QuickSpecs

Overview

HPE FlexNetwork 5130 HI Switch Series

Models

HPE FlexNetwork 5130 24G 4SFP+ 1-slot HI Switch	JH323A
HPE FlexNetwork 5130 48G 4SFP+ 1-slot HI Switch	JH324A
HPE FlexNetwork 5130 24G PoE+ 4SFP+ 1-slot HI Switch	JH325A
HPE FlexNetwork 5130 48G PoE+ 4SFP+ 1-slot HI Switch	JH326A

Key features

- Scalable with 10 Gigabit uplinks and 9-chassis IRF with up to 80GB/s stacking bandwidth
- PoE+ for up to 30 Watts of PoE power per port on all ports simultaneously
- 4 convenient built-in SFP+ 10GbE uplinks provide performance for bandwidth hungry applications
- Openflow 1.3 support
- MACsec support

Product overview

The HPE FlexNetwork 5130 HI Switch Series comprises Gigabit Ethernet switches that support static and RIP Layer 3 routing, diversified services, and IPv6 forwarding, as well as provide four 10-Gigabit Ethernet (10GbE) interfaces.

Unique Intelligent Resilient Fabric (IRF) technology creates a virtual fabric by managing several switches as one logical device, which increases network resilience, performance, and availability, while reducing operational complexity. These switches provide Gigabit Ethernet access and can be used at the edge of a network or to connect server clusters in small data centers.

High availability, simplified management, and comprehensive security control policies are among the key features that distinguish this series. This switch also supports dual modular power supplies.

Features and benefits

Software-defined networking

OpenFlow

supports OpenFlow 1.3 specification to enable SDN by allowing separation of the data (packet forwarding) and control (routing decision) paths

Quality of Service (QoS)

Broadcast control

allows limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic

Advanced classifier-based QoS

classifies traffic using multiple match criteria based on Layers 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a port, VLAN, or entire switch

Powerful QoS feature

supports the following congestion actions: strict priority (SP) queuing, weighted round robin (WRR), and SP+WRR



• Traffic policing

supports Committed Access Rate (CAR) and line rate

Management

Remote configuration and management

enables configuration and management through a secure CLI located on a remote device

• Manager and operator privilege levels

provides read-only (operator) and read/write (manager) access on CLI management interfaces

Command authorization

leverages RADIUS/HWTACACS to link a custom list of CLI commands to an individual network administrator's login; also provides an audit trail

Multiple configuration files

stores easily to the flash image

• Complete session logging

provides detailed information for problem identification and resolution

Remote monitoring (RMON)

uses standard SNMP to monitor essential network functions; supports events, alarm, history, and statistics group plus a private alarm extension group

• 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 wirespeed 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

Management VLAN

segments traffic to and from management interfaces, including CLI/Telnet and SNMP

• Remote intelligent mirroring

mirrors ingress/egress ACL-selected traffic from a switch port or VLAN to a local or remote switch port anywhere on the network

• Device Link Detection Protocol (DLDP)

monitors a cable between two compatible switches and shuts down the ports on both ends if the cable is broken, which prevents network problems such as loops

• IPv6 management

provides future-proof networking because the switch is capable of being managed whether the attached network is running IPv4 or IPv6; supports pingv6, tracertv6, Telnetv6, TFTPv6, DNSv6, syslogv6, FTPv6, SNMPv6, DHCPv6, and RADIUS for IPv6

Troubleshooting

ingress and egress port monitoring enables network problem-solving; virtual cable tests provide visibility into cable problems

• HPE Intelligent Management Center (IMC)

integrates fault management, element configuration, and network monitoring from a central vantage point; built-in support for third-party devices enables network administrators to centrally manage all network elements with a variety of automated tasks, including discovery, categorization, baseline configurations, and software images; the software also provides configuration comparison tools, version tracking, change alerts, and more

• Network Management

SNMP v1/v2c/v3, MIB-II with Traps, and RADIUS Authentication Client MIB (RFC 2618); embedded HTML management tool with secure access

Connectivity

Auto-MDIX

automatically adjusts for straight-through or crossover cables on all 10/100/1000 ports

Flow control

provides back pressure using standard IEEE 802.3x, reducing congestion in heavy traffic situations

High-density connectivity

provides up to 48 fixed 10/100/1000BASE-T ports in a Layer 2/Lite Layer 3 switch

• IEEE 802.3at Power over Ethernet (PoE+) support

simplifies deployment and dramatically reduces installation costs by helping to eliminate the time and cost involved in supplying local power at each access point location

