HPE FlexFabric 5710 Switch Series

Key features

• High-performance, low-latency data center top-of-rack (ToR) switch aimed at expanding port connectivity while adding local switching capacity
• HPE Intelligent Resilient Fabric (IRF) for virtualization and 2-tier networks
• High 1/10GbE wire speed ports with 40GbE and 100GbE uplinks
• Layer 2 and Layer 3 features with static routing, RIP, OSPF, and BGP
• Support converged applications with Data Center Bridging (DCB) features such as Priority-based Flow Control (PFC) IEEE 802.1Qbb, Quantized Congestion Notification (QCN) IEEE 802.1Qau, Enhanced Transmission Selection (ETS) IEEE 802.1Qaz, and Data Center Bridging Capability Exchange (DCBx) IEEE 802.1Qaz, and FCoE

Product overview

HPE FlexFabric 5710 Switch Series is a family of high-performance, low-latency access switches aimed at providing superior edge device connectivity in modern spine leaf data centers.

HPE FlexFabric 5710 Switch Series is ideally suited for deployment at the server access layer of large and medium-sized enterprise data centers. It delivers lower TCO while enhancing networking performance to support demanding virtualized applications and server-to-server traffic. Resilience and ease of management come hand-in-hand with the HPE FlexFabric 5710.
Features and benefits

Quality of service (QoS)
• Powerful QoS features
  – Flexible classification
    Flow classification is based on DSCP field, MAC address, IP protocol type, source address, destination address, or port number of an application.
  – Feature queue scheduling
    Flexible queuing and scheduling algorithms are configured on a per-port or per-queue basis, including strict priority (SP), weighted round robin (WRR), SP+WRR, weighted fair queuing (WFQ), and SP+WFQ.
  – QPPB
    QoS Policy Propagation via Border Gateway Protocol (BGP), often abbreviated to QPPB, is a mechanism that allows propagation of QoS policy and classification by the sending party based on access lists, community lists, and autonomous system paths in the BGP, thus helping to classify based on destination instead of source address.

Data center-optimized
• Versatile server connectivity
  HPE FlexFabric 5710 Switch Series enables scaling of the server edge with 1GbE and 10GbE ToR deployments with high-density 24- and 48-port solutions delivered in a 1RU form factor. These switches can be set up as stand-alone Layer 2 and Layer 3 switches. The high server port density of HPE FlexFabric 5710 Switch is backed by 40GbE QSFP+ or 100GbE QSFP28 uplinks to deliver the availability of needed bandwidth for demanding applications. Each 40GbE QSFP+ port can also be configured as four 10GbE ports by using a 40GbE-to-10GbE splitter cable.
• High-performance switching
  Cut-through and nonblocking architecture delivers low latency (1.5 to 2.5 μs for 10GbE) for very demanding enterprise applications. HPE FlexFabric 5710 switches also deliver high-performance switching capacity and wire speed packet forwarding. Local switching capacity and wire speed packet forwarding for demanding data center environments.
• Higher scalability
  HPE IRF technology simplifies the architecture of server access networks; up to 9 HPE FlexFabric 5710 physical switches can be combined into one virtual switch configuration and are managed using a single IP address. HPE IRF enables this switch to deliver the unmatched scalability of virtualized switches and flatter 2-tier networks, which reduces cost and complexity.
• Advanced modular network operating system
  Comware v7 network operating system’s modular design and multiple processes bring native high stability, independent process monitoring, and a restart. The OS also allows individual software modules to be upgraded for higher availability and supports enhanced serviceability functions like hitless software upgrades with In Service Software Upgrade (ISSU).
• Reversible airflow
  It is enhanced for data center hot-cold aisle deployment with reversible airflow—for either
  front-to-back or back-to-front airflow.

• Redundant fans and power supplies
  1+1 internal redundant and hot-pluggable power supplies and multiple fan trays enhance
  reliability and availability.

• Data Center Bridging (DCB) protocols
  It provides support for IEEE 802.1Qbb Priority Flow Control (PFC), Quantized Congestion
  Notification (QCN) IEEE 802.1Qau, Enhanced Transmission Selection (ETS) IEEE
  802.1Qaz, and Data Center Bridging Capability Exchange (DCBx) IEEE 802.1Qaz for
  converged applications.

