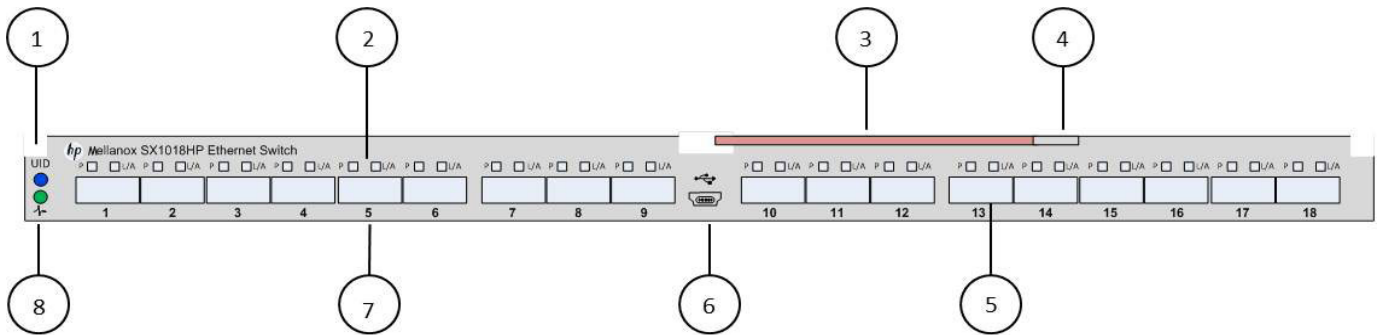


### Overview

### Mellanox SX1018HP Ethernet Switch

The Mellanox SX1018HP Ethernet Switch brings high bandwidth, low latency capability to the HPE c-Class enclosure. Based on Mellanox's SwitchX® silicon and advanced hardware design, this switch provides sixteen downlinks capable of 40Gb per link and up to eighteen 40Gb QSFP+ ports in a double wide c-Class interconnect form factor. The SX1018HP features industry leading latency of 230nS and exceptional power efficiency while providing optimal performance for enterprise data center, financial services, web 2.0, high performance computing and cloud computing applications. In addition, the SX1018HP incorporates a familiar industry-standard CLI, which enables administrators to easily configure and manage the switch.



**Mellanox SX1018HP Ethernet Switch**

- |                          |                      |
|--------------------------|----------------------|
| 1. Switch Identifier LED | 5. 40Gb QSFP+ Port   |
| 2. Port LEDs             | 6. Mini USB port     |
| 3. Latch                 | 7. Port Number       |
| 4. Latch release         | 8. Switch Status LED |

### Models

Mellanox SX1018HP Ethernet Switch for c-Class BladeSystem

689638-B21

### Compatibility

- |                             |                          |
|-----------------------------|--------------------------|
| <b>HPE ProLiant Servers</b> | HPE ProLiant BL420c Gen8 |
|                             | HPE ProLiant BL460c Gen8 |
|                             | HPE ProLiant BL465c Gen8 |
|                             | HPE ProLiant BL660c Gen8 |
|                             | HPE ProLiant WS460c Gen8 |
|                             | HPE ProLiant BL460c Gen9 |
|                             | HPE ProLiant BL660c Gen9 |
|                             | HPE ProLiant WS460c Gen9 |

**NOTE:** Some servers listed above may be discontinued.

- |  |                                 |
|--|---------------------------------|
| <b>ProLiant BL c-Class Server Blade Enclosures</b> | HPE BladeSystem c7000 Enclosure |
|--|---------------------------------|

---

## Standard Features

### Performance

- Totally Non blocking architecture
- 230ns latency at 40Gb; 280ns latency at 10Gb
- Wire speed switching on any packet size
- Eighteen QSFP+ ports support 40Gb uplinks
- Sixteen server side downlinks support 10Gb/40Gb per port
- Up to eight QSFP+ uplinks can be broken out to 4 x 10Gb with optional breakout cable
- Maximum of two SX1018HP switches per enclosure
- Efficient Cut through switching
- Hardware-based wire-speed access control lists (ACLs)
- RDMA over Converged Ethernet (RoCEE)

