with tailored support

Connect your devices
Unlock all of the benefits of your technology investment by connecting your products to Hewlett Packard Enterprise. Reduce down time, increase diagnostic accuracy and have a single consolidated view of your environment. By connecting, you will receive 24x7monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization. All of these benefits are already available to you with your server storage and networking products, securely connected to HPE support. Learn more about getting connected at **http://www.hpe.com/services/getconnected**

Free up resources with Operational Services from HPE Pointnext
Choose from the recommended services for customers purchasing from Hewlett Packard Enterprise or an authorized reseller are quoted using Hewlett Packard Enterprise order configuration tools.

HPE Datacenter Care helps customers to address the pressing needs of IT today and smoothly transform to a more agile cloud-like IT operations model. We help run and monitor your IT by offloading the day to day routine tasks, helping customers be more predictive and proactive, and saving time with one place to call with for all of their IT. Datacenter Care is available as both tailored statement of work and as a packaged service for 3, 4, and 5 year terms.

Partner with an assigned account team backed by local and global experts, access HPE enhanced call experience with priority access, use specialized support for complex, technologies, choose hardware and software support for your devices, implement proactive monitoring to stay ahead of issues , and access HPE IT best practices and IP. HPE Datacenter Care advantage options are available to add to your agreement to give you specialized expertise for performance, security, back up analysis, and much more.

Service and Support

HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice.

HPE Proactive Care is available in 3, 4 and 5 year terms with a choice of response levels: Next Business day (NBD), 24x7 with a 4 hour response, and 24x7 with 6 hour call to repair (CTR). This service combines both reactive support when there is a problem with an enhanced call experience and start to finish case management with proactive reporting and advice.
https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

HPE Proactive Care Advanced incorporates all the deliverables of HPE Proactive Care *plus* includes personalized support from a local, assigned Account Support Manager who will share best practice advice and personalized recommendations designed to help improve availability and performance to help increase stability and reduce unplanned downtime. Leverage your system's ability to connect to HPE for pre-failure alerts, automatic call logging and parts dispatch. For business critical incidents, Proactive Care Advanced offers critical event management to help reduce mean time to resolution. HPE Service Credits are included to redeem for technical and operational services. HPE Proactive Care Advanced is offered in 3, 4, and 5 year terms with a choice of response levels: Next Business day (NBD), 24x7 with a 4 hour response, and 24x7 with 6 hour call to repair (CTR).
https://www.hpe.com/h20195/v2/getdocument.aspx?docname=4AA5-3259ENW

NOTE: HPE Proactive Care and HPE Proactive Care Advanced require that the customer connect their devices to HPE to help make the most of these services and receive all the deliverables.

HPE Foundation Care – (choose the response level that meets your needs)
HPE Foundation Care helps when there is a problem and is available in 3, 4, and 5 year terms with a choice of response levels: Next Business day (NBD), 24x7 with a 4 hour response, and 24x7 with 6 hour call to repair (CTR).

NOTE: that Call-To-Repair Service connects you to HPE 24 hours a day, seven days a week for assistance on resolving issues - this includes our highest level commitment to repair hardware within six hours after opening your case and respond to software questions within two hours. Simplify your support experience and make HPE your first call to help resolve hardware or software problems.
https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en

Other related services from HPE Pointnext

Parts and Materials
Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

Defective Media Retention is an option available with HPE Datacenter Care, HPE Proactive Care, Proactive Care Advanced, and HPE Foundation Care and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

HPE Installation and Start-up Service
Provides for the hardware installation and startup of HPE branded M-Series switches with ONYX™ OS, according to the product specifications. The HPE service delivery technician will assist you in bringing your new hardware into operation in a timely and professional manner.
https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00025816enw

Service and Support

HPE Hardware Installation
Provides for the basic hardware installation of HPE branded M-Series ONIE switches to assist you in bringing your new hardware into operation in a timely and professional manner.

HPE Service Credits offers flexible services and technical skills to meet your IT demands as your business evolves. With a menu of services, you can access additional resources and specialist skills to help you maintain peak performance of your IT. HPE Service Credits help you proactively respond to your dynamic IT and business needs.

HPE Education Services provides comprehensive training designed to expand the skills of your IT staff and keep them up to speed with the latest technologies.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and support options.

