Overview

HPE StoreFabric M-Series SN2100M Ethernet 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 network becomes paramount. The HPE StoreFabric M-Series SN2100M Ethernet 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 3.2Tb/s from 16 ports at 100GbE, the switch enable non-blocking throughput at wire-speed transfers-across all packet sizes. All this enables the SN2100M 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.

HPE StoreFabric 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—Support 1/10/40Gbps for existing workloads and deliver 25/50/100Gbps Ethernet to respond quickly to business needs and stay on the leading edge of technology.

The StoreFabric M-Series SN2100 switch provides a high density, side-by-side 100GbE switching solution which scales up to 128 ports with 10/25 GbE breakout cables in single Rack Unit (RU) for the growing demands of today's storage, database, and data center environments. The SN2100 carries a unique design to accommodate the highest rack performance. Its design allows side-by-side placement of two switches in a single, 1RU slot of a 19" rack, delivering high availably to the hosts. Available in 8 or 16 100GbE ports, the SN2100 carries a switching capacity of 3.2Tb/s with 4.76Bpps processing capacity when running 16 ports at 100GbE, and enables 6.4Tb/s and 9.52Bpps when two units are deployed side-by-side in a 1 RU space.

SN2100M is available in two models:

- HPE StoreFabric SN2100M 100GbE 16QSFP28
  - 64 x 10 GbE - or
  - 64 x 25 GbE - or

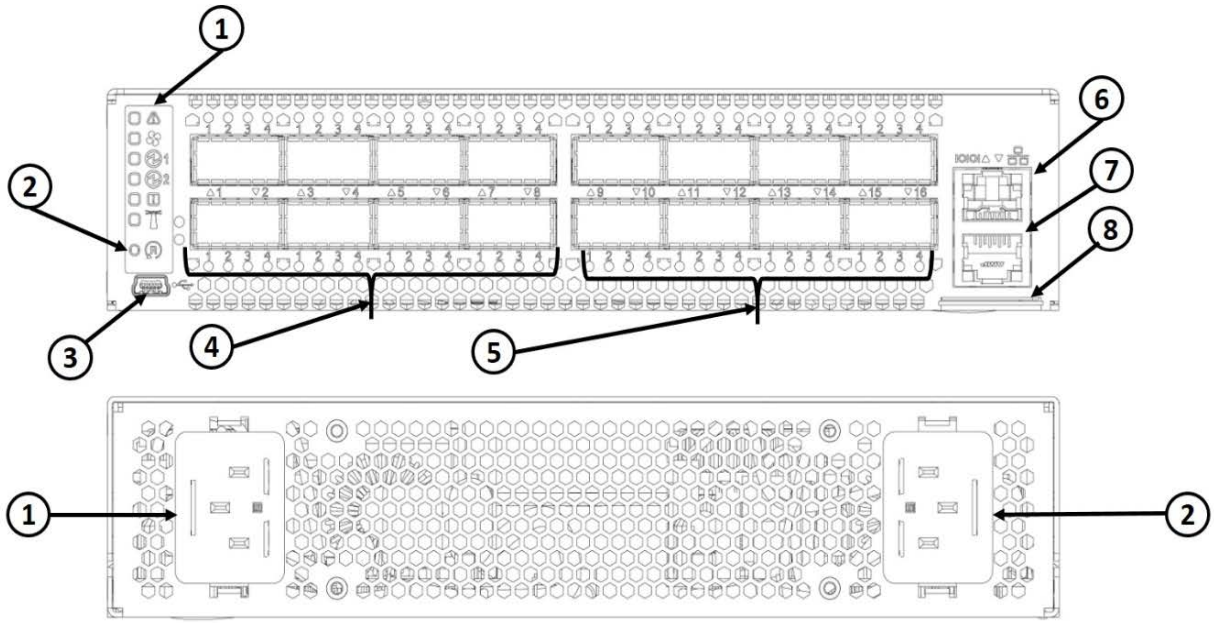
Overview

- 16 x (40/100) GbE

- HPE StoreFabric SN2100M 100GbE 8QSFP28
  - 32 x 10 GbE - or
  - 32 x 25 GbE - or
  - 8 x (40/100) GbE

SN2100M offers cost-effective options with entry at 8-ports and a pay as you grow with a software license. Offering more flexibility to customers to add capacity when needed.