• Ethernet operations, administration and maintenance (OAM)

detects data link layer problems that occurred in the "last mile" using the IEEE 802.3ah OAM standard; monitors the status of the link between two devices

Performance

Nonblocking architecture

up to 216 Gb/s nonblocking switching fabric provides wirespeed switching with up to 190.5 million pps throughput

Hardware-based wirespeed access control lists (ACLs)

help provide high levels of security and ease of administration without impacting network performance with a feature-rich TCAM-based ACL implementation

Resiliency and high availability

Separate data and control paths

separates control from services and keeps service processing isolated; increases security and performance

Smart Link

allows under 100ms failover between links

Spanning Tree/PVST+, MSTP, RSTP

provides redundant links while preventing network loops

• Intelligent Resilient Fabric (IRF)

creates virtual resilient switching fabrics, where two to nine switches perform as a single L2 switch and L3 router; switches do not have to be co-located and can be part of a disaster-recovery system; servers or switches can be attached using standard LACP for automatic load balancing and high availability; can eliminate need for complex protocols like Spanning Tree Protocol, Equal-Cost Multipath (ECMP), or VRRP, thereby simplifying network operation

• Internal Dual Redundant Power Supply

provides high reliability by keeping network up while delivering up to 1440 Watts of PoE+

Manageability

Dual flash images

provides independent primary and secondary operating system files for backup while upgrading

• Multiple configuration files

allow multiple configuration files to be stored to a flash image

IPv6 management

future-proofs networking, as the switch is capable of being managed whether the attached network is running IPv4 or IPv6; supports pingv6, tracertv6, Telnetv6, TFTPv6, DNSv6, and ARPv6

Troubleshooting

allows ingress and egress port monitoring, enabling network problem solving; virtual cable tests provide visibility into cable problems

Layer 2 switching

• 32K MAC address table

provides access to many Layer 2 devices

• VLAN support and tagging

supports IEEE 802.1Q with 4,094 simultaneous VLAN IDs

IEEE 802.1ad QinQ and selective QinQ

increase the scalability of an Ethernet network by providing a hierarchical structure; connect multiple LANs on a high-speed campus or metro network

• 10GbE port aggregation

allows grouping of ports to increase overall data throughput to a remote device

• 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

• Jumbo frame support

improves the performance of large data transfers; supports frame size of up to 9K-bytes

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

Dynamic Host Configuration Protocol (DHCP)

simplifies the management of large IP networks; supports client; DHCP Relay enables DHCP operation across subnets

Loopback interface address

defines an address that can always be reachable, improving diagnostic capability

• User Datagram Protocol (UDP) helper function

allows UDP broadcasts to be directed across router interfaces to specific IP unicast or subnet broadcast addresses and prevents server spoofing for UDP services such as DHCP

Route maps

provide more control during route redistribution; allow filtering and altering of route metrics

• DHCP server

centralizes and reduces the cost of IPv4 address management

Policy Based Routing

provides a mechanism for indicating and executing forwarding/routing of data packets based on the policies defined by the network administrator

Layer 3 routing

Static IP routing

provides manually configured routing for both IPv4 and IPv6 networks

• Routing Information Protocol (RIP)

uses a distance vector algorithm with UDP packets for route determination; supports RIPv1 and RIPv2 routing; includes loop protection

Policy Based Routing

provides a mechanism for indicating and executing forwarding/routing of data packets based on the policies defined by the network administrator

Security

Access control lists (ACLs)

provides IP Layer 2 to Layer 4 traffic filtering; supports global ACL, VLAN ACL, port ACL, and IPv6 ACL

IEEE 802.1X

industry-standard method of user authentication using an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server

• MAC-based authentication

client is authenticated with the RADIUS server based on the client's MAC address

Identity-driven security and access control

Per-user ACLs

permits or denies user access to specific network resources based on user identity and time of day, allowing multiple types of users on the same network to access specific network services without risking network security or providing unauthorized access to sensitive data

Automatic VLAN assignment

automatically assigns users to the appropriate VLAN based on their identities

Secure management access

delivers secure encryption of all access methods (CLI, GUI, or MIB) through SSHv2, SSL, HTTPS and/or SNMPv3

Secure FTP/ SCP

allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file

Guest VLAN

provides a browser-based environment to authenticated clients that is similar to IEEE 802.1X

Port security

allows access only to specified MAC addresses, which can be learned or specified by the administrator

Port isolation

secures and adds privacy, and prevents malicious attackers from obtaining user information