HPE Support Center
The HPE Support Center is a personalized online support portal with access to information, tools and experts to support HPE business products. Submit support cases online, chat with HPE experts, access support resources or collaborate with peers.
Learn more **http://www.hpe.com/support/hpesc**

The HPE Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.

HPE Insight Remote Support and HPE Support Center are available at no additional cost with a HPE warranty, HPE Support Service, or HPE contractual support agreement.

NOTE: *HPE Support Center Mobile App is subject to local availability

For more information
http://www.hpe.com/services
https://www.hpe.com/us/en/services/operational.html
To learn more on HPE Storage Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at **Contact HPE**
HPE Support Services are sold by HPE and Hewlett Packard Enterprise Authorized Service Partners:
- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find HPE Support Services at **https://ssc.hpe.com/portal/site/ssc/**

Configuration Information

Step 1 - Base Configuration

Select one Model:	Part Number
HPE SN2700M 100GbE 32QSFP28 Switch	Q2F21A
HPE SN2700M 100GbE 32QSFP28 Power to Connector Airflow TAA-compliant Switch	R0P71A
HPE SN2700M 100GbE 32QSFP28 Connector to Power Airflow TAA-compliant Switch	R0P72A
HPE SN2700M 100GbE 32QSFP28 ONIE Connector to Power Airflow Switch	R0P79A
HPE SN2700M 100GbE 32QSFP28 ONIE Power to Connector Airflow Switch	R0P80A
HPE SN2700M 100GbE 32QSFP28 ONIE Power to Connector Airflow DC Switch	R3B02A
HPE SN2700M 100GbE 32QSFP28 ONIE Connector to Power Airflow DC Switch	R3B03A
HPE SN2745M 100GbE 32QSFP28 ONIE Power to Connector Airflow Switch	R3B04A

NOTE: This switch model is not supported in standard HPE racks, but only racks which are less than 23.6" in length. For Standard depth HPE racks use any SN2700M SKU or purchase an MTEF-KIT-S from the Mellanox on-line Store.

	Part Number
HPE SN2745M 100GbE 32QSFP28 ONIE Power to Connector Airflow DC Switch	R3B05A

NOTE: SN2745M is a short-depth version of SN2700M switch.
NOTE: This switch model is not supported in standard HPE racks, but only racks which are less than 23.6" in length. For Standard depth HPE racks use any SN2700M SKU or purchase an MTEF-KIT-S from the Mellanox on-line Store.

Model Description	Part Number
HPE SN2700M 100GbE 32QSFP28 Switch	Q2F21A

- 2 x 460w Power Supply with Intake Fan
- 4 x Intake Fan Tray
- 1 x Fixed Rack Mount Kit
- 2 x Power cord, 1.83m, C13-C14
- 1 x Serial cable (DB9 to RJ45)
- 2 x PSU CABEL RETAINER KIT
- 1 x HPE Warranty and Installation instructions
- 1x HPE Quick Start Guide

NOTE: Requires optical transceivers listed below.

HPE SN2700M 100GbE 16QSFP28 Switch	Q6M26A

- 2 x 460w Power Supply with Intake Fan
- 4 x Intake Fan Tray
- 1 x Fixed Rack Mount Kit
- 2 x Power cord, 1.83m, C13-C14
- 1 x Serial cable (DB9 to RJ45)
- 2 x PSU CABEL RETAINER KIT
- 1 x HPE Warranty and Installation instructions
- 1x HPE Quick Start Guide

NOTE: Requires optical transceivers listed below.

HPE SN2700M 100GbE 16-port Upgrade E-LTU	Q6J39AAE
HPE SN2700M 100GbE 16QSFP28 Switch	Q6M26A

NOTE: Upgrade licenses (Q6J39AAE) allow pay-as-you-grow model with additional 16-active-ports with Q6M26A.
NOTE: For M-Series SN2700M ONIE SKU (R0P79A, R0P80A) refer to Transceivers & Cables supported by the NOS used.