- HPE SN2100M 100GbE 8p Upgrade E-LTU



Front:		Rear:
1. System Status LEDs	5. QSFP Ports (9-16)	1. Power Supply (non-replaceable)
2. Reset Button	6. Console Port	2. Power Supply (non-replaceable)
3. Mini USB Port	7. MGMT Port	
4. QSFP Ports (1-8)	8. Inventory Information Pull-out Tab	

Figure 1 HPE StoreFabric M-Series SN2100M

Overview

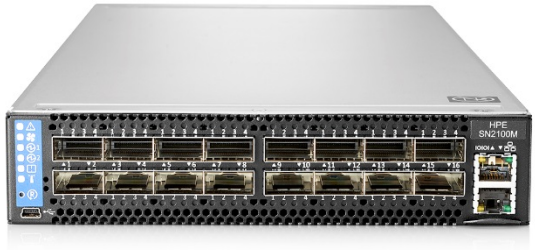


Figure 2: StoreFabric M-Series SN2100M (Front View)

Figure 3: StoreFabric M-Series SN2100M (Side View)

Figure 4: StoreFabric M-Series 2 x SN2100M (With Rack Installation Kit)

Features and Benefits

Key Features and Benefits

- HPE StoreFabric M-Series SN2100M offers cost-effective options with entry at 8-ports and a pay-as-you-grow software license. It offers more flexibility to add capacity when needed for diverse deployment and tighter budgets.
- SN2100M 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. This can be doubled by deploying two units side-by-side in 1U, delivering predictable performance and zero packet loss at line-rate across each port and packet size.
- SN2100M can be deployed to support 1GbE and 10GbE ports and is designed to be able to evolve over time to support 25, 50, and 100GbE speeds. This helps future-proof your network architecture and allows for implementing significant speed upgrades to the architecture over time.
- SN2100M provides ultra-low latency of under 300ns port-to-port. This is 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.
- 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.
- With unique half-width form factors and port counts, these Ethernet switches allow for two HPE M-Series SN2100 units to be deployed side-by-side within 1U, allowing for increased density and making it the ideal top-of-rack switch.
- 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 internal bandwidth to carry all ports at 100 Gb/s bandwidths concurrently. This allows the switches to avoid head-of-line blocking which can reduce a switches overall performance and throughput.

Models

HPE M-Series SN2100M Ethernet Switch Models	HPE StoreFabric SN2100M 100GbE 16QSFP28 Half Width Switch	Q2F23A
	HPE StoreFabric SN2100M 100GbE 8QSFP28 Half Width Switch	Q2F24A
	HPE StoreFabric SN2100M 100GbE 8-port Upgrade E-LTU	Q2M94AAE
	HPE StoreFabric SN2100M Rack Installation Kit	Q2F25A

Product Highlights

StoreFabric M-Series SN2100M

- Unique form factor of half-width allow for redundant units to be placed side-by-side in 1 rack unit with up to 128 ports with breakout cables, saving space and increasing density
- Half-width form factor with 8- or 16, 100GbE ports offers high-availability and scales up to 128 10GbE & 25GbE connections with breakout cables in 1U when deploying two units side-by-side.
- Extremely Flexible. Support for 1, 10, 25, 40, 50 and 100GbE speeds in a 1U enclosure.
- Ultra low latency with true cut through performance, Zero packet loss performance with DCBX, PFC, and ECN support

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 - web GUI that accept input and provide output by generating webpages which can be viewed by the user using a web browser

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 StoreFabric Switch Management supports out-of-band (OOB) dedicated interfaces (e.g. mgmt0, mgmt1) and in-band dedicated interfaces. In addition, most HPE StoreFabric Switches feature a 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.

Software Management

Configuration Management
Saving, Loading & restore to factory defaults of the Configuration File

Logging
Logging of system events in several severity levels and over a configurable period of time.

Debugging
Enables debug traces for Ethernet modules and protocols.

Product Highlights

Link Diagnostic Per Port
Enables an insight into the physical layer components - see information such as a cable status (plugged/unplugged) or if Auto-Negotiation has failed, etc

Signal Degradation Monitoring
A system can monitor the bit error rate (BER) in order to ensure a quality of the link.