• STP BPDU port protection

blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks

STP root guard

protects the root bridge from malicious attacks or configuration mistakes

DHCP protection

blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks

• IP source guard

helps prevent IP spoofing attacks

• Dynamic ARP protection

blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data

• RADIUS/HWTACACS

eases switch management security administration by using a password authentication server

Endpoint Admission Defense (EAD)

provides security policies to users accessing a network

• IPv6 source guard

help prevent IPv6 spoofing attacks using ND Snooping as well as DHCPv6 Snooping

Convergence

• IEEE 802.1AB Link Layer Discovery Protocol (LLDP)

facilitates easy mapping using network management applications with LLDP automated device discovery protocol

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

LLDP-CDP compatibility

receives and recognizes CDP packets from Cisco's IP phones for seamless interoperation

• IEEE 802.3at Power over Ethernet (PoE+)

provides up to 30 W per port that allows support of the latest PoE+-capable devices such as IP phones, wireless access points, and security cameras, as well as any IEEE 802.3af-compliant end device; eliminates the cost of additional electrical cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments

PoE allocations

supports multiple methods (automatic, IEEE 802.3af class, LLDP-MED, or user-specified) to allocate PoE power for more efficient energy savings

Voice VLAN

automatically assigns VLAN and priority for IP phones, simplifying network configuration and maintenance

• IP multicast snooping (data-driven IGMP)

prevents flooding of IP multicast traffic

Multicast Source Discovery Protocol (MSDP)

allows multiple PIM-SM domains to interoperate; is used for inter-domain multicast applications

Device support

• Pre-standard PoE support

detects and provides power to pre-standard PoE devices such as wireless LAN access points and IP phones

Additional information

Green IT and power

improves energy efficiency through the use of the latest advances in silicon development; shuts off unused ports and utilizes variable-speed fans, reducing energy costs

Green initiative support

provides support for RoHS and WEEE regulations

• Unified Hewlett Packard Enterprise Comware operating system with modular architecture

provides an easy-to-enhance-and-extend feature set, which doesn't require whole-scale changes; all switching, routing, and security platforms leverage the Comware OS, a common unified modular operating system

Energy Efficient Ethernet (EEE) support

Reduces power consumption in accordance with IEEE 802.3az

Warranty and support

Limited Lifetime Warranty

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

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.

HPE FlexNetwork 5130 24G 4SFP+ 1-slot HI Switch

JH323A

24 RJ-45 autosensing 10/100/1000 ports

See Configuration

- 4 fixed Gigabit Ethernet SFP+ ports
- (min=0 \ max=4 SFP/SFP+ Transceivers)
- 1 port expansion module slots
- Must select min 1 power supply
- 1U Height

HPE FlexNetwork 5130 48G 4SFP+ 1-slot HI Switch

JH324A

NOTE: 2

NOTE: 2

48 RJ-45 autosensing 10/100/1000 ports

See Configuration

- 4 fixed Gigabit Ethernet SFP+ ports
- (min=0 \ max=4 SFP/SFP+ Transceivers)
- 1 port expansion module slots
- Must select min 1 power supply
- 1U Height

HPE FlexNetwork 5130 24G PoE+ 4SFP+ 1-slot HI Switch

JH325A

24 RJ-45 autosensing 10/100/1000 PoE+ ports

See Configuration **NOTE:** 2

- 4 fixed Gigabit Ethernet SFP+ ports
- (min=0 \ max=4 SFP/SFP+ Transceivers)
- 1 port expansion module slots
- Must select min 1 power supply
- 1U Height

HPE FlexNetwork 5130 48G PoE+ 4SFP+ 1-slot HI Switch

JH326A

48 RJ-45 autosensing 10/100/1000 PoE+ ports

See Configuration NOTE: 2

- 4 fixed Gigabit Ethernet SFP+ ports
- (min=0 \ max=4 SFP/SFP+ Transceivers)
- 1 port expansion module slots
- Must select min 1 power supply
- 1U Height

Configuration Rules:

Note 2 The following Transceivers install into this Switch: (SFP+ Ports)

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 X120 1G SFP LC BX 10-U Transceiver	JD098B
HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HPE X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HPE X125 1G SFP LC LH70 Transceiver	JD063B
HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LR Transceiver	JD094B

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 X2A0 10G SFP+ to SFP+ 7m Active Optical Cable	JL290A
HPE X2AO 10G SFP+ to SFP+ 10m Active Optical Cable	JL291A
HPE X2A0 10G SFP+ to SFP+ 20m Active Optical Cable	JL292A

Remarks: OCA Only Model Selection Form -

HPE Offering > Aruba > Switches - FlexNetwork:

