RETIRED: This document has been officially retired, and the base products listed herein are now considered obsolete and are no longer available for sale. Consequently, the information contained within may no longer be current. This document is provided exclusively for reference and informational purposes.

Overview

HPE FlexFabric 5920 Switch Series

Models

HPE FlexFabric 5920AF 24XG Switch	JG296A

Product overview

The HPE FlexFabric 5920 Switch Series is made up of high-density 10GbE, ultra-deep packet buffering, top-of-rack (ToR) switches. These switches are part of the Hewlett Packard Enterprise (HPE) FlexNetwork architecture's HPE FlexFabric solution module and are ideally suited for deployments at the server access layer of large enterprise data centers.

The HPE FlexFabric 5920 Switch Series is also designed for content delivery networks, especially when they are used to reduce network congestion at the I/O that is associated with the heavy use of server virtualization, as well as bursty multimedia, storage applications, and other critical services.

With the increase in virtualized applications and server-to-server traffic, businesses now require ToR switch innovations that will meet their needs for higher-performance server connectivity, convergence of Ethernet and storage traffic, the capability to handle virtual environments, and ultra-deep packet buffering all in a single device.



Key features

- Ultra-deep packet buffering
- HPE IRF for virtualization and a 2-tier architecture
- High 10GbE ToR port density
- IPv6 support in ToR with full L2/L3 features
- TRILL and VEPA readiness for virtualized networks

Features and benefits

Quality of Service (QoS)

- **Powerful QoS features**

Overview

- **Flexible classification**
  creates traffic classes based on access control lists (ACLs), IEEE 802.1p precedence, IP, and DSCP or Type of Service (ToS) precedence; supports filter, redirect, mirror, remark, and logging
- **Feature support**
  provides support for Strict Priority Queuing (SP), Weighted Fair Queuing (WFQ), Weighted Deficit Round Robin (WDRR), SP+WDRR together, configurable buffers, Explicit Congestion Notification (ECN), and Weighted Random Early Detection (WRED)

Data center optimized

- **High-performance 10 GbE switching**
  enables you to scale your server-edge 10GbE ToR deployments with 24 high-density 10GbE ports delivered in a 1RU design; delivers a 480 Gbps (357.12 Mpps) switching capacity in addition to incorporating 3.6 GB of packet buffers
- **Ultra-deep packet buffering**
  provides up to a 3.6 GB packet buffer to eliminate network congestion at the I/O that is associated with the heavy use of server virtualization, as well as bursty multimedia, storage applications, and other critical services
- **Higher scalability**
  Hewlett Packard Enterprise (HPE) Intelligent Resilient Framework (IRF) technology simplifies the architecture of server access networks; up to four HPE FlexFabric 5920 switches can be combined to deliver unmatched scalability of virtualized access layer switches and flatter, two-tier FlexFabric networks using IRF, which reduces cost and complexity
- **Advanced modular operating system**
  Comware v7 software's modular design and multiple processes deliver native high stability, independent process monitoring, and restart; the OS also allows individual software modules to be upgraded for higher availability and supports enhanced serviceability functions like hitless software upgrades with single-chassis ISSU
- **TRILL and VEPA ready**
  Transparent Interconnection of Lots of Links (TRILL) is supported to increase the scale of enterprise data centers; EVB/VEPA provides connectivity into the virtual environment for a data center-ready environment
- **Reversible airflow**
  switches are enhanced for data center hot/cold aisle deployments with reversible front-to-back or back-to-front airflow
- **Redundant fans and power supplies**
  1+1 internal redundant and hot-pluggable power supplies and dual fan trays enhance reliability and availability
- **Lower OPEX and greener data center**
  provide reversible airflow and advanced chassis power management
- **Data Center Bridging (DCB) protocols**
  support IEEE 802.1Qbb Priority Flow Control (PFC), Data Center Bridging Exchange (DCBX), and IEEE 802.1Qaz Enhanced Transmission Selection (ETS) for converged applications
- **FCoE support**
  provides support for FCoE, including expansion, fabric, trunk VF and N ports, aggregation of E-port, N-port virtualization; fabric services such as name server, registered state change notification, and login services; per-VSAN fabric services, FSPF, soft and hard zoning, Fibre Channel traceroute, ping, debugging, and FIP snooping
- **Jumbo frames**
  with frame sizes of up to 10,000 bytes on Gigabit Ethernet and 10-Gigabit ports, high-performance remote backup and disaster-recovery services can be enabled