---

### Management

- Remote configuration and management through Web browser or CLI
- Secure Web-based management through HTTPS
- Standards based SNMP management via SNMPv1, v2c and v3
- OOBM via Onboard Administrator
- GUI Management via Unified Fabric Manager
- Manager and operator privilege levels
- Command authorization via RADIUS
- Complete session logging for problem resolution
- LLDP Discovery protocol
- IPv6 management
- Dual flash images
- Multiple configuration files
- Syslog
- Network Time Protocol (NTP)
- MAC-based authentication with RADIUS server
- Access Control Lists (ACLs)
- Secure FTP
- STP Root Guard
- DHCP protection from unauthorized DHCP servers
- DHCP relay
- RADIUS/TACACS+
- Secure management via SSHv2 and SNMPv3
- mLAG
- PIM (Bidirectional)
- sFlow
- Port mirroring

---

### Layer 2 Switching

- 48 K MAC addresses
- Priority based Flow Control (802.1Qbb)
- Flow Control (802.3x)
- Enhanced Transmission Selection (802.1Qaz)
- 4094 VLANs
- Jumbo packet support
- LAG, LACP (802.3ad)
- mLAG
- Rapid Spanning Tree Protocol RSTP (802.1W)
- Multiple Spanning Tree Protocol MSTP (802.1s)
- IGMPv1, IGMPv2
- IGMP querier

## Standard Features

- RSTP, STP Root Guard
- IP Multicast Snooping and data-driven IGMP
- DCBx
- OpenFlow

---

## Layer 3 Switching

- Static Routing
- OSPF
- ECMP
- VRRPv2 (IPv4)
- PIM (bidirectional)

---

## Service and Support

### Service and Support

#### **HPE Technology Services for Industry Standard Servers and BladeSystem**

Capitalizing on HPE ProLiant server and HPE BladeSystem capabilities requires a service partner who understands your increasingly complex business technology environment. That's why it makes sense to team up with the people who know Hewlett Packard Enterprise infrastructure hardware and software best - the experienced professionals at HPE Services.

#### **Protect your business beyond warranty with HPE Pointnext operational services**

HPE Pointnext operational services offer complete care and support expertise with committed response choices designed to meet your IT and business needs.

HPE Foundation Care services offer scalable reactive support-packages for Hewlett Packard Enterprise servers and software. You can choose the type and level of service that is most suitable for your IT and business needs. HPE Proactive Care delivers high levels of system availability through proactive service management and advanced technical response. HPE Datacenter Care provides highly flexible environmental support to address unique customer business needs.

Choose a recommended service appropriate to your product or contact your Hewlett Packard Enterprise sales representative or authorized HPE ServiceOne partner for additional HPE Pointnext operational services information.

---

## Recommended HPE Pointnext operational services for optimal satisfaction with your HPE product

### Optimized Support

#### **3-Year HPE 6 hour Call to Repair Response, Proactive Care**

Combined reactive and proactive support for hardware and software helping optimize your systems and delivering high levels of availability through proactive service management and advanced technical response. Hardware problem resolution to return the hardware in operating condition within 6 hours of the initial service request. A Technical Account Manager, as your single point of contact, will own your call or issue end to end until resolved.

<https://www.hpe.com/h20195/v2/getpdf.aspx/4aa3-8855eee.pdf>

#### **HPE Installation and Startup Service for HPE BladeSystem c-Class Infrastructure for c7000 enclosure**

Provides for hardware installation (c-Class ProLiant and Integrity server blades, storage blades, Ethernet Interconnects and Virtual Connect) and software installation and startup of a BladeSystem c7000 Infrastructure in a single enclosure including deployment of OS (two servers), HPE Insight Control and Server Deployment (formerly RDP).