Configuration Information

Step 2 – Options

Transceivers – for M-series SN2700M ONYX™ switches

Refer to HPE M-series <u>SPOCK</u> Connectivity Stream for latest M-series ONYX™ interconnect support matrix

Note #	Transceivers	SKU
	HPE M-series 100GbE QSFP28 SR4 100m Transceiver	Q2F19A
	HPE M-series 100GbE QSFP28 1310nm PSM4 500m Transceiver	Q8J73A
	HPE M-series 40GbE QSFP28 SR4 100m Transceiver	Q7F11A
2	HPE M-series 10GbE SFP+ SR MM 300m Transceiver	Q6M30A
2	HPE 10Gb SFP+ SW E Temp 1-pack PT XCVR (ETEMP operation to 85c)	Q2P65A
5, 6	HPE 100Gb QSFP28 LC SWDM4 Multi-mode 100m Transceiver	R0R40A
2, 7, 8	HPE 10GBASE-T SFP+ RJ45 30m XCVR	R0R41A
2	HPE 25Gb SFP28 SR 30m Transceiver	R0R42A
2	HPE BladeSystem c-Class 10Gb SFP+ SR Transceiver	455883-B21
2	HPE X110 100M SFP LC LX Transceiver	JD120B
2	HPE X120 1G SFP LC SX Transceiver	JD118B
2	HPE X120 1G SFP LC LX Transceiver	JD119B
2	HPE X120 1G SFP RJ45 T Transceiver	JD089B
2	HPE BladeSystem CClass Virtual Connect 1G SFP RJ45 Transceiver	453154-B21
4	HPE 7.6m/25ft CAT5 RJ45 M/M Ethernet C/O Cable	C7539A
2	HPE X130 10G SFP+ LC SR Transceiver	JD092B
2	HPE X130 10G SFP+ LC LR Transceiver	JD094B
2	HPE X130 10G SFP+ LC ER 40km Transceiver	JG234A
1, 2	HPE X130 10G SFP+ LC LH 80km Transceiver	JG915A
	HPE X140 40G QSFP+ MPO MM 850nm CSR4 300m Transceiver	JG709A
	HPE X130 10G SFP+ LC ER 40km Transceiver	JL286A
	HPE BladeSystem c-Class 40Gb QSFP+ MPO SR4 300m Transceiver	747698-B21
	HPE X140 40G QSFP+ LC LR4 SM 10km 1310nm Transceiver	JG661A
	HPE BladeSystem c-Class 40Gb QSFP+ LC LR4 Transceiver	720190-B21
	HPE BladeSystem c-Class 40Gb QSFP+ MPO SR4 100m Transceiver	720187-B21
	HPE X140 40G QSFP+ LC BiDi 100m MM Transceiver	JL251A
	HPE 40Gb QSFP+ Bidirectional Transceiver	841716-B21
2	HPE X190 25G SFP28 LC SR 100m MM Transceiver	JL293A
2	HPE 25Gb SFP28 Short Wave 1-pack Pull Tab Optical Transceiver	Q2P64A
2	HPE 25Gb SFP28 Short Wave Extended Temperature 1-pack Pull Tab Optical Transceiver	Q2P64B
2	HPE X130 10G SFP+ LC SR Transceiver	JD092B
	HPE X140 40G QSFP+ MPO SR4 Transceiver	JG325B
2	HPE 25Gb SFP28 SR 100m Transceiver	845398-B21
2	HPE QSFP28 to SFP28 Adapter	845970-B21

Configuration Information

Note #	Transceivers	SKU
	HPE X150 100G QSFP28 LC LR4 10km SM Transceiver	JL275A
	HPE X150 100G QSFP28 CWDM4 2km SM Transceiver	JH673A
5, 6	HPE X150 100G QSFP28 LC SWDM4 100m MM Transceiver	JH419A
5	HPE 100Gb QSFP28 Bidirectional Transceiver	845972-B21
5	HPE 100GB QSFP28 BIDIRECTIONAL XCVR	855817-B21