Management

- **IEEE 802.1ab LLDP discovery**
  advertises and receives management information from adjacent devices on a network, facilitating easy mapping by network management applications
- **SNMPv1, v2c, and v3**
  facilitate centralized discovery, monitoring, and secure management of networking devices
- **Port mirroring**
  enables traffic on a port to be simultaneously sent to a network analyzer for monitoring

Overview

- **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
- **Remote configuration and management**
  is available through a secure command-line interface (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 with sFlow and SNMP v1/v2/v3 is fully supported in HPE Intelligent Management Center (IMC)
- **ISSU and hot patching**
  provides hitless software upgrades with single-unit In Services Software Upgrade (ISSU) and hitless patching of modular OS
- **Autoconfiguration**
  provides automatic configuration via DHCP autoconfiguration
- **Network Time Protocol (NTP) and Secure Network Time Protocol (SNTP)**
  synchronizes timekeeping among distributed time servers and clients; keeps consistent timekeeping among all clock-dependent devices within the network so that the devices can provide diverse applications based on the consistent time

Resiliency and high availability

- **Intelligent Resilient Fabric (IRF)**
  Hewlett Packard Enterprise (HPE) IRF technology enables an HPE FlexFabric to deliver resilient, scalable, and secured data center networks for physical and virtualized environments; up to four 5920 switches can be grouped together in an IRF configuration, which allows them to be configured and managed as a single switch with a single IP address; this simplifies ToR deployment and management, reducing data center deployment and operating expenses

Layer 2 switching

- **Address Resolution Protocols (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**
  IEEE 802.3ad Link Aggregation of up to 128 groups of 16 ports; support for LACP, LACP Local Forwarding First, and LACP Short Timeout provide 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) provide loop avoidance
- **VLAN support**
  provides support for 4,096 VLANs based on port, MAC address, IPv4 subnet, protocol, and guest VLAN; supports VLAN mapping
- **IGMP support**
  provides support for IGMP Snooping, Fast-Leave, Group-Policy, and IPv6; IGMP Snooping provides Layer 2 optimization of multicast traffic
- **DHCP support at Layer 2**
  provides full DHCP Snooping support, including DHCP Snooping Option 82, DHCP Relay Option 82, DHCP Snooping Trust, and DHCP Snooping Item Backup

Layer 3 services

- **Address Resolution Protocol (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

Overview

- **OAM support**
  provides support for 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

Layer 3 routing

- **Virtual Router Redundancy Protocol (VRRP) and VRRP Extended**
  allow quick failover of router ports
- **Policy-based routing**
  makes routing decisions based on policies set by the network administrator
- **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 and RIPv2, OSPF, BGP, and IS-IS
- **Layer 3 IPv6 routing**
  provides routing of IPv6 at media speed; supports RIPng, OSPFv3, BGP4+ for IPv6, and IS-ISv6

Additional information

- **Green IT and power**
  use the latest advances in silicon development, shut off unused ports, and use variable-speed fans to improve energy efficiency
- **Low power consumption**
  is rated to have one of the lowest power usages in the industry by Miercom independent tests

Warranty and support

- **1-year warrant**y
  see **http://www.hpe.com/networking/warrantysummary** for warranty and support information included with your product purchase
- **Software releases**
  to find software for your product, refer to **http://www.hpe.com/networking/support**; for details on the software releases available with your product purchase, refer to **http://www.hpe.com/networking/warrantysummary**

Configuration

Build To Order:

BTO is a standalone unit with no integration. BTO products ship standalone are not part of a CTO or Rack-Shippable solution.

Standard Switch Enclosures

HPE FlexFabric 5920AF 24XG Switch — JG296A

- 24 fixed 1000/10000 SFP+ ports
- min=0 \ max=24 SFP or SFP+ Transceivers
- Must select min 2 Fan Tray
- Must select min 1 Power Supply
- 1U - Height

See Configuration
NOTE:1

Configuration Rules:

Note 1 The following Transceivers install into this switch:

HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LRM Transceiver	JD093B
HPE X130 10G SFP+ LC LR Transceiver	JD094B
HPE X130 10G SFP+ LC SR Data Center Transceiver	JL437A
HPE X130 10G SFP+ LC LRM Data Center Transceiver	JL438A
HPE X130 10G SFP+ LC LR Data Center Transceiver	JL439A
HPE X130 10G SFP+ LC ER 40km Transceiver	JG234A
HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HPE FlexNetwork X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HPE X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Campus-Cable	JH693A
HPE X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Campus-Cable	JH694A
HPE X240 10G SFP+ to SFP+ 3m Direct Attach Copper Campus-Cable	JH695A
HPE X240 10G SFP+ to SFP+ 7m Direct Attach Copper Campus-Cable	JH696A
HPE FlexNetwork X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C
HPE X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HPE X125 1G SFP LC LH70 Transceiver	JD063B
HPE X120 1G SFP RJ45 T Transceiver	JD089B
HPE X120 1G SFP LC BX 10-U Transceiver	JD098B
HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
HPE X120 1G SFP LC SX Transceiver	JD118B
HPE X120 1G SFP LC LX Transceiver	JD119B

Rack Level Integration CTO Models

CTO Switch Chassis

HPE FlexFabric 5920AF 24XG Switch — JG296A

- 24 fixed 1000/10000 SFP+ ports
- (min=0 \ max=24 SFP or SFP+ Transceivers)

See Configuration
NOTE:1, 2, 5

Configuration

- Must select min 2 Fan Tray
- Must select min 1 Power Supply
- 1U - Height

Configuration Rules:

Note 1 The following Transceivers install into this switch: (Use #0D1 or #B01 quoted to switch if switch is CTO) - if applicable

HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LRM Transceiver	JD093B
HPE X130 10G SFP+ LC LR Transceiver	JD094B
HPE X130 10G SFP+ LC ER 40km Transceiver	JG234A
HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HPE FlexNetwork X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HPE FlexNetwork X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C
HPE X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HPE X125 1G SFP LC LH70 Transceiver	JD063B
HPE X120 1G SFP RJ45 T Transceiver	JD089B
HPE X120 1G SFP LC BX 10-U Transceiver	JD098B
HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
HPE X120 1G SFP LC SX Transceiver	JD118B
HPE X120 1G SFP LC LX Transceiver	JD119B

Note 2 Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) . (See Localization Menu)
REMARK: When Switches/Routers are Factory Racked, Then #B2B, or #B2C should be the Defaulted Power Cable option on the Switches/Routers.

Note 5 If HPE CTO Switch Chassis is selected for Rack Level Integration, Then the JG296A - HPE 5920AF-24XG Switch needs to integrate (with #0D1) to the HPE Rack.

Remarks: Clic UNB - If an option is ordered with #0D1/#B01, then the switch must have #0D1 option.

Enter the following menu selections as integrated to the CTO Model X server above if order is factory built.

Transceivers

SFP Transceivers

HPE X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HPE X125 1G SFP LC LH70 Transceiver	JD063B
HPE X120 1G SFP RJ45 T Transceiver	JD089B
HPE X120 1G SFP LC BX 10-U Transceiver	JD098B
HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
HPE X120 1G SFP LC SX Transceiver	JD118B

Configuration

HPE X120 1G SFP LC LX Transceiver	JD119B

SFP+ Transceivers

HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LRM Transceiver	JD093B
HPE X130 10G SFP+ LC LR Transceiver	JD094B
HPE X130 10G SFP+ LC SR Data Center Transceiver	JL437A
HPE X130 10G SFP+ LC LRM Data Center Transceiver	JL438A
HPE X130 10G SFP+ LC LR Data Center Transceiver	JL439A
HPE X130 10G SFP+ LC ER 40km Transceiver	JG234A
HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HPE FlexNetwork X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HPE FlexNetwork X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C
HPE X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Campus-Cable	JH693A
HPE X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Campus-Cable	JH694A
HPE X240 10G SFP+ to SFP+ 3m Direct Attach Copper Campus-Cable	JH695A
HPE X240 10G SFP+ to SFP+ 7m Direct Attach Copper Campus-Cable	JH696A
HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C

Cables

MPO 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

Internal Power Supplies

System (std 0 // max 2) User Selection (min 1 // max 2) per switch

HPE 58x0AF 650W AC Power Supply • includes 1 x c13, 300w	JC680A See Configuration **NOTE:**1, 2
PDU Cable NA/MEX/TW/JP • C15 PDU Jumper Cord (NA/MEX/TW/JP)	JC680A#B2B
PDU Cable ROW • C15 PDU Jumper Cord (ROW)	JC680A#B2C
HP 58x0AF 650W DC Power Supply	JC681A See Configuration **NOTE:**1
HPE FlexFabric Switch 650W 48V Hot Plug NEBS-compliant DC Power Supply	JH336A See Configuration **NOTE:**1

Configuration Rules:

Configuration

Note 1 If 2 power supplies are selected they must be the same SKU number.