• FCoE support
  Provides support for Fibre Channel over Ethernet (FCoE) including Fibre Channel
  Forwarder (FCF), transit, and N-Port Virtualization (NPV).

• Jumbo frames
  Frame sizes of up to 10,000 bytes allow high-performance remote backup and disaster
  recovery services to be enabled.

**Management and manageability**

• Fully featured console
  Provides a safe, easy-to-use CLI for configuring the module via SSH or a switch console;
  provides direct real-time session visibility

• Remote configuration and management
  Is available through a secure CLI over Telnet and SSH; Role-Based Access Control (RBAC)
  provides multiple levels of access; configuration rollback and multiple configurations on
  the flash provide ease of operation; remote visibility is provided with sFlow® and Simple
  Network Management Protocol (SNMP) v1/v2/v3, and is fully supported in HPE Intelligent
  Management Center (IMC)

• Management security
  Restricts access to critical configuration commands; offers multiple privilege levels with
  password protection; access control lists (ACLs) provide Telnet and SNMP access; local and
  remote syslog capabilities allow logging of access

• Command authorization
  Leverages Remote Authentication Dial-In User Service (RADIUS) to link a custom list of CLI
  commands to an individual network administrator's login; an audit trail documents activity

• Troubleshooting
  – Ingress and egress port monitoring
    Enable network problem solving
  – Traceroute and ping
    Enable testing of network connectivity
• File copy
  Allows users to copy switch files to and from a USB flash drive
• Support for multiple configuration files
• Dual flash images
  Provides independent primary and secondary operating system files for backup while upgrading
• SNMPv1, v2c, and v3
  Facilitate centralized discovery, monitoring, and safer management of networking devices
• Out-of-band interface
  Isolates management traffic from user data plane traffic for complete isolation and total reachability, no matter what happens in the data plane
• ISSU and hot patching
  Provides hitless IRF-based software upgrades and hitless patching of the modular operating system
• Auto-configuration
  Provides automatic configuration via Dynamic Host Configuration Protocol (DHCP) auto-configuration, NETCONF, and Python scripting
• IPv6 over IPv4, 6to4, and ISATAP Tunnel
• RSPAN and ERSPAN
• Ethernet OAM (802.3ah) and Connectivity Fault Detection (CFD) (802.1ag)
• Symmetric load balancing for link aggregation and ECMP
• Layer 2 protocol tunneling (L2PT) support for virtual private networks (VPNs)
• Buffer monitoring
• OVSDB QoS and OVSDB ACL
• IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
  Advertises and receives management information from adjacent devices on a network, facilitating easy mapping by network management applications
• sFlow (RFC 3176)
  Provides scalable ASIC-based wire speed network monitoring and accounting with no impact on network performance; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes
• **Logging**
  Provides local and remote logging of events via SNMP (v2c and v3) and syslog; provides log throttling and log filtering to reduce the number of log events generated

• **Information center**
  Provides a central repository for system and network information; aggregates logs, traps, and debugging information generated by the system and maintains them in order of severity; outputs the network information to multiple channels based on user-defined rules

• **Local/Remote port mirroring**
  Mirrors selected traffic to destination on same device or mirrors destination on different devices

• **Puppet/Chef/YANG support**

• **Network management**
  **HPE IMC** centrally configures, updates, monitors, and troubleshoots

**Resiliency and high availability**

• **HPE IRF technology**
  Enables an HPE FlexFabric to deliver resilient, scalable, and secured data center network for physical and virtualized environment; groups up to 9 HPE FlexFabric 5710 Switch Series in an HPE IRF configuration, allowing them to be configured and managed as a single virtual switch with a single IP address; simplifies ToR and spine/leaf deployments and management, reducing data center deployment and operating expenses

• **IEEE 802.1w Rapid Convergence Spanning Tree Protocol**
  Increases network uptime through faster recovery from failed links

• **IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)**
  Provides high link availability in multiple VLAN environments by allowing Multiple Spanning Trees