Note #	Direct Attach Copper Cables (DAC)	SKU
3	HPE BladeSystem c-Class 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	721064-B21
	HPE FlexNetwork X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable	JG326A
	HPE FlexNetwork X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable	JG327A
	HPE FlexNetwork X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable	JG328A
3	HPE 100GbE QSFP28 to 4x25GbE SFP28 1m Direct Attach Copper Cable	Q9S72A
3	HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable	JG329A
3	HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	JG330A
3	HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable	JG331A
	HPE BladeSystem c-Class 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable	720199-B21
	HPE BladeSystem c-Class 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable	720202-B21
	HPE BladeSystem c-Class 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable	720196-B21
	HPE X242 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable	JH234A
	HPE X242 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable	JH235A
	HPE X242 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable	JH236A
3	HPE X240 QSFP28 4xSFP28 1m Direct Attach Copper Cable	JL282A
3	HPE X240 QSFP28 4xSFP28 3m Direct Attach Copper Cable	JL283A
3	HPE X240 QSFP28 4xSFP28 5m Direct Attach Copper Cable	JL284A
	HPE 100GbE QSFP28 to 4x25GbE SFP28 1m Direct Attach Copper Cable	Q9S72A
	HPE 100Gb QSFP28 to 4x25Gb SFP28 3m Direct Attach Copper Cable	845416-B21
	HPE 100G QSFP28 to QSFP28 5m DAC	845408-B21
	HPE 100Gb QSFP28 to QSFP28 0.5m DAC	R1N34A
	HPE 100G QSFP28 to QSFP28 1m DAC	R0Z25A
	Aruba 100G QSFP28 to QSFP28 5m DAC Cable	R0Z26A
	HPE X240 100G QSFP28 to QSFP28 1m Direct Attach Copper Cable	JL271A
	HPE X240 100G QSFP28 to QSFP28 3m Direct Attach Copper Cable	JL272A
	HPE X240 100G QSFP28 to QSFP28 5m Direct Attach Copper Cable	JL273A
	HPE 100Gb QSFP28 to QSFP28 3m Direct Attach Copper Cable	845406-B21

Configuration Information

Note #	Active Optical Cable (AOC)	SKU
3	HPE 40GbE QSFP+ to 4x10GbE SFP+ 5m Active Optical Cable	Q9S66A
2	HPE 25GbE SFP28 to SFP28 3m Smart Active Optical Cable	Q9S67A
2	HPE 25GbE SFP28 to SFP28 5m Smart Active Optical Cable	Q9S68A
2	HPE 25GbE SFP28 to SFP28 10m Smart Active Optical Cable	Q9S69A
2	HPE 25GbE SFP28 to SFP28 15m Smart Active Optical Cable	Q9S70A
	HPE 100GbE QSFP28 to QSFP28 5m Active Optical Cable	Q9S71A
	HPE BladeSystem c-Class QSFP+ to 4x10G SFP+ 15m Active Optical Cable	721076-B21
	HPE BladeSystem c-Class 40G QSFP+ to QSFP+ 15m Active Optical Cable	720211-B21
	HP 40G QSFP+ to 4x10G SFP+ 7m Active Optical Cable	721070-B21
	HP 40G QSFP+ to 4x10G SFP+ 10m Active Optical Cable	721073-B21
	HP 40G QSFP+ to QSFP+ 7m Active Optical Cable	720205-B21
	HP 40G QSFP+ to QSFP+ 10m Active Optical Cable	720208-B21
	HPE 100Gb QSFP28 to QSFP28 7m Active Optical Cable	845410-B21
	HPE 100G QSFP28 to QSFP28 10m Active Optical Cable	845412-B21
	HPE 100Gb QSFP28 to QSFP28 15m Active Optical Cable	845414-B21
	HPE QSFP28 to 4x25Gb SFP28 7m Active Optical Cable	845420-B21
	HPE QSFP28 to 4x25Gb SFP28 15m Active Optical Cable	845424-B21

Configuration Rules and NOTES:

NOTE: 1: JG915A - Storage connectivity support for this transceiver is limited to 40Km

NOTE: 2: HPE QSA28 (QSFP28 to SFP28) adapter (845970-B21) is compatible with all M-Series switches and is required with this transceiver to convert a QSFP+/QSFP28 slot to a single SFP+/SFP28 slot for 25G or 10G operation with this switch model.

NOTE: 3: The SN2010M 25G DAC connectivity to another M-Series switch or 3rd party switch is limited to a 0.5m DAC cable. End device connectivity may use 1m or a 3m (26 gauge) DAC.

NOTE: 4: This RJ45 crossover cable is compatible and supported for use when directly connecting the two M-Series switch MGMT ports. When configuring MLAG and also utilizing in-band management, the MGMT0 ports of the two switches should be connected.