Note 2 Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) . (See Localization Menu)
REMARK: When Switches/Routers are Factory Racked, Then #B2B, or #B2C should be the Defaulted Power Cable option on the Switches/Routers.

Remarks:

Drop down under power supply should offer the following options and results:
Switch/Router/Power Supply to PDU Power Cord - #B2B in North America, Mexico, Taiwan, and Japan or #B2C ROW. (Watson Default B2B or B2C for Rack Level CTO)
Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO)

Switch Options

Fan Trays
System (std 0 // max 2) User Selection (min 2 // max 2) per switch

HPE 5920AF 24XG Back (Power Side) to Front (Port Side) Airflow Fan Tray	JG297A See Configuration **NOTE:**1
HPE 5920AF 24XG Front (Port Side) to Back (Power Side) Airflow Fan Tray	JG298A See Configuration **NOTE:**1

Configuration Rules:

Note 1 The Fan Trays selected must be the same SKU number.

Remarks:

Watson Blue Text:
If there is any empty space below the switch in a rack when using Back to Front Fan Trays, JG297A, the rack will receive an Air Plenum kit that takes up 1U of additional space in the rack. The Air Plenum kit is not required on fully configured racks. This only applies for CTO Rack Level Integration. The Air Plenum Kit is a non-saleable SKU, and is brought in automatically for CTO Factory Rack Level Integration.

Technical Specifications

HPE FlexFabric 5920AF 24XG Switch (JG296A)

I/O ports and slots	24 fixed 1000/10000 SFP+ ports	
Additional ports and slots	1 RJ-45 serial console port 1 RJ-45 out-of-band management port	
Power supplies	2 power supply slots 1 minimum power supply required (ordered separately)	
Fan tray	2 fan tray slots The customer must order fan trays, as fan trays are not included with the switch. This system requires two same-direction airflow fan trays to function properly. The system should not be operated with only one fan tray for more than 24 hours. The system should not be operated without a fan tray more than two minutes. The system should not be operated outside of the temperature range of 32°F (0°C) to 113°F (45°C). Failure to comply with these operating requirements may void the product warranty.	
Physical characteristics	**Dimensions**	1.72(h) x 17.32(w) x 27.56(d) x in (4.36 x 44.0 x 70.0 x cm) (1U height)
	Weight	28.66 lb (13 kg)
Memory and processor	256 MB flash; Packet buffer size: 3.6 GB, 2 GB SDRAM	
Performance	**Latency**	< 1.7 µs (64-byte packets)
	Throughput	up to 367 Mpps
	Routing/Switching capacity	480 Gbps
	Routing table size	16000 entries (IPv4)
	MAC address table size	128000 entries
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 90%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Acoustic	Low-speed fan: 62.1 dB, High-speed fan: 76.7 dB
Electrical characteristics	**Maximum heat dissipation**	1249 BTU/hr (1317.7 kJ/hr)
	Voltage	100 - 240 VAC, rated -40 to -60 VDC, rated (depending on power supply chosen)
	Idle power	343 W
	Maximum power rating	366 W
	Frequency	50/60 Hz
	Notes	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.
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance	

Technical Specifications

Emissions	VCCI Class A EN 55022 Class A ICES-003 Class A ANSI C63.4 2003 AS/NZS CISPR 22 Class A EN 61000-3-2:2006 EN 61000-3-3:1995 +A1:2001+A2:2005 EMC Directive 2004/108/EC FCC (CFR 47, Part 15) Class A	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3
	EN	EN 55024:1998+ A1:2001 + A2:2003
	ESD	EN 61000-4-2; IEC 61000-4-2
	Radiated	EN 61000-4-3; IEC 61000-4-3
	EFT/Burst	EN 61000-4-4; IEC 61000-4-4
	Surge	EN 61000-4-5; IEC 61000-4-5
	Conducted	EN 61000-4-6; IEC 61000-4-6
	Power frequency magnetic field	EN 61000-4-8; IEC 61000-4-8
	Voltage dips and interruptions	EN 61000-4-11; IEC 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	IMC - Intelligent Management Center; Command-line interface; Out-of-band management; SNMP manager; Telnet; FTP	
Notes	The customer must order a power supply, as the device does not come with a PSU. At least one JC680A or JC681A is required.	
Services	Refer to the Hewlett Packard Enterprise sales website at **http://www.hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