• **Hitless patch upgrades**
  Allows patches and new service features to be installed without restarting the equipment, increasing network uptime and facilitating maintenance

• **Device Link Detection Protocol (DLDP)**
  Monitors link connectivity and shuts down ports at both ends if unidirectional traffic is detected, preventing loops in STP-based networks

• **Smart Link and RRPP and load balancing among Smart Link multiple instances and RRPP multiple instances**

• **DRNI**
  Provides a resilient interconnect using multiple links among one or more nodes in a network

• **ERPS**
  Provides fast protection and recovery switching for Ethernet traffic
Security

HPE FlexFabric 5710 Switch Series fully meets customer requirements in security design and provides a complete network security solution. It provides the following network security features:

- **ACLs**
  Provides IP Layer 3 filtering based on source, destination IP address, or subnet, and source, destination TCP or UDP port number.

- **RADIUS/TACACS+**
  Eases switch management security administration by using a password authentication server.

- **Secure shell (SSH)**
  Encrypts transmitted data for safe remote CLI access over IP networks.

- **IEEE 802.1X and RADIUS network logins**
  Controls port-based access for authentication and accountability.

- **Terminal and user access control**

- **Hierarchical user management and password protection**

- **IP source guard**

- **Blackhole MAC address entries**

- **MAC learning limit**

- **MAC address and port number binding**

- **SSH 2.0**

- **Port isolation**
  - IEEE 802.1X-compliant user access authentication
  - Port security: Allows access only to specified MAC addresses, which can be learned or specified by the administrator
  - Local and RADIUS authentications

- **Ethernet frame and upper-layer packet filtering and validity authentication:**
  - **ACL**
    - Packet filtering based on packet header fields from Layer 2 through Layer 4, including source MAC, destination MAC, source IP (IPv4/IPv6), destination IP (IPv4/IPv6), port number, and protocol type
  - **SNMPv3** encryption and authentication

- **Address Resolution Protocol (ARP) attack protection features such as ARP attack detection**

- **RA guard, and ND snooping and detection**
Layer 2 switching

• ARP
  Supports static, dynamic, and reverse ARP and ARP proxy

• Flow Control
  IEEE 802.3x Flow Control provides intelligent congestion management via PAUSE frames

• Ethernet link aggregation
  Provides IEEE 802.3ad Link Aggregation of up to 1024 groups and 32 ports; support for Link Aggregation Control Protocol (LACP), LACP Local Forwarding First, and LACP Short-time provides a fast, resilient environment that is ideal for the data center

• Spanning Tree Protocol (STP)
  STP (IEEE 802.1D), Rapid STP (RSTP, IEEE 802.1w), and Multiple STP (MSTP) (IEEE 802.1s)

• VLAN support
  Provides support for 4094 VLANs based on port: VLAN mapping, Q-in-Q, and Selective Q-in-Q

• Internet Group Management Protocol (IGMP) support
  Provides support for IGMP Snooping v1/v2/v3, Protocol Independent Multicast (PIM) snooping, Multicast Listener Discovery (MLD) snooping v1/v2, and IPv6 PIM snooping

• DHCP support at Layer 2
  Provides full DHCP snooping support for DHCP Snooping Option 82, DHCP Relay Option 82, DHCP Snooping Trust, and DHCP Snooping Item Backup

Layer 3 services

• ARP
  Determines the MAC address of another IP host in the same subnet; supports static ARPs; gratuitous ARP allows detection of duplicate IP addresses; proxy ARP allows normal ARP operation between subnets or when subnets are separated by a Layer 2 network

• DHCP
  Simplifies the management of large IP networks and supports client and server; DHCP Relay enables DHCP operation across subnets

• Connectivity Fault Management (IEEE 802.1AG) and Ethernet in the First Mile (IEEE 802.3ah)
  Provides additional monitoring that can be used for fast fault detection and recovery