<https://www.hpe.com/h20195/v2/getpdf.aspx/4aa0-5964enw.pdf>

#### **HPE Installation and Startup Service for HPE BladeSystem c-Class Enhanced Network**

Hewlett Packard Enterprise provides for the configuration and testing of BladeSystem Ethernet interconnect switches and Virtual Connect to facilitate proper implementation of network protocols and access to advanced features.

<https://www.hpe.com/h20195/v2/getpdf.aspx/4aa0-5969enw.pdf>

---

## HPE Pointnext operational services to enhance your HPE product experience

### Related Services

#### **3-Year HPE 24x7 4 hour response, Proactive Care Service**

This service gives you combined reactive and proactive support including rapid access to our Advanced Solution Center to manage and prevent problems and a Technical Support Specialist with a broad level of technical knowledge that will engage with additional technical expertise as needed from HPE's vast global resources.

## Service and Support

<https://www.hpe.com/h20195/v2/getpdf.aspx/4aa3-8855eee.pdf>

### **HPE Installation and Startup Service for HPE BladeSystem c-Class Infrastructure for c7000 enclosure**

Provides for hardware installation (c-Class ProLiant and Integrity server blades, storage blades, Ethernet Interconnects and Virtual Connect) and software installation and startup of a BladeSystem c7000 Infrastructure in a single enclosure including deployment of OS (two servers), HPE Insight Control and Server Deployment (formerly RDP).

<https://www.hpe.com/h20195/v2/getpdf.aspx/4aa0-5964enw.pdf>

### **HPE Installation and Startup Service for HPE BladeSystem c-Class Enhanced Network**

Hewlett Packard Enterprise provides for the configuration and testing of BladeSystem Ethernet interconnect switches and Virtual Connect to facilitate proper implementation of network protocols and access to advanced features.

<https://www.hpe.com/h20195/v2/getpdf.aspx/4aa0-5969enw.pdf>

### **HPE Proactive Care Personalized Support - Environmental Option**

The Personalized Support option provides an assigned Account Support Manager who can bring best practices from across the industry plus extra technical skills to your IT team. This option is only available as an add-on to HPE Proactive Care Support.

### **HPE Proactive Select Service**

Provides a flexible way to purchase HPE best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months. <http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENN.pdf>

Additional HPE Pointnext operational services can be found at: <http://www.hp.com/go/cpc>

---

### **Insight Online/Insight Remote Support**

HPE Insight Remote Support provides 24 X 7 remote monitoring, proactive notifications, and problem resolution. This comes at no additional cost with your HPE solution. Learn more about Insight Remote Support <http://www.hp.com/go/insightremotesupport> and Insight Online <http://www.hp.com/go/insightonline>

**NOTE:** Insight Remote Support is a prerequisite for Proactive Care.

---

### **HPE Support Center**

Personalized online support portal with access to information, tools and experts to support Hewlett Packard Enterprise business products. Submit support cases online, chat with HPE experts, access support resources or collaborate with peers. Learn more <http://www.hp.com/go/hpsc>

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 Care Pack or Hewlett Packard Enterprise contractual support agreement.

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

---

### **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.

---

## Service and Support

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

---

### Warranty

Mellanox SX1018HP Ethernet Switch Limited Warranty includes 1 year Parts, 1 year Labor, 1-year on-site next business day support. Additional information regarding worldwide limited warranty and technical support is available at:

<http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>.