Standards and protocols (applies to all products in series)

BGP	RFC 1163 Border Gateway Protocol (BGP) RFC 1771 BGPv4 RFC 1997 BGP Communities Attribute RFC 2918 Route Refresh Capability RFC 3392 Capabilities Advertisement with BGP-4 RFC 4271 A Border Gateway Protocol 4 (BGP-4) RFC 4360 BGP Extended Communities Attribute RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP) RFC 4760 Multiprotocol Extensions for BGP-4
Device Management	RFC 1157 SNMPv1/v2c RFC 1305 NTPv3 RFC 1591 DNS (client) RFC 1902 (SNMPv2) RFC 1908 (SNMP v1/2 Coexistence) RFC 2573 (SNMPv3 Applications) RFC 2576 (Coexistence between SNMP V1, V2, V3) Multiple Configuration Files

Technical Specifications

	Multiple Software Images SSHv1/SSHv2 Secure Shell TACACS/TACACS+
General Protocols	IEEE 802.1D MAC Bridges IEEE 802.1p Priority IEEE 802.1Q VLANs IEEE 802.1s Multiple Spanning Trees IEEE 802.1w Rapid Reconfiguration of Spanning Tree IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3ae 10-Gigabit Ethernet IEEE 802.3ag Ethernet OAM IEEE 802.3ah Ethernet in First Mile over Point to Point Fiber - EFMF IEEE 802.3x Flow Control RFC 768 UDP RFC 783 TFTP Protocol (revision 2) RFC 791 IP RFC 792 ICMP RFC 793 TCP RFC 826 ARP RFC 854 TELNET RFC 856 TELNET RFC 868 Time Protocol RFC 896 Congestion Control in IP/TCP Internetworks RFC 903 RARP RFC 950 Internet Standard Subnetting Procedure RFC 959 File Transfer Protocol (FTP) RFC 1058 RIPv1 RFC 1091 Telnet Terminal-Type Option RFC 1141 Incremental updating of the Internet checksum RFC 1142 OSI IS-IS Intra-domain Routing Protocol RFC 1191 Path MTU discovery RFC 1213 Management Information Base for Network Management of TCP/IP-based internets RFC 1253 (OSPF v2) RFC 1350 TFTP Protocol (revision 2) RFC 1531 Dynamic Host Configuration Protocol RFC 1533 DHCP Options and BOOTP Vendor Extensions RFC 1534 DHCP/BOOTP Interoperation RFC 1541 DHCP RFC 1591 DNS (client only) RFC 1624 Incremental Internet Checksum RFC 1723 RIP v2 RFC 1812 IPv4 Routing RFC 2131 DHCP RFC 2236 IGMP Snooping RFC 2338 VRRP RFC 2453 RIPv2 RFC 2581 TCP Congestion Control RFC 2644 Directed Broadcast Control RFC 3046 DHCP Relay Agent Information Option RFC 3768 Virtual Router Redundancy Protocol (VRRP) RFC 4250 The Secure Shell (SSH) Protocol Assigned Numbers RFC 4251 The Secure Shell (SSH) Protocol Architecture RFC 4252 The Secure Shell (SSH) Authentication Protocol RFC 4253 The Secure Shell (SSH) Transport Layer Protocol