• VXLAN L2 and L3 gateway support for up to 2K tunnels
Layer 3 routing
- Equal-Cost Multipath (ECMP)
  Enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth
- Layer 3 IPv4 routing
  Provides routing of IPv4 at media speed; supports static routes, RIP, OSPF, and BGP
- Dual IP stack
  Maintains separate stacks for IPv4 and IPv6 to ease the transition from an IPv4-only network to an IPv6-only network design
- Bidirectional Forwarding Detection (BFD)
  Enables link connectivity monitoring and reduces network convergence time for RIP, OSPF, BGP, IS-IS, Virtual Router Redundancy Protocol (VRRP), and IRF
- Layer 3 IPv6 routing
  Provides routing of IPv6 at media speed; supports static routing, RIPng, OSPFv3, and BGP

Convergence
- LLDP-MED (Media Endpoint Discovery)
  Defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones

Warranty and support
- 1-year warranty
  See hpe.com/networking/warrantysummary for warranty and support information included with your product purchase
- Software releases
  To find software for your product, see hpe.com/networking/support. For details on the software releases available with your product purchase, see hpe.com/networking/warrantysummary
## HPE FlexFabric 5710 Switch Series Specifications

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<th>I/O ports and slots</th>
<th>Additional ports and slots</th>
<th>Power supplies</th>
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<th>Physical characteristics</th>
<th>Memory and processor</th>
<th>Performance</th>
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<tr>
<td>HPE 5710 48SFP+ 6QS+/2QS28 Switch (JL585A)</td>
<td>48 x 1/10 GB SFP+ ports, 6 x 40GbE ports, 3 x 40GbE ports and 1 x 100G port, 2 x 100GbE ports</td>
<td>Management ports, 1 x 10M/100M/1000MBASE-T copper port, 1 x SFP port, 1 x mini USB console port, 1 x serial console port</td>
<td>2 power supply slots, 1 minimum power supply required (ordered separately)</td>
<td>4 fan tray slots, The customer must order fan trays, as they are not included with the switch. This system requires four same-direction airflow fan trays to function properly. A failed fan tray must be replaced immediately. Fans are hot swappable.</td>
<td>44 mm x 440 mm x 460 mm (1.73 in. x 17.32 in. x 18.11 in.)</td>
<td>1 GB flash, 4 GB SDRAM, packet buffer size: 12 MB</td>
<td></td>
</tr>
<tr>
<td>HPE 5710 48XGT 6QS+/2QS28 Switch (JL586A)</td>
<td>48 x 1/10GBASE-T ports, 6 x 40GbE ports, 3 x 40GbE ports and 1 x 100G port, 2 x 100GbE ports</td>
<td>Management ports, 1 x 10M/100M/1000MBASE-T copper port, 1 x SFP port, 1 x mini USB console port, 1 x serial console port</td>
<td>2 power supply slots, 1 minimum power supply required (ordered separately)</td>
<td>5 fan tray slots, The customer must order fan trays, as they are not included with the switch. This system requires five same-direction airflow fan trays to function properly. A failed fan tray must be replaced immediately. Fans are hot swappable.</td>
<td>44 mm x 440 mm x 460 mm (1.73 in. x 17.32 in. x 18.11 in.)</td>
<td>1 GB flash, 4 GB SDRAM, packet buffer size: 12 MB</td>
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<tr>
<td>HPE 5710 24SFP+ 6QS+/2QS28 Switch (JL587A)</td>
<td>24 x 1/10 GB SFP+ ports, 6 x 40GbE ports, 3 x 40GbE ports and 1 x 100G port, 2 x 100GbE ports</td>
<td>Management ports, 1 x 10M/100M/1000MBASE-T copper port, 1 x SFP port, 1 x mini USB console port, 1 x serial console port</td>
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<td>44 mm x 440 mm x 400 mm (1.73 in. x 17.32 in. x 15.75 in.)</td>
<td>1 GB flash, 4 GB SDRAM, packet buffer size: 12 MB</td>
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### HPE FlexFabric 5710 Switch Series (continued)