NOTE: 5: The interoperable 845972-B21 and 855817-B21 HPE 100Gb QSFP28 Bidirectional XCVRs do not interoperate with the JH419A and R0R40A transceivers.

NOTE: 6: 100Gbe SWDM4 LC transceivers JH419A and R0R40A are interoperable.

NOTE: 7: 10Gbase-T SFP+ RJ45 transceiver supports maximum length 30M CAT6a cable due to power density.

NOTE 8: ONYX-3.8.2008 and later revisions are required for support of R0R41A in a QSA28 in SN2100M switches.

Configuration Information

Supported Optical Cables for all M-Series switch models

Description	SKU
HPE Premier Flex MPO/MPO Multi-mode OM4 12 fiber 10m Cable	QK729A
HPE Premier Flex MPO/MPO Multi-mode OM4 8 fiber 50m Cable	QK731A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A
HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A
HPE LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
HPE LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
HPE LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable	AJ839A
HPE Premier Flex MPO/MPO OM4 100m (12ft) Cable	H6Z30A
HPE Multi Fiber Push On to 4 x Lucent Connector 5m Cable	K2Q46A
HPE Multi Fiber Push On to 4 x Lucent Connector 15m Cable	K2Q47A
HPE Premier Flex MPO/MPO Multi-mode OM4 12 Fiber 1m Cable	Q1H63A
HPE Premier Flex MPO/MPO Multi-mode OM4 12 Fiber 2m Cable	Q1H64A
HPE Premier Flex MPO/MPO Multi-mode OM4 12 Fiber 5m Cable	Q1H65A
HPE Premier Flex MPO/MPO OM4 12f 15m Cbl	Q1H66A
HPE Premier Flex MPO/MPO Multi-mode OM4 12 Fiber 30m Cable	Q1H67A
HPE Premier Flex MPO to 4xLC 30m Cbl	Q1H68A
HPE Premier Flex MPO to 4 x Lucent Connector 50m Cable	Q1H69A

Technical Specifications

Family Information

	HPE SN2010M	**HPE SN2100M**	**HPE SN2410bM**	**HPE SN2410M**	**HPE SN2700M**
Description	Ideal ½ width ToR 1/10/25/40/50/100 GbE	Ideal ½ width ToR 10/25/40/50/100 GbE	1/10GbE ToR 40/50/100GbE	10/25GbE ToR 40/50/100GbE	40/50/100GbE spine and aggregation ToR
Ports Speeds	18 x 1/10/25GBE + 4x40/100GbE	16x40/100GbE 64x10/25GbE	48x10GbE + 8x40/100GbE	48x10/25GbE + 8x40/100GbE	32x40/100GbE 64x10/25GbE
Minimum Configuration	18 + 4 Ports	8 Ports - pay as you grow with 8 additional port option	24x10 GbE + 4x100 GbE Ports – pay as you grow 24/4 additional port option	24x10/25 GbE + 4x100 GbE Ports - pay as you grow 24/4 additional port option	16 Ports - pay as you grow with 16 additional port option
Size	1U (½ 19" wide)	1U (½ 19" wide)	1U	1U	1U
Switching Capacity	1.7Tb/s	3.2Tb/s	2.56Tb/s	4Tb/s	6.4Tb/s
Processing Capacity	1.26Bpps	2.38Bpps	1.93Bpps	2.97Bpps	4.76Bpps
Forwarding Technology	Cut Through and Store-and-forward	Cut Through and Store-and-forward	Cut Through and Store-and-forward	Cut Through and Store-and-forward	Cut Through and Store-and-forward
Latency	300ns	300ns	300ns	300ns	300ns
Typical Power Consumption	57W	94W	165W	165W	150W
Supported Operating Systems**	ONYX™ & ONIE	ONYX™ & ONIE	ONYX™	ONYX™ & ONIE	ONYX™ & ONIE
System Memory	8GB	8GB	8GB	8GB	8GB
SSD Memory	16GB	16GB	32GB	32GB	32GB
Packet Buffer	16MB	16MB	16MB	16MB	16MB
1GbE Mgmt Ports	1 RJ45	1 RJ45	2 RJ45	2 RJ45	2 RJ45
Serial Ports	1 RJ45	1 RJ45	1 RJ45	1 RJ45	1 RJ45
USB Ports	1 Mini USB	1 Mini USB	1	1	1
Airflow	Power-to-Connector and Connector-to-Power airflow	Power-to-Connector and Connector-to-Power airflow	Power-to-Connector and Connector-to-Power airflow; hot swappable	Power-to-Connector and Connector-to-Power airflow; hot swappable	Power-to-Connector and Connector-to-Power airflow; hot swappable
Power Supplies	2 (1+1 redundant) not replaceable	2 (1+1 redundant) not replaceable	2 (1+1 redundant) hot-swappable	2 (1+1 redundant) hot-swappable	2 (1+1 redundant) hot-swappable