5130 HI Switch Series

Box Level Integration CTO Models

CTO Solution SKU

HPE 51xx CTO Switch Solution JG706A

SSP trigger SKU

CTO Base SKU

HPE FlexNetwork 5130 24G 4SFP+ 1-slot HI Switch

See Configuration 24 RJ-45 autosensing 10/100/1000 ports **NOTE: 2, 10** • 4 fixed Gigabit Ethernet SFP+ ports

- (min=0 \ max=4 SFP/SFP+ Transceivers)
- 1 port expansion module slots
- Must select min 1 power supply
- 1U Height

HPE FlexNetwork 5130 48G 4SFP+ 1-slot HI Switch

See Configuration 48 RJ-45 autosensing 10/100/1000 ports **NOTE: 2.10**

• 4 fixed Gigabit Ethernet SFP+ ports

- (min=0 \ max=4 SFP/SFP+ Transceivers)
- 1 port expansion module slots
- Must select min 1 power supply
- 1U Height

HPE FlexNetwork 5130 24G PoE+ 4SFP+ 1-slot HI Switch

See Configuration 24 RJ-45 autosensing 10/100/1000 PoE+ ports **NOTE: 2.10**

4 fixed Gigabit Ethernet SFP+ ports

• (min=0 \ max=4 SFP/SFP+ Transceivers)

- 1 port expansion module slots
- Must select min 1 power supply
- 1U Height

HPE FlexNetwork 5130 48G PoE+ 4SFP+ 1-slot HI Switch

- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 fixed Gigabit Ethernet SFP+ ports

JH326A

JH323A

JH324A

JH325A

See Configuration

NOTE: 2, 10

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- (min=0 \ max=4 SFP/SFP+ Transceivers)
- 1 port expansion module slots
- Must select min 1 power supply
- 1U Height

Configuration Rules:

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Note 2	The following	Iransceivers	install into	this	Switch:	(SFP+	Ports)

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 X120 1G SFP LC BX 10-U Transceiver	JD098B
HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HPE X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HPE X125 1G SFP LC LH70 Transceiver	JD063B
HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LR Transceiver	JD094B
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 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

Note 10 If the Switch Chassis is to be Factory Integrated (CTO), Then the #0D1 is required on the Switch Chassis and integrated to the JG506A - HPE 55xx CTO Switch Solution. (Min 1/Max 1 Switch per SSP)

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

Rack Level Integration CTO Models

Switch Chassis

HPE FlexNetwork 5130 24G 4SFP+ 1-slot HI Switch

JH323A

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 fixed Gigabit Ethernet SFP+ ports
- (min=0 \ max=4 SFP/SFP+ Transceivers)
- 1 port expansion module slots
- Must select min 1 power supply
- 1U Height

See Configuration NOTE: 2, 10

See Configuration 48 RJ-45 autosensing 10/100/1000 ports **NOTE: 2, 10**

4 fixed Gigabit Ethernet SFP+ ports

(min=0 \ max=4 SFP/SFP+ Transceivers)

1 port expansion module slots

Must select min 1 power supply

1U - Height

HPE FlexNetwork 5130 24G PoE+ 4SFP+ 1-slot HI Switch

JH325A

24 RJ-45 autosensing 10/100/1000 PoE+ ports

See Configuration

4 fixed Gigabit Ethernet SFP+ ports

NOTE: 2, 10

(min=0 \ max=4 SFP/SFP+ Transceivers)

1 port expansion module slots

Must select min 1 power supply

1U - Height

HPE FlexNetwork 5130 48G PoE+ 4SFP+ 1-slot HI Switch

JH326A

48 RJ-45 autosensing 10/100/1000 PoE+ ports

See Configuration **NOTE:** 2, 10

4 fixed Gigabit Ethernet SFP+ ports

(min=0 \ max=4 SFP/SFP+ Transceivers)

1 port expansion module slots

Must select min 1 power supply

1U - Height

Configuration Rules:

The following Transceivers install into this Switch: (SFP+ Ports) Note 2

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 X120 1G SFP LC BX 10-U Transceiver	JD098B
HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HPE X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HPE X125 1G SFP LC LH70 Transceiver	JD063B
HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LR Transceiver	JD094B
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 X2AO 10G SFP+ to SFP+ 7m Active Optical Cable	JL290A
HPE X2AO 10G SFP+ to SFP+ 10m Active Optical Cable	JL291A
HPE X2A0 10G SFP+ to SFP+ 20m Active Optical Cable	JL292A

Note 10 If HPE CTO Switch Chassis is selected for Rack Level Integration, Then the Switch needs to integrate (with #0D1) to the 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 above if order is factory built.