### For more information

To learn more on HPE ProLiant servers and HPE BladeSystem servers, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit:

<http://www.hp.com/services/bladesystem>

## Related Options

<b>Adapter options</b>	HP Infiniband QDR/Ethernet 10Gb 2-port 544M Adapter <b>NOTE:</b> Only one port of each adapter is available for use with this switch regardless of mezzanine slot occupied. Two adapters and two switches are required for redundancy.	644160-B21
<b>QSFP+ Options</b>	HPE QSFP/SFP+ Adapter Kit  HPE FlexNetwork X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable HPE FlexNetwork X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable HPE FlexNetwork X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable	655874-B21  JG326A JG327A JG328A
<b>Direct Attach Cables</b>	HPE 0.5M FDR Quad Small Form Factor Pluggable InfiniBand Copper Cable  HPE 1M FDR Quad Small Form Factor Pluggable InfiniBand Copper Cable  HPE 1.5M FDR Quad Small Form Factor Pluggable InfiniBand Copper Cable  HPE 2M FDR Quad Small Form Factor Pluggable InfiniBand Copper Cable  HPE 3M FDR Quad Small Form Factor Pluggable InfiniBand Copper Cable	670759-B21  670759-B22  670759-B23  670759-B24  670759-B25
<b>Service and Support Offerings</b>	<p><b>NOTE:</b> HPE Pointnext operational services for the c7000 Enclosure cover the enclosure, power supplies and fans. The Mellanox SX1018HP Ethernet Switch for c-Class BladeSystem is also covered by the c7000 enclosure Care Pack services.</p> <p><b>NOTE:</b> Some options, including Fibre Channel and InfiniBand switches for the HPE c-Class BladeSystem, are not covered under the c7000 enclosure Care Packs and carry separate Care Packs. Care Pack service level support for these options should always be uplifted to match existing storage or server service level</p> <p><b>Proactive Care Services for the c7000 Enclosure</b></p> <p>HPE 3 year Proactive Care 24x7 c7000 Enclosure Service</p> <p><b>Installation &amp; Start-up Services recommended for the c7000</b></p> <p>HPE BladeSystem c7000 Infrastructure Startup Service</p> <p>HPE BladSys c7000 Endc Network Startup Service</p> <p>Additional HPE Pointnext operational services can be found at:  <a href="http://www.hp.com/go/cpc">http://www.hp.com/go/cpc</a></p>	U3C33E   UE602E UE603E

## Technical Specifications

<b>Shipping Dimensions</b>	<b>Length</b>	20.12 in (511 mm)
	<b>Width</b>	14.53 in (369 mm)
	<b>Height</b>	2.41 in (61 mm)
<b>Shipping Weight</b>		8.82 lbs (3.680 kg)
<b>Product Specifications</b>	<b>Performance</b>	14.40 Gbps uplink port bandwidth; 640 Gbps downlink (server) port bandwidth;
<b>Hardware</b>		Forwarding rate 1.48 million pps per Gigabit port, (64-byte packets) and 14.8 million pps per 10 Gig port and 59.37 MPPS per 40GbE Non-blocking, full-wire speed for all connections
	<b>Forwarding Mode</b>	Cut through
	<b>MAC Addresses</b>	Supports 48K MAC addresses per switch in a BladeSystem Enclosure
	<b>Forwarding Table Age Time</b>	10 to 1,000,000 seconds (default: 300 seconds) (Maximum age)
	<b>VLAN IDs</b>	4096 Byte
	<b>IGMP Groups</b>	5000
	<b>Memory</b>	Flash Nor 128M bit, Nand Flash 16Gbit. DDR (main) - 2Gbyte, FW flash -32Mbit.
<b>Connectors and Cabling</b>	<b>Connector</b>	18 QSFP+ 1 mini-USB Management
	<b>Cable Support</b>	FCC Class A ICES-003 Class A AS/NZS 3548 Class A VCCI Class A
<b>Indicators</b>		Status LED Module locator (UID) Port physical link 1/10/40GbE port link/activity, Green
<b>Dimensions</b>	<b>Length</b>	15.28 in (388 mm)
	<b>Width</b>	10.87 in (276 mm)
	<b>Height</b>	1.10 in (27.9 mm)
<b>Weight</b>		7.18lbs (3.226 kg)
<b>Environmental Ranges</b>	<b>Temperature Range</b>	Operating 50° to 95° F (10° to 35° C) Non-operating -40° to 158° F (-40° to 70° C)
		Relative Humidity (non-condensing) Operating 5% to 95%
	<b>Power Specification</b>	Power Requirements Passive Cables 82.6W Active Cables 95.76W Optical Cables 106.76W