#### Specifications (continued)

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<th>HPE 5710 48SFP+ 6QS+/2QS28 Switch (JL585A)</th>
<th>HPE 5710 48XGT 6QS+/2QS28 Switch (JL586A)</th>
<th>HPE 5710 24SFP+ 6QS+/2QS28 Switch (JL587A)</th>
</tr>
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<tbody>
<tr>
<td><strong>Reliability</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTBF (years)</td>
<td>J585A HPE 5710 48SFP+ 6QS+/2QS28 Switch 135.90</td>
<td>J586A HPE 5710 48XGT 6QS+/2QS28 Switch 114.43</td>
<td>J587A HPE 5710 24SFP+ 6QS+/2QS28 Switch 145.41</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>32°F to 113°F (0°C to 45°C)</td>
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</tr>
<tr>
<td>Operating relative humidity</td>
<td>10% to 90% noncondensing</td>
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</tr>
<tr>
<td>Acoustic</td>
<td>Low-speed fan: 52.5 dB; high-speed fan: 68.7 dB</td>
<td>Low-speed fan: 52.4 dB; high-speed fan: 68.6 dB</td>
<td>Low-speed fan: 52.5 dB; high-speed fan: 68.7 dB</td>
</tr>
<tr>
<td><strong>Electrical characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>50 Hz/60 Hz</td>
<td>50 Hz/60 Hz</td>
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</tr>
<tr>
<td>Maximum heat dissipation</td>
<td>607 BTU/hr</td>
<td>900 BTU/hr</td>
<td>457 BTU/hr</td>
</tr>
<tr>
<td>AC voltage</td>
<td>100 VAC–240 VAC; Max. voltage: 264 VAC @ 50 Hz/60 Hz; Max. output power: 250W/450W depending on PSU selected</td>
<td>100 VAC–240 VAC; Max. input voltage: 264 VAC @ 50 Hz/60 Hz; Max. output power: 450W</td>
<td>100 VAC–240 VAC; Max. voltage: 264 VAC @ 50 Hz/60 Hz; Max. output power: 250W/450W depending on PSU selected</td>
</tr>
<tr>
<td>Idle power</td>
<td>74W/108W</td>
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</tr>
<tr>
<td><strong>Notes</strong></td>
<td>Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.</td>
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<tr>
<td><strong>Safety</strong></td>
<td>UL 60950-1; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1; AS/NZS 60950-1; CNS 14336-1</td>
<td>UL 60950-1; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1; AS/NZS 60950-1; CNS 14336-1</td>
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<tr>
<td><strong>Emissions</strong></td>
<td>VCCI Class A; EN 55032 Class A; ICES-003 Class A; AS/NZS CISPR 32 Class A; EN 61000-3-2; EN 61000-3-3; FCC (CFR 47, Part 15) Class A; CISPR 32 Class A; CNS 13438; KN32; TCVN 7189; Anatel Resolution 442; ETSI EN 300 386</td>
<td>VCCI Class A; EN 55032 Class A; ICES-003 Class A; AS/NZS CISPR 32 Class A; EN 61000-3-2; EN 61000-3-3; FCC (CFR 47, Part 15) Class A; CISPR 32 Class A; CNS 13438; KN32; TCVN 7189; Anatel Resolution 442; ETSI EN 300 386</td>
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<tr>
<td><strong>Immunity</strong></td>
<td>ETSI EN 300 386; EN 55024; KN35; CISPR 24</td>
<td>ETSI EN 300 386; EN 55024; KN35; CISPR 24</td>
<td>ETSI EN 300 386; EN 55024; KN35; CISPR 24</td>
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<tr>
<td><strong>Environmental</strong></td>
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**Specifications (continued)**

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<th>Model</th>
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<th>Notes</th>
<th>Services</th>
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<tr>
<td>HPE 5710 48SFP+ 6QS+/2QS28 (JL585A)</td>
<td>HPE IMC; CLI; out-of-band management; SNMP Manager; Telnet; FTP</td>
<td>The customer must install a minimum of one power supply, as the device does not come with one. The customer must install 4 fan kits depending on the model, as the device does not come with one.</td>
<td>See the HPE website at <a href="http://hpe.com/networking/services">hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services, and response times in your area, contact your local HPE sales office.</td>
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### Standards and protocols