Modules

System (std 0 // max 1) User Selection (min 0 // max 1)

HPE FlexNetwork 5130/5510 10GBASE-T 2p Module

JH156A

• No Transceivers

HPE FlexNetwork 5130/5510 10GbE SFP+ 2p Module

JH157A See Configuration

• min=0 \ max=2 SFP+ Transceivers

NOTE: 1

Configuration Rules:

Note 1 The following Transceivers install into this Module: (SFP+ Ports)

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 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 X130 10G SFP+ LC LRM Transceiver	JD093B
HPE X130 10G SFP+ LC LH 80km Transceiver	JG915A
HPE X130 10G SFP+ LC ER 40km Transceiver	JG234A
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 X2AO 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

Transceivers

SFP Transceivers

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 X120 1G SFP LC BX 10-U Transceiver	JD098B
HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HPE X120 1G SFP LC LH100 Transceiver	JD103A
HPE X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HPE X125 1G SFP LC LH70 Transceiver	JD063B

SFP+ Transceivers

HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LRM Transceiver	JD093B
NOTE: For use Only with the JH157A Module	
HPE X130 10G SFP+ LC LR Transceiver	JD094B
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 X2A0 10G SFP+ 7m AOC Cable	JL290A
OCA Blue NOTE: Requires R1122P02 or later code for AOC cable support	
HPE X2A0 10G SFP+ 10m AOC Cable	JL291A
OCA Blue NOTE: Requires R1122P02 or later code for AOC cable support	
HPE X2A0 10G SFP+ 20m AOC Cable	JL292A
OCA Blue NOTE: Requires R1122P02 or later code for AOC cable support	

Cables

Console Cables

(std 0 // max 99) User Selection (min 0 // max 99) per switch

Aruba X2C2 RJ45 to DB9 Console Cable

JL448A

Multi-Mode Cables

(std 0 // max 99) User Selection (min 0 // max 99) per switch

HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable HPE LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ833A AJ834A
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HPE LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
HPE LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable	AJ839A
HPE Premier Flex 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

Internal Power Supplies

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

HPE FlexNetwork 5500 150WDC Power Supply

JD366A

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Configuration

Configuration	
	See Configuration NOTE: 1
HPE X361 150W 48-60VDC to 12VDC Power Supply	JD366B See Configuration NOTE: 1
HPE 5500 150WAC Power Supply ■ includes 1 x c13, 910w	JD362A See Configuration NOTE: 1, 3, 4
PDU Cable NA/MEX/TW/JP • C15 PDU Jumper Cord (NA/MEX/TW/JP)	JD362A#B2B
PDU Cable ROW • C15 PDU Jumper Cord (ROW)	JD362A#B2C
High Volt Switch to Wall Power Cord • NEMA L6-20P Cord (NA/MEX/JP/TW)	JD362A#B2E
HPE X361 150W 100-240VAC to 12VDC Power Supply ■ includes 1 x c13, 910w	JD362B See Configuration NOTE: 1, 3, 4
PDU Cable NA/MEX/TW/JP • C13 PDU Jumper Cord (NA/MEX/TW/JP)	JD362B#B2B
PDU Cable ROW • C13 PDU Jumper Cord (ROW)	JD362B#B2C
High Volt Switch to Wall Power Cord • HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)	JD362B#B2E
No Power Cord • No Localized Power Cord Selected	JD362B#AC3
HPE X362 720W 100-240VAC to 56VDC PoE Power Supply ■ includes 1 x c13, 720w	JG544A See Configuration NOTE: 2, 3, 4
PDU Cable NA/MEX/TW/JP • C15 PDU Jumper Cord (NA/MEX/TW/JP)	JG544A#B2B
PDU Cable ROW • C15 PDU Jumper Cord (ROW)	JG544A#B2C
High Volt Switch to Wall Power Cord ■ NEMA L6-20P Cord (NA/MEX/JP/TW)	JG544A#B2E
HPE X362 1110W 115-240VAC to 56VDC PoE Power Supply	JG545A

• includes 1 x c13, 1100w See Configuration

NOTE: 2, 3, 4

PDU Cable NA/MEX/TW/JP JG545A#B2B

C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW JG545A#B2C

• C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord JG545A#B2E

NEMA L6-20P Cord (NA/MEX/JP/TW)

Configuration Rules:

Note 1 This power supply is only supported on JH323A and JH324A.

Note 2 This power supply is only supported on JH 325A and JH326A.