Technical Specifications

	HPE SN2010M	HPE SN2100M	HPE SN2410bM	HPE SN2410M	HPE SN2700M
Fans	2 fans not replaceable	2 fans not replaceable	4 (N+1 redundant) hot-swappable	4 (N+1 redundant) hot-swappable	4 (N+1 redundant) hot-swappable
Power Supplies	Frequency: 50-60Hz Input range: 100-264 AC Input current 4.5-2.9A	Frequency: 50-60Hz Input range: 100-264 AC Input current 4.5-2.9A	Frequency: 50-60Hz Input range: 100-264 AC Input current 4.5-2.9A	Frequency: 50-60Hz Input range: 100-264 AC Input current 4.5-2.9A	Frequency: 50-60Hz Input range: 100–264 AC Input current 4.5-2.9A
Size	1.72" x 7.87" x 20"(43.9mm x 200mm x 508mm)	1.72" x 7.87" x 20"(43.9mm x 200mm x 508mm)	1.72" x 17.24" x 17"(43.9mm x 438mm x 436mm)	1.72" x 17.24" x 17"(43.9mm x 438mm x 436mm)	1.72" x 16.84" x 27"(43.9mm x 427.8mm x 686mm)
Weight	4.53kg (10Lb)	4.53kg (10Lb)	8.52kg (18.8Lb)	8.52kg (18.8Lb)	11.1kg (24.5Lb)

NOTE: **There are separate M-Series SKUs for ONIE and ONYX™ switch models.

HPE M-Series SN2700 Switch Specifications

	HPE SN2700M 100GbE 32QSFP28 Switch	HPE SN2700M 100GbE 16QSFP28 Switch
Description	100GbE Aggregation /ToR switch	100GbE Aggregation /ToR switch
Ports Speeds	• 32x40/100GbE • 32x50GbE • 64x10/25GbE	• 16x40/100GbE • 16x50GbE • 32x10/25GbE
Minimum Configuration	16 Ports	16 Ports - pay as you grow with 16 additional ports with License SKU (Q6J39AAE)
Size	1U	1U
Switching Capacity	6.4Tb/s	6.4Tb/s
Processing Capacity	4.76Bpps	4.76Bpps
Forwarding Technology	Cut Through	Cut Through
Latency	300ns	300ns
Typical Power Consumption	150W	150W
Supported Operating Systems	ONYX™ & ONIE	ONYX™
System Memory	8GB	8GB
SSD Memory	32GB	32GB
Packet Buffer	16MB	16MB
1Gb Mgmt Ports	2 RJ45	2 RJ45
Serial Ports	1 RJ45	1 RJ45
USB Ports	1	1
Airflow	Power-to-Connector and Connector-to-Power airflow ; hot swappable	Power to connector only; hot swappable
Power Supplies	2 (1+1 redundant) hot-swappable	2 (1+1 redundant) hot-swappable
Fans	4 (N+1 redundant) hot-swappable	4 (N+1 redundant) hot-swappable
Power Supplies	Frequency: 50-60Hz Input range: 100–264 AC Input current 4.5-2.9A	Frequency: 50-60Hz Input range: 100–264 AC Input current 4.5-2.9A
Size	1.72" x 16.84" x 27"(43.9mm x 427.8mm x 686mm)	1.72" x 16.84" x 27"(43.9mm x 427.8mm x 686mm)
Weight	11.1kg (24.5Lb)	11.1kg (24.5Lb)

Technical Specifications

Environment

Operating temperature   Non-operating temperature
0°C to 40°C   -40°C to 70°C
Operating relative humidity (operational)
5% to 85%   noncondensing
Operating Altitude 0 - 3050m
RoHS compliant