**BGP**

- RFC 1163 BGP
- RFC 1771 BGPv4
- RFC 1997 BGP Communities Attribute
- RFC 2918 Route Refresh Capability
- RFC 3392 Capabilities Advertisement with BGP-4
- RFC 4271 A BGP-4
- RFC 4360 BGP Extended Communities Attribute
- RFC 4456 BGP Route Reflection: An alternative to Full Mesh Internal BGP (IBGP)

**Device management**

- RFC 1157 SNMPv1/v2c
- RFC 1305 NTPv3
- RFC 1591 DNS (client)
- RFC 1902 SNMPv2
- RFC 1908 (SNMPv1/2 coexistence)
- RFC 2573 (SNMPv3 applications)
- RFC 2576 (coexistence between SNMPv1, v2, v3)
- RFC 2819 RMON
- Multiple configuration files
- Multiple software images
- SSHv1/SSHv2
- TACACS/TACACS+
## Standards and protocols (continued)

( applies to all products in series)

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<td>RFC 1331 DHCP</td>
<td>RFC 3417 Transport Mappings for the SNMP</td>
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<td>RFC 1533 DHCP Options and BOOTP Vendor Extensions</td>
<td>RFC 3418 Management Information Base (MIB) for the SNMP</td>
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<td>RFC 1534 DHCP/BOOTP Interoperation</td>
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<td>RFC 1541 DHCP</td>
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<td>RFC 1542 Clarifications and Extensions for the Bootstrap Protocol</td>
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<td>RFC 1591 DNS (client only)</td>
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<td>RFC 1624 Incremental Internet checksum</td>
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<td>RFC 2131 DHCP</td>
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*(applies to all products in series)*

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### Accessories

**HPE FlexFabric 5710 48SFP+ 6QSFP+ or 2QSFP28 Switch (JL585A)**

- HPE FlexFabric 5710 250W Front-to-Back AC Power Supply (JL589A)
- HPE FlexFabric 5710 250W Back-to-Front AC Power Supply (JL590A)
- HPE FlexFabric 5710 450W Front-to-Back AC Power Supply (JL592A)
- HPE FlexFabric 5710 450W Back-to-Front AC Power Supply (JL593A)

**Note:** 450W AC PSUs are compatible with JL585A but not required. The 250W AC PSU and 450W AC PSU cannot be installed in the same switch. For 1-1 redundancy this system requires two same-type power supplies to function properly.

- HPE FlexFabric X721 Front-to-Back Fan Tray (JL594A)
- HPE FlexFabric X722 Back-to-Front Fan Tray (JL595A)

**HPE FlexFabric 5710 48XGT 6QSFP+ or 2QSFP28 Switch (JL586A)**

- HPE FlexFabric 5710 450W Front-to-Back AC Power Supply (JL592A)
- HPE FlexFabric 5710 450W Back-to-Front AC Power Supply (JL593A)
- HPE FlexFabric X721 Front-to-Back Fan Tray (JL594A)
- HPE FlexFabric X722 Back-to-Front Fan Tray (JL595A)

**HPE FlexFabric 5710 24SFP+ 6QSFP+ or 2QSFP28 Switch (JL587A)**

- HPE FlexFabric 5710 250W Front-to-Back AC Power Supply (JL589A)
- HPE FlexFabric 5710 250W Back-to-Front AC Power Supply (JL590A)
- HPE FlexFabric 5710 450W Front-to-Back AC Power Supply (JL592A)
- HPE FlexFabric 5710 450W Back-to-Front AC Power Supply (JL593A)

**Note:** 450W AC PSUs are compatible with JL587A but not required. The 250W AC PSU and 450W AC PSU cannot be installed in the same switch. For 1-1 redundancy this system requires two same-type power supplies to function properly.