Technical Specifications

	RFC 4254 The Secure Shell (SSH) Connection Protocol RFC 4364 BGP/MPLS IP Virtual Private Networks (VPNs) RFC 4419 Diffie-Hellman Group Exchange for the Secure Shell (SSH) Transport Layer Protocol RFC 4594 Configuration Guidelines for DiffServ Service Classes RFC 4941 Privacy Extensions for Stateless Address Autoconfiguration in IPv6
IPv6	RFC 2080 RIPng for IPv6 RFC 2460 IPv6 Specification RFC 2711 IPv6 Router Alert Option RFC 2740 OSPFv3 for IPv6 RFC 3315 DHCPv6 (client only) RFC 4291 IP Version 6 Addressing Architecture RFC 4862 IPv6 Stateless Address Auto-configuration RFC 5095 Deprecation of Type 0 Routing Headers in IPv6
MIBs	RFC 1213 MIB II RFC 1907 SNMPv2 MIB RFC 2571 SNMP Framework MIB RFC 2572 SNMP-MPD MIB RFC 2573 SNMP-Notification MIB RFC 2573 SNMP-Target MIB RFC 2574 SNMP USM MIB RFC 2737 Entity MIB (Version 2) RFC 3414 SNMP-User based-SM MIB RFC 3415 SNMP-View based-ACM MIB LLDP-EXT-DOT1-MIB LLDP-EXT-DOT3-MIB LLDP-MIB
Network Management	IEEE 802.1AB Link Layer Discovery Protocol (LLDP) IEEE 802.1D (STP) RFC 3164 BSD syslog Protocol RFC 3176 sFlow SNMPv1/v2c/v3
OSPF	RFC 1587 OSPF NSSA RFC 2328 OSPFv2 RFC 3101 OSPF NSSA RFC 3137 OSPF Stub Router Advertisement RFC 3623 Graceful OSPF Restart RFC 4577 OSPF as the Provider/Customer Edge Protocol for BGP/MPLS IP Virtual Private Networks (VPNs) RFC 4811 OSPF Out-of-Band LSDB Resynchronization RFC 4812 OSPF Restart Signaling RFC 4813 OSPF Link-Local Signaling RFC 5340 OSPFv3 for IPv6
QoS/CoS	IEEE 802.1p (CoS) RFC 1349 Type of Service in the Internet Protocol Suite RFC 2474 DiffServ Precedence, including 8 queues/port RFC 2475 DiffServ Architecture RFC 2597 DiffServ Assured Forwarding (AF) RFC 3168 The Addition of Explicit Congestion Notification (ECN) to IP

Technical Specifications

	RFC 3247 Supplemental Information for the New Definition of the EF PHB (Expedited Forwarding Per-Hop Behavior) RFC 3260 New Terminology and Clarifications for DiffServ Ingress Rate Limiting
Security	IEEE 802.1X Port Based Network Access Control RFC 1492 TACACS+ Access Control Lists (ACLs) Guest VLAN for 802.1X Port Security SSHv1/SSHv2 Secure Shell

Accessories

HPE FlexFabric 5920 Switch Series accessories

Transceivers

HPE X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HPE X125 1G SFP LC LH70 Transceiver	JD063B
HPE X120 1G SFP LC BX 10-U Transceiver	JD098B
HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
HPE X120 1G SFP LC SX Transceiver	JD118B
HPE X120 1G SFP LC LX Transceiver	JD119B
HPE X120 1G SFP RJ45 T Transceiver	JD089B
HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LRM Transceiver	JD093B
HPE X130 10G SFP+ LC LR Transceiver	JD094B
HPE X130 10G SFP+ LC ER 40km Transceiver	JG234A
HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HPE FlexNetwork X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HPE FlexNetwork X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C

Power Supply

HPE 58x0AF 650W AC Power Supply	JC680A
HP 58x0AF 650W DC Power Supply	JC681A

Fan Tray

HPE 5920AF 24XG Back (Power Side) to Front (Port Side) Airflow Fan Tray	JG297A
HPE 5920AF 24XG Front (Port Side) to Back (Power Side) Airflow Fan Tray	JG298A

Accessory Product Details

NOTE: Details are not available for all accessories. The following specifications were available at the time of publication.

HPE X125 1G SFP LC LH40 1310nm Transceiver (JD061A) A small form-factor pluggable SFP Gigabit LH40 transceiver that provides a full duplex Gigabit solution up to 40km on a single-mode fiber.	**Ports**	1 LC 1000Base-LH port (no IEEE standard exists for 1550 nm optics)	
	Connectivity	Connector type	LC
		Wavelength	1310 nm
	Physical characteristics	Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	Power consumption typical	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 40km distance	
		Fiber type	Single Mode
	Services	Refer to the Hewlett Packard Enterprise sales website at **http://www.hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	
HPE X120 1G SFP LC LH40 1550nm Transceiver (JD062A) A small form-factor pluggable (SFP) Gigabit LH40 transceiver that provides a full-duplex Gigabit solution up to 40 km on a single mode fiber.	**Ports**	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics)	
	Connectivity	Connector type	LC
		Wavelength	1550 nm
	Physical characteristics	Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	Power consumption typical	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 40km distance	
		Fiber type	Single Mode
	Services	Refer to the Hewlett Packard Enterprise sales website at **http://www.hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