Note 3 If #B2E is selected Then replace Localized option with #B2E for power supply and with

#B2E for switch. (Offered only in North America, Mexico, Taiwan, and Japan)

Note 4 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)

High Volt Switch/Router/Power Supply to Wall Power Cord - #B2E Option. (Offered only in

North America, Mexico, Taiwan, and Japan)

HPE FlexNetwork 5130 24G 4SFP+ 1-slot HI Switch (JH323A)

I/O ports and slots 24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type

100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-

T/100BASE-TX: half or full; 1000BASE-T: full only; Ports 1 - 8 support MACSec

4 SFP+ 10GbE ports

1 port expansion module slot

Supports a maximum of 6 SFP+ ports or 2 1/10GBASE-T ports, with optional module

Additional ports and

1 dual-personality (RJ-45 or mini USB) serial console port

slots

1 RJ-45 out-of-band management port

1 USB 2.0

Power supplies 2 power supply slots

1 minimum power supply required (ordered separately)

Fan tray Airflow direction is Front (port side) to Back (power cord side)

Physical characteristics Dimensions $17.32(w) \times 14.17(d) \times 1.72(h)$ in $(44.00 \times 36.00 \times 4.37 \text{ cm})$ (1U height)

Weight 16.53 lb (7.5 kg) shipping weight

Memory and processor

2 GB SDRAM; Packet buffer size: 4 MB, 512 MB flash

Mounting and enclosure

Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)

Performance IPv6 Ready Certified

1000 Mb Latency < 5 μs **10 Gbps Latency** < 3 μs

Throughput up to 154.8 Mpps

Routing/Switching

capacity

168 Gbps

Routing table size 4096 entries (IPv4), 2048 entries (IPv6)

MAC address table size

32768 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: 52.8 dB, High-speed fan: 66.7 dB; ISO 7779

Electrical characteristics Frequency 50/60 Hz

Maximum heat

365 BTU/hr (385.08 kJ/hr), Ranges from 167 BTU/hr to 392 BTU/hr,

dissipation

depending on power supply configuration

Voltage 100 - 240 VAC, rated (90 - 264 VAC, max)

-48 to -60 VDC, rated (-36 to -72 VDC, max)

(depending on power supply chosen)

Maximum power rating 107 W

Idle power 55 W

Notes Idle power is the actual power consumption of the device with no ports

onnected

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; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; FDA 21 CFR Subchapter J; ROHS

Compliance; AS/NZS 60950-1; GB 4943; EAC (EurAsian Conformity Certification)

Emissions EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A; EN 61000-4-11:2004; ANSI C63.4-

> 2009; EN 61000-3-3:2008; VCCI V-4/2012.04; EN 6100-3-2:2006+A1:2009 + A2:2009; EN 61000-3-2:2006+A1:2009+A2:2009; EN 61000-4-3:2006; EN 61000-4-4:2012; EN 61000-4-5:2006; EN 61000-4-6:2009; AS/NZS CISPR 22:2009 Class A; CISPR 22:2008 Class A; EN 55022:2010 Class A;

EN 61000-4-29: 2000; CISPR 24:2010; EN 300 386 V1.6.1; VCCI V-3/2013.04 Class A

Immunity Generic EN 55024

> EN300 386 **ESD**

Management IMC - Intelligent Management Center; Command-line interface; SNMP manager

Services Refer to the Hewlett Packard Enterprise 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 FlexNetwork 5130 48G 4SFP+ 1-slot HI Switch (JH324A)

48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3 u Type I/O ports and slots

100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-

T/100BASE-TX: half or full; 1000BASE-T: full only; Ports 1 - 8 support MACSec

4 SFP+ 10GbE ports

1 port expansion module slot

Supports a maximum of 6 SFP+ ports or 2 1/10GBASE-T ports, with optional module

Additional ports and

slots

1 dual-personality (RJ-45 or mini USB) serial console port

1 RJ-45 out-of-band management port 1 USB 2.0

Power supplies 2 power supply slots

1 minimum power supply required (ordered separately)

Airflow direction is Front (port side) to Back (power cord side) Fan tray

Dimensions 17.32(w) x 14.17(d) x 1.72(h) in (44.0 x 36 x 4.37 cm) (1U height) Physical characteristics

> Weight 16.53 lb (7.5 kg)

Memory and processor 2 GB SDRAM: Packet buffer size: 4 MB. 512 MB flash

Mounting and enclosure Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)