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.

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

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
Linux Dockers run your own applications on a Linux docker's image embedded in the switch SW

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 device provides yet another level of redundancy that extends from the link level to the node level.

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

Product Highlights

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
Following are supported: BPDU Filter, BPDU Guard, Loop Guard, Root Guard, MSTP & RPVST

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.

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

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 without any CPU involvement.

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

Product Highlights

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.

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 to the destination..

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.

Product Highlights

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.

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 and embedded non-saleable software. For extended hardware support and installation information, please see the "Services and Support" Section.

Service and Support

Protect your business beyond warranty with HPE Support Services
HPE Pointnext provides a comprehensive portfolio including Advisory and Transformational, Professional, and Operational Services to help accelerate your digital transformation. From the onset of your transformation journey, Advisory and Transformational Services focus on designing the transformation and creating a solution roadmap. Professional Services specializes in creative configurations with flawless and on-time implementation, and on-budget execution. Finally, operational services provides innovative new approaches like Flexible Capacity and Datacenter Care, to keep your business at peak performance. HPE is ready to bring together all the pieces of the puzzle for you, with an eye on the future, and make the complex simple.

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**

Optimized Care

HPE Proactive Care* with 6 hour call-to-repair commitment, three year Support Service - HPE Proactive Care gives customers an enhanced call experience plus helps preventing problems and maintains IT stability by utilizing tailored, proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our highest level of hardware support - HPE's 24x7, six hour hardware call-to-repair. HPE is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable storage systems.
https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

Standard Care

HPE Proactive Care* with 24x7 coverage, three year Support Service - HPE Proactive Care gives customers an enhanced call experience plus helps preventing problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem.

https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

Basic Care

HPE Foundation Care 24x7, three-year Support Service – HPE Foundation Care 24x7 gives you access to HPE 24 hours a day, seven days a week for assistance on resolving issues. This service includes need based Hardware onsite response within four hours. Simplify your support experience and make HPE your first call to help resolve hardware or software problems. **https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA4-8876ENW**

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

Related Services

HPE Installation and Start-up Service
Provides for the basic hardware installation of HPE branded storage devices to assist you in bringing your new hardware into operation in a timely and professional manner.

Service and Support

https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00025816enw

HPE Datacenter Care service
HPE Datacenter Care helps improve IT stability and security, increase the value of IT, and enable agility and innovation. It is a structured framework of repeatable, tested, and globally available services "building blocks." You can deploy, operate, and evolve your datacenter wherever you are on your IT journey. With HPE Datacenter Care, you benefit from a personalized relationship with HPE via a single point of accountability for HPE and others' products. For more information, visit **http://www.hpe.com/services/datacentercare**

Parts and Materials

HPE 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.
The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

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**

HPE's 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.

*HPE Support Center Mobile App is subject to local availability.

For more information

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" **https://www.hpe.com/us/en/contact-hpe.html**

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/**

Family Information

	HPE StoreFabric SN2100M	HPE StoreFabric SN2410bM	HPE StoreFabric SN2410M	HPE StoreFabric SN2700M
Description	Ideal 25/40/50/100GbE ½ width ToR switch	10GbE ToR switch with 100GbE uplinks	25GbE ToR switch with 100GbE uplinks	100GbE Aggregation /ToR switch
Ports Speeds	• 16x40/100GbE • 32x50GbE 64x10/25GbE	• 48x1/10GbE + 8x40/100GbE	• 48x10/25GbE + 8x40/100GbE	• 32x40/100GbE • 32x50GbE 64x10/25GbE
Minimum Configuration	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	1U	1U
Switching Capacity	3.2Tb/s	4Tb/s	4Tb/s	6.4Tb/s
Processing Capacity	4.76Bpps	5.95Bpps	5.95Bpps	9.52Bpps
Forwarding Technology	Cut Through	Cut Through	Cut Through	Cut Through
Latency	300ns	300ns	300ns	300ns
Typical Power Consumption	94W	165W	165W	150W
Supported Operating Systems	MLNX-OS	MLNX-OS	MLNX-OS	MLNX-OS
System Memory	8GB	8GB	8GB	8GB
SSD Memory	16MB	32MB	32MB	32MB
Packet Buffer	16MB	16MB	16MB	16MB
100/100 Mgmt Ports	1 RJ45	2 RJ45	2 RJ45	2 RJ45
Serial Ports	1 RJ45	1 RJ45	1 RJ45	1 RJ45
USB Ports	1 Mini USB	1	1	1
Reversible Airflow	No	No power-to-port only option; hot swappable	No Power to port only; hot swappable	No Power to port only; hot swappable
Power Supplies	2 (1+1 redundant) not replaceable	2 (1+1 redundant) hot-swappable	2 (1+1 redundant) hot-swappable	2 (1+1 redundant) hot-swappable
Fans	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
Size	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)	8.52kg (18.8Lb)	8.52kg (18.8Lb)	11.1kg (24.5Lb)