- HPE FlexFabric X721 Front-to-Back Fan Tray (JL594A)
- HPE FlexFabric X722 Back-to-Front Fan Tray (JL595A)
Optics

Management ports

- HPE X120 1G SFP RJ45 T Transceiver (JD089B)
- HPE X120 1G SFP LC SX Transceiver (JD118B)
- HPE X120 1G SFP LC LX Transceiver (JD119B)
- HPE X125 1G SFP LC LH40 1310nm Transceiver (JD061A)
- HPE X120 1G SFP LC LH40 1550nm Transceiver (JD062A)
- HPE X125 1G SFP LC LH80 Transceiver (JD063B)

Gigabit SFP+ modules

Gigabit SFP+ transceiver modules

- HPE X120 1G SFP RJ45 T Transceiver (JD089B)
- HPE X120 1G SFP LC SX Transceiver (JD118B)
- HPE X120 1G SFP LC LX Transceiver (JD119B)
- HPE X125 1G SFP LC LH40 1310nm Transceiver (JD061A)
- HPE X120 1G SFP LC LH40 1550nm Transceiver (JD062A)
- HPE X125 1G SFP LC LH80 Transceiver (JD063B)

10-Gigabit SFP+ modules and cables

- HPE X130 10G SFP+ LC SR Transceiver (JL437A)
- HPE X130 10G SFP+ LC LR Transceiver (JL439A)
- HPE X240 10G SFP+ SFP+ 3m DAC Cable (JD097C)
- HPE X240 SFP+ SFP+ 5m DAC Cable (JG081C)
- HPE X240 10G SFP+ SFP+ 0.65m DAC Cable (JD095C)
- HPE X240 10G SFP+ SFP+ 1.2m DAC Cable (JD096C)
- HPE X2A0 10G SFP+ to SFP+ 7m Active Optical Cable (JL290A)
- HPE X2A0 10G SFP+ to SFP+ 10m Active Optical Cable (JL291A)
- HPE X2A0 10G SFP+ to SFP+ 20m Active Optical Cable (JL292A)

40-Gigabit QSFP+ modules and cables

- HPE X140 40G QSFP+ LC LR4 SM 10km 1310nm Transceiver (JG661A)
- HPE X140 40G QSFP+ MPO MM 850nm CSR4 300m Transceiver (JG709A)
- HPE X140 40G QSFP+ MPO SR4 Transceiver (JG325B)
- HPE X140 40G QSFP+ LC BiDi 100m MM Transceiver (JL251A)
- HPE X140 40G QSFP+ LC LR4L 2km SM Transceiver (JL286A)
- HPE X240 40G QSFP+ QSFP+ 1m DAC Cable (JG326A)
- HPE X240 40G QSFP+ QSFP+ 3m DAC Cable (JG327A)
- HPE X240 40G QSFP+ QSFP+ 5m DAC Cable (JG328A)
- HPE X240 QSFP+ 4x10G SFP+ 1m DAC Cable (JG329A)
- HPE X240 QSFP+ 4x10G SFP+ 3m DAC Cable (JG330A)
- HPE X240 QSFP+ 4x10G SFP+ 5m DAC Cable (JG331A)
- HPE X2A0 40G QSFP+ to QSFP+ 7m Active Optical Cable (JL287A)
- HPE X2A0 40G QSFP+ to QSFP+ 10m Active Optical Cable (JL288A)
- HPE X2A0 40G QSFP+ to QSFP+ 20m Active Optical Cable (JL289A)
100-Gigabit QSFP28 modules and cables

- HPE X150 100G QSFP28 MPO SR4 100m MM Transceiver (JL274A)
- HPE X150 100G QSFP28 LC LR4 10km SM Transceiver (JL275A)
- HPE X150 100G QSFP28 MPO PSM4 500m SM Transceiver (JH420A)
- HPE X150 100G QSFP28 CWDM4 2km SM Transceiver (JH673A)
- HPE X240 100G QSFP28 to QSFP28 1m Direct Attach Copper Cable (JL271A)
- HPE X240 100G QSFP28 3m DAC Cable (JL272A)
- HPE X240 100G QSFP28 to QSFP28 5m Direct Attach Copper Cable (JL273A)
- HPE X2A0 100G QSFP28 to QSFP28 7m Active Optical Cable (JL276A)
- HPE X2A0 100G QSFP28 to QSFP28 10m Active Optical Cable (JL277A)
- HPE X2A0 100G QSFP28 to QSFP28 20m Active Optical Cable (JL278A)

Learn more at hpe.com/networking