Performance IPv6 Ready Certified

> 1000 Mb Latency < 5 µs 10 Gbps Latency < 3 µs

up to 190.5 Mpps **Throughput**

Routing/Switching

capacity

216 Gbps

4096 entries (IPv4), 2048 entries (IPv6) Routing table size

MAC address table size 32768 entries

32°F to 113°F (0°C to 45°C) **Environment** Operating temperature

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: 49.9 dB, High-speed fan: 64.8 dB; ISO 7779

Electrical characteristics Frequency 50/60 Hz

Voltage

Maximum heat dissipation

419 BTU/hr (442.04 kJ/hr), Ranges from 201 BTU/hr to 443 BTU/hr,

depending on power supply configuration 100 - 240 VAC, rated (90 - 264 VAC, max)

-48 to -60 VDC, rated (-36 to -72 VDC, max)

(depending on power supply chosen)

Idle power 70 W

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; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; FDA 21 CFR Subchapter J; ROHS

Compliance; AS/NZS 60950-1; GB 4943; EAC (EurAsian Conformity Certification)

Emissions EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A; EN 61000-4-11:2004; ANSI C63.4-

2009; EN 61000-3-3:2008; VCCI V-4/2012.04; EN 6100-3-2:2006+A1:2009 + A2:2009; EN 61000-3-2:2006+A1:2009+A2:2009 ; EN 61000-4-3:2006; EN 61000-4-4:2012; EN 61000-4-5:2006; EN 61000-4-6:2009; AS/NZS CISPR 22:2009 Class A; CISPR 22:2008 Class A; EN 55022:2010 Class A;

EN 61000-4-29: 2000; CISPR 24:2010; EN 300 386 V1.6.1; VCCI V-3/2013.04 Class A

Immunity Generic EN 55024

ESD EN300 386

Management IMC - Intelligent Management Center; Command-line interface; SNMP manager

Services Refer to the Hewlett Packard Enterprise 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 FlexNetwork 5130 24G PoE+ 4SFP+ 1-slot HI Switch (JH325A)

I/O ports and slots 24 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type

100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Media Type: Auto-MDIX; Duplex:

10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only; Ports 1 - 8 support MACSec

4 SFP+ 10GbE ports

1 port expansion module slot

Supports a maximum of 6 SFP+ ports or 2 1/10GBASE-T ports, with optional module

Additional ports and

slots

1 dual-personality (RJ-45 or mini USB) serial console port 1 RJ-45 out-of-band management port

1 USB 2.0

Power supplies 2 power supply slots

1 minimum power supply required (ordered separately)

Fan tray Airflow direction is Front (port side) to Back (power cord side)

Physical characteristics Dimensions 17.32(w) x 18.11(d) x 1.72(h) in (43.99 x 46 x 4.37 cm) (1U height)

Weight 27.56 lb (12.5 kg) shipping weight

Memory and processor 2 GB SDRAM; Packet buffer size: 4 MB, 512 MB flash

Mounting and enclosure Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)

Performance IPv6 Ready Certified

1000 Mb Latency $< 5 \mu s$ 10 Gbps Latency $< 3 \mu s$

Throughput up to 154.8 Mpps

Routing/Switching

capacity

168 Gbps

Routing table size 4096 entries (IPv4), 2048 entries (IPv6)

MAC address table size 32768 entries

Environment Operating temperature 32°F to 113°F (0°C to 45°C)

Operating relative

humidity

Acoustic

Voltage

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

Electrical characteristics Frequency 50/60 Hz

Maximum hast

Maximum heat dissipation

2217 BTU/hr (3599.66 kJ/hr), Ranges from 228 BTU/hr to 3412 BTU/hr,

Low-speed fan: 57.6 dB, High-speed fan: 66.9 dB; ISO 7779

depending on power supply configuration 100 - 240 VAC, rated (90 - 264 VAC, max)

Maximum power rating 650 W **Idle power** 67 W

PoE power 740 W PoE+

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.

PoE+ power range is from 450W to 740W. PoE+ power is the power supplied by the internal power supply(ies). It is dependent on the type

and quantity of power supplies.

Device supports 1 or 2 internal modular power supplies.