Electrical characteristics

Frequency 50/60 Hz
Voltage 90 - 264 VAC

Safety

EN 60950-1:2006+A11:2009+A1:2010+A12:2011+AC:2011+A2:2013, IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 and EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + AC:2011 + A2:2013, UL 60950-1:2007, CAN/CSA C22.2 60950 -1:2007+A1:2011+A2:2014, IEC 60950-1 Ed. 2.0 :2005 + Am 1:2009+ Am 2:2013, LV CU TR 004/2011 and EMC CU TR 020/2011 Technical Regulation, DSTU EN 55032:2014 and DSTU EN 60950-1:2014

EMC

EN 55032:2012 class A, EN 55024:2010, EN 61000-3-2:2014, EN 61000-3-3: 2013, EN 61000-4-2: 2002, EN 61000-4-3: 2006+A1(08)+A2(10), EN 61000-4-4: 2004+A1(10), EN 61000-4-5: 2006, EN 61000-4-6: 2014
EN 61000-4-11:2004, FCC 47 CFR, Part 15:2017, Sub-part B, Class A, ICES-003, Issue 6: 2016 Class A, VCCI V-3/2015.04 Class A, AZ/NZS CISPR 32:2015 Class A, KN22:2009 class A/ KN24:2009

Acoustic:

High-speed fan: : SN2700 - 71.6 dB(A)

Typical power with passive cables (ATIS):

150W

Standards	SNMP MIBs	SNMP MIBs
802.1D Bridging and Spanning Tree	RFC 4001 INET-ADDRESS-MIB	RFC 4292 IP-FORWARD-MIB
802.1p QOS	IANAifType-MIB	RFC 2790 HOST-RESOURCES-MIB
802.1Q VLAN Tagging	RFC 2863 IF-MIB	RFC 1213
802.1w Rapid Spanning Tree	RFC 4318 RSTP-MIB	SNMPV2-CONF
802.1s Multiple Spanning Tree Protocol	LLDP-MIB 802.1AB-2005	RFC 2579 SNMPV2-TC MIB
802.1AB Link Layer Discovery Protocol	RFC 4363 Q-BRIDGE-MIB	RFC 3417 SNMPV2-TM MIB
802.1Qaz ETS	RFC 4188 BRIDGE-MIB	RFC 3826 SNMP-USM-AES-MIB
802.1Qbb PFC	RFC 4133 ENTITY-MIB	Mellanox SMI MIB
802.3ad Link Aggregation with LACP	RFC 3433 ENTITY-SENSOR-MIB	Mellanox IF-VPI-MIB
802.3ba	RFC 4268 ENTITY-STATE-MIB	Mellanox enhanced ENTITY-MIB
802.3x Flow Control	RFC 2572 SNMP-MPD-MIB	Mellanox Power-Cycle-MIB
1000BASE-KX	RFC 4293 IP-MIB	Mellanox SW-Update-MIB
802.3ae 10 Gigabit Ethernet	RFC 4022 TCP-MIB	Mellanox Config-MIB
	RFC 4113 UDP-MIB	

Summary of Changes

Date	Version History	Action	Description of Change
03-Feb-2020	Version 10	Changed	Overview, Service and Support, Family Information and Technical Specifications sections were updated.
07-Oct-2019	Version 9	Changed	L3 Feature descriptions; updated transceivers section
05-Aug-2019	Version 8	Changed	Overview, Service and Support, Family Information and Technical Specifications sections were updated.
02-Apr-2019	Version 7	Changed	Family Information and Technical Specifications sections were updated.
07-Jan-2019	Version 6	Changed	Overview, Models, Service and Support, Family Information, Configuration Information and Technical Specifications sections were updated
15-Oct-2018	Version 5	Changed	Overview section was updated. SKUs descriptions were updated. Obsolete SKUs were removed from Configuration Information section. New SKUs were added in Configuration Information section.
02-Apr-2018	Version 4	Changed	SKU descriptions were updated.
		Removed	Obsolete SKUs were removed
08-Jan-2018	Version 3	Changed	The support matrix was updated and few typos were fixed.
02-Oct-2017	Version 2	Changed	Fixed a typo on the main image
25-Sep-2017	Version 1	New	New QuickSpecs

f 𝕏 in ✉

Sign up for updates

Hewlett Packard Enterprise

+