Configuration Information

Step 1 - Base Configuration

Select one:

Model	Model Description	Part Number
HPE SN2100M 100GbE 16QSFP28 Switch	100 GbE 16-port Switch with 16 ports active 2 x Power cord, 1.83m, C13-C14 1 x Serial cable (DB9 to RJ45) 1 x HPE Warranty and Installation instructions HPE Quick Start Guide **NOTE:** Requires Rack Installation Kit & optical transceivers listed below.	Q2F23A
HPE SN2100M 100GbE 8QSFP28 Switch	100 GbE 16-port Switch with 8 active ports 2 x Power cord, 1.83m, C13-C14 1 x Serial cable (DB9 to RJ45) 1 x HPE Warranty and Installation instructions HPE Quick Start Guide **NOTE:** Requires Rack Installation Kit & optical transceivers listed below.	Q2F24A
HPE SN2100M Rack Installation Kit	Rack installation kit for StoreFabric SN2100M (Q2F23A & Q2F24A)	Q2F25A
HPE SN2100M 100GbE 8p Upgrade E-LTU	8-port upgrade license for – SN2100M 100GbE 8QSFP28 Switch (Q2F24A).	Q2M94AAE

Step 2 - Options

	Model Description	Part Number
Transceivers		
	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
	40GE compatible Transceivers, DAC, and AOC:	
	HPE X140 40G QSFP+ MPO SR4 Transceiver	JG325B
	HPE X140 40G QSFP+ MPO MM 850nm CSR4 300m Transceiver	JG709A
	HPE X140 40G QSFP+ LC LR4 SM 10km 1310nm Transceiver	JG661A
	HPE X140 40G QSFP+ LC LR4L 2km SM Transceiver	JL286A
	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
	HPE BladeSystem c-Class QSFP+ to 4x10G SFP+ 7m Active Optical Cable	721070-B21
	HPE BladeSystem c-Class QSFP+ to 4x10G SFP+ 15m Active Optical Cable	721076-B21

Configuration Information

HPE BladeSystem c-Class 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable	720202-B21
HPE BladeSystem c-Class 40G QSFP+ to QSFP+ 7m Active Optical Cable	720205-B21
HPE BladeSystem c-Class 40G QSFP+ to QSFP+ 15m Active Optical Cable	720211-B21
HPE BladeSystem c-Class 40Gb QSFP+ MPO SR4 100m Transceiver	720187-B21
HPE BladeSystem c-Class 40Gb QSFP+ MPO SR4 300m Transceiver	747698-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
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable	JG329A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	JG330A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable	JG331A
HPE X240 QSFP28 4xSFP28 1m Direct Attach Copper Cable	JL282A
HPE X240 QSFP28 4xSFP28 3m Direct Attach Copper Cable	JL283A
HPE X240 QSFP28 4xSFP28 5m Direct Attach Copper Cable	JL284A
100GE and 25GE compatible Transceiver, DAC, and AOC	
HPE 100Gb QSFP28 to QSFP28 7m Active Optical Cable	845410-B21
HPE 100Gb QSFP28 to QSFP28 15m Active Optical Cable	845414-B21
HPE 100Gb QSFP28 to 4x25Gb SFP28 3m Direct Attach Copper Cable	845416-B21
25GE AOC	
HPE QSFP28 Direct Attach Special Cables	845420-B21
HPE QSFP28 Direct Attach Special Cables	845422-B21
HPE QSFP28 Direct Attach Special Cables	845424-B21
100GE DAC	
HPE 100Gb QSFP28 to QSFP28 1m Direct Attach Copper Cable	845404-B21
HPE 100Gb QSFP28 to QSFP28 3m Direct Attach Copper Cable	845406-B21
HPE 100Gb QSFP28 to QSFP28 5m Direct Attach Copper Cable	845408-B21
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 X240 QSFP28 4xSFP28 1m Direct Attach Copper Cable	JL282A
HPE X240 QSFP28 4xSFP28 3m Direct Attach Copper Cable	JL283A
QSFP/QSA Adapter	
HPE QSFP/SFP+ Adapter Kit	655874-B21
HPE QSFP28 to SFP28 Adapter	845970-B21
HPE X120 1G SFP RJ45 T Transceiver	JD089B
HPE M-series 10GbE SFP+ SR MM 300m Transceiver	Q6M30A
HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE 10GBase-T SFP+ Transceiver	813874-B21
HPE BladeSystem c-Class 10Gb SFP+ SR Transceiver	455883-B21
Supported and recommended HPE Premier Flex Fiber cables	
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