Accessory Product Details

HPE X125 1G SFP LC LH70 Transceiver (JD063B) A small form-factor pluggable (SFP) Gigabit LH70 transceiver that provides a full-duplex Gigabit solution up to 70km on a single-mode fiber.	**Ports**		1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics)
	Connectivity	**Connector type**	LC
		Wavelength	1550 nm
	Physical characteristics	**Dimensions**	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling		Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 70km
		Fiber type	Single Mode
	Services		Refer to the Hewlett Packard Enterprise sales website at **http://www.hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
HPE X120 1G SFP LC SX Transceiver (JD118B) A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550m on a Multimode fiber.	**Ports**		1 LC 1000BASE-SX port
	Connectivity	**Connector type**	LC
		Wavelength	850 nm
	Physical characteristics	**Dimensions**	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling		Maximum distance: • FDDI Grade distance = 220m • OM1 = 275m • OM2 = 500m • OM3 = Not Specified by standard
		Cable length	up to 550m
		Fiber type	Multi Mode
	Services		Refer to the Hewlett Packard Enterprise sales website at **http://www.hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
HPE X120 1G SFP LC LX Transceiver (JD119B)	**Ports**		1 SFP 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX)
	Connectivity	**Connector type**	LC
		Wavelength	1300 nm

Accessory Product Details

A small form-factor pluggable (SFP) Gigabig LX transceiver that provides a full duplex Gigabit solution up to 550m on MMF or 10Km on SMF	**Physical characteristics**	**Dimensions**	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: Either single mode or multimode; Maximum distance: • 550m for Multimode • 10km for Singlemode	
		Fiber type	Both
	Services	Refer to the Hewlett Packard Enterprise sales website at **http://www.hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

HPE X120 1G SFP RJ45 T Transceiver (JD089B) A small form factor pluggable (SFP) Gigabit 1000Base-T transceiver that provides a full duplex Gigabit solution up to 100m on a Cat-5+ cable.	**Ports**	1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T)	
	Connectivity	**Connector type**	RJ-45
	Physical characteristics	**Dimensions**	2.71(d) x 0.54(w) x 0.55(h) in. (6.88 x 1.37 x 1.4 cm)
		Full configuration weight	0.07 lb. (0.03 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 Ù differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T; Maximum distance: • 100m	
	Services	Refer to the Hewlett Packard Enterprise sales website at **http://www.hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

Summary of Changes

Date	Version History	Action	Description of Change
04-Feb-2019	Version 21	Changed	Removed Box Level CTO SSP Section and logic from menu and configurators
07-May-2018	Version 20	Changed	Configuration Section updated
25-Sep-2017	Version 19	Changed	Configuration section updated
27-May-2016	Version 18	Changed	Document name updated to HPE FlexFabric 5920 Switch Series. Product description updated.
08-Jan-2016	Version 17	Changed	Warranty and support updated
12-Oct-2015	Version 16	Added	Added new DC power supply: JH336A
07-Apr-2015	Version 15	Changed	Product image changed, Configuration and Technical Specifications updated
19-Mar-2014	Version 14	Changed	Transceivers and Fan Trays were revised in Configuration.
08-Nov-2013	Version 12	Changed	Box Level Integration CTO Models, Rack Level Integrated CTO Models, Internal Power Supplies, and Switch Options were revised in Configuration.
10-Jun-2013	Version 11	Changed	Updated notes section for Box Level Integration CTO Models and Rack Level Integration CTO Models.
19-Mar-2013	Version 10	Changed	Corrected the new Configuration section.
27-Feb-2013	Version 9	Changed	The formatting of the new Configuration section was revised.
19-Feb-2013	Version 8	Added	The configuration section was added. Line art was added.
		Changed	Product overview, Features and benefits, Model specifications, and Accessories were revised.
31-Dec-2012	Version 6	Changed	Updated Features and Benefits.
19-Dec-2012	Version 5	Changed	Updated the Flash Memory.
04-Dec-2012	Version 4	Changed	Updated Features and Benefits and made minor updates to the model specifications and accessories.
06-Jul-2012	Version 3	Changed	Changes made in the Technical Specifications section.
02-Apr-2012	Version 2	Changed	Part number was revised.
26-Mar-2012	Version 1	Created	Document creation

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