### Standards Support

#### General protocols

IEEE 802.1D MAC Bridges  
 IEEE 802.1p Priority  
 IEEE 802.1Q VLANs  
 IEEE 802.1w Rapid Reconfiguration of Spanning Tree  
 IEEE 802.3ad Link Aggregation Control Protocol (LACP)  
 IEEE 802.3ae 10-Gigabit Ethernet



## Technical Specifications

IEEE 802.3x Flow Control  
 RFC 768 UDP  
 RFC 792 ICMP  
 RFC 793 TCP  
 RFC 826 ARP  
 RFC 854 TELNET  
 RFC 925 Multi-LAN Address Resolution  
 RFC 1350 TFTP Protocol (revision 2)  
 RFC 1519 CIDR  
 RFC 2131 DHCP  
 RFC 4675 RADIUS VLAN & Priority

### MIBs

RFC 1213 MIB II  
 RFC 2233 Interface MIB  
 RFC 2571 SNMP Framework MIB  
 RFC 2572 SNMP-MPD MIB  
 RFC 2579 SNMPv2-TC  
 RFC 2591 IANA-LANGUAGE-MIB  
 RFC 2863 IF MIB  
 RFC 2932 IANA-RTPROTO-MIB  
 RFC 3433 ENTITY SENSOR MIB  
 RFC 4133 Entity MIB (Version 3)  
 RFC 4268 ENTITY STATE MIB  
 RFC 4318 RSTP MIB  
 LLDP-MIB

---

<b>Safety and Compliance Safety Certifications</b>	Complies with UL 60950-1 2nd Ed CAN/CSA C22.2 No.60950-1 2nd Ed cTUVus certified. CE Marking RoHS 6/6 compliant
--	---

---

<b>Electromagnetic Emissions Certifications FCC Part 15 Class A</b>	FCC Part 15 Class A EN 55022: 1998 (CISPR22) EN 55024: 1998 (CISPR24) VCCI Class A AS/NZS 3548 Class A CE CNS 13438 Class A MIC MIC
---	---

---

<b>Environment-friendly Products and Approach</b>	<b>End-of-life Management and Recycling</b>	Hewlett Packard Enterprise offers end-of-life Hewlett Packard Enterprise product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a> . To recycle your product, please go to: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a> or contact your nearest Hewlett Packard Enterprise sales office. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.
---	---	--

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site at: <http://www.hp.com/go/green>. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

## Technical Specifications

## Summary of Changes

Date	Version History	Action	Description of Change
23-Oct-2017	Version 9	Changed	Care Pack naming and Service and Support- Parts and Materials updated.
21-Oct-2016	From version 7 to 8	Updated	Rebranding edition.
02-Oct-2015	From version 6 to 7	Updated	Update overview section
17-Nov-2014	From Version 5 to 6	Updated	Servers Compatibility
12-Aug-2014	From Version 4 to 5	Updated	Standard Features updated
11-Jul-2014	From Version 3 to 4	Changed	Changes were made on all document
05-Jul-2013	From Version 2 to 3	Added	HPE 0.5M, 1M, and 3M FDR Quad Small Form Factor Pluggable InfiniBand Copper Cables were added to Direct Attach Cables.
21-Feb-2013	From Version 1 to 2	Changed	Updated the Introduction Section, Standard Features and Related Options Section.



[Sign up for updates](#)



© Copyright 2017 Hewlett Packard Enterprise Development LP. The information contained herein is subject to change without notice. The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft and Windows are US registered trademarks of Microsoft Corporation.

c04111434 - 14481 - Worldwide - V9 - 23-October-2017