Configuration Information

HPE Premier Flex MPO to 4 x Lucent Connector 30m Cable	Q1H68A
HPE Premier Flex MPO to 4 x Lucent Connector 50m Cable	Q1H69A
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 Multi-mode OM4 12 Fiber 15m Cable	Q1H66A
HPE Premier Flex MPO/MPO Multi-mode OM4 12 Fiber 30m Cable	Q1H67A
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 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 MPO/MPO OM4 100m (12ft) Cable	H6Z30A
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

Technical Specifications

	HPE SN2100M 100GbE 16QSFP28 Switch	HPE SN2100M 100GbE 8QSFP28 Switch
Description	Ideal 25/40/50/100GbE ½ width ToR switch	Ideal 25/40/50/100GbE ½ width ToR switch
Ports Speeds	• 16x40/100GbE • 32x50GbE • 64x10/25GbE	• 8x40/100GbE • 16x50GbE • 32x10/25GbE
Minimum Configuration	16 ports	8 Ports - pay as you grow with 8 additional ports Upgrade License (Q2M94AAE)
Size	1U (½ 19" wide)	1U (½ 19" wide)
Switching Capacity	3.2Tb/s	3.2Tb/s (halved at 8 ports)
Processing Capacity	4.76Bpps	4.76Bpps (halved at 8 ports)
Forwarding Technology	Cut Through	Cut Through
Latency	300ns	300ns
Typical Power Consumption	94W	94W
Supported Operating Systems	MLNX-OS	MLNX-OS
System Memory	8GB	8GB
SSD Memory	16MB	16MB
Packet Buffer	16MB	16MB
100/100 Mgmt Ports	1 RJ45	1 RJ45
Serial Ports	1 RJ45	1 RJ45
USB Ports	1 Mini USB	1 Mini USB
Reversible Airflow	No	No
Power Supplies	2 (1+1 redundant); not replaceable	2 (1+1 redundant); not replaceable
Fans	2 fans not replaceable	2 fans not replaceable
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 7.87" x 20"(43.9mm x 200mm x 508mm)	1.72" x 7.87" x 20"(43.9mm x 200mm x 508mm)
Weight	4.53kg (10Lb)	4.53kg (10Lb)

Technical Specifications

Environment

Operating temperature 0°C to 40°C

Operating relative humidity (operational) 10% to 85%,noncondensing

Electrical characteristics

Frequency	**50/60 Hz**
Voltage	**90-264VAC**

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: 73.7dB(A)

Typical power with passive cables (ATIS): 94.3W

Summary of Changes

Date	Version History	Action	Description of Change
02-Apr-2018	Version 3	Changed	SKU descriptions were updated. Updates to Services & Support section with new links.
		Removed	Obsolete SKUs were removed.
08-Jan-2018	Version 2	Changed	The support matrix was updated and few typos were fixed.
25-Sep-2017	Version 1	New	New QuickSpecs

Sign up for updates

a00021858enw - 16028 - Worldwide - V3 - 2-April-2018