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; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; FDA 21 CFR Subchapter J; ROHS

Compliance; AS/NZS 60950-1; GB 4943; EAC (EurAsian Conformity Certification)

Emissions EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A; EN 61000-4-11:2004; ANSI C63.4-

2009; EN 61000-3-3:2008; VCCI V-4/2012.04; EN 6100-3-2:2006+A1:2009 + A2:2009; EN 61000-3-2:2006+A1:2009+A2:2009; EN 61000-4-3:2006; EN 61000-4-4:2012; EN 61000-4-5:2006; EN 61000-4-6:2009; AS/NZS CISPR 22:2009 Class A; CISPR 22:2008 Class A; EN 55022:2010 Class A;

EN 61000-4-29: 2000; CISPR 24:2010; EN 300 386 V1.6.1; VCCI V-3/2013.04 Class A

Immunity Generic EN 55024

ESD EN300 386

Management IMC - Intelligent Management Center; Command-line interface; SNMP manager

Services Refer to the Hewlett Packard Enterprise 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 FlexNetwork 5130 48G PoE+ 4SFP+ 1-slot HI Switch (JH326A)

I/O ports and slots 48 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type

100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-

TX: half or full; 1000BASE-T: full only; Ports 1 - 8 support MACSec

4 SFP+ 10GbE ports

1 port expansion module slot

Supports a maximum of 6 SFP+ ports or 2 1/10GBASE-T ports, with optional module

Additional ports and

1 dual-personality (RJ-45 or mini USB) serial console port 1 RJ-45 out-of-band management port

slots 1 USB 2.0

Power supplies 2 power supply slots

1 minimum power supply required (ordered separately)

Airflow direction is Front (port side) to Back (power cord side) Fan tray

Physical characteristics **Dimensions** 17.32(w) x 18.11(d) x 1.72(h) in (43.99 x 46 x 4.37 cm) (1U height)

> Weight 27.56 lb (12.5 kg) shipping weight

2 GB SDRAM; Packet buffer size: 4 MB, 512 MB flash Memory and processor

Mounting and enclosure Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)

Performance IPv6 Ready Certified

> 1000 Mb Latency < 5 µs 10 Gbps Latency < 3 µs

Throughput up to 190.5 Mpps

Routing/Switching

capacity

216 Gbps

Routing table size 4096 entries (IPv4), 2048 entries (IPv6)

MAC address table size

32768 entries

Environment Operating temperature

Operating relative

humidity

32°F to 113°F (0°C to 45°C)

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: 57.6 dB, High-speed fan: 66.9 dB; ISO 7779

Electrical characteristics Frequency 50/60 Hz

> Maximum heat dissipation

2286 BTU/hr (2411.73 kJ/hr), Heat dissipation ranges from 256 BTU/hr

to 6142 BTU/hr, depending on power supply configuration

100 - 240 VAC, rated (90 - 264 VAC, max) Voltage

670 W Maximum power rating Idle power 75 W

PoE power 1440 W PoE+

Notes Idle power is the actual power consumption of the device with no ports

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.

PoE+ power range is from 450W to 1440W. PoE+ power is the power supplied by the internal power supply (ies). It is dependent on the type and quantity of power supplies.

and quantity of power supplies.

Device supports 1 or 2 internal modular power supplies.

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; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; FDA 21 CFR Subchapter J; ROHS

Compliance; AS/NZS 60950-1; GB 4943; EAC (EurAsian Conformity Certification)

Emissions EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A; EN 61000-4-11:2004; ANSI C63.4-

2009; EN 61000-3-3:2008; VCCI V-4/2012.04; EN 6100-3-2:2006+A1:2009 + A2:2009; EN 61000-3-2:2006+A1:2009+A2:2009 ; EN 61000-4-3:2006; EN 61000-4-4:2012; EN 61000-4-5:2006; EN 61000-4-6:2009; AS/NZS CISPR 22:2009 Class A; CISPR 22:2008 Class A; EN 55022:2010 Class A;

EN 61000-4-29: 2000; CISPR 24:2010; EN 300 386 V1.6.1; VCCI V-3/2013.04 Class A

Immunity Generic EN 55024

ESD EN300 386

Management IMC - Intelligent Management Center; Command-line interface; SNMP manager

Services Refer to the Hewlett Packard Enterprise 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)

Device Management RFC 1155 Structure and Mgmt Information (SMIv1)

RFC 1157 SNMPv1/v2c RFC 1305 NTPv3

RFC 2573 (SNMPv3 Applications)

RFC 2578-2580 SMIv2

RFC 2819 (RMON groups Alarm, Event, History and Statistics only)

RFC 3416 (SNMP Protocol Operations v2) RFC 3417 (SNMP Transport Mappings)

HTML and telnet management Multiple Configuration Files SNMP v3 and RMON RFC support SSHv1/SSHv2 Secure Shell

TACACS/TACACS+

General Protocols IEEE 802.1ad Q-in-Q

IEEE 802.1ak Multiple Registration Protocol (MRP) and Multiple VLAN Registration Protocol (MVRP)

IEEE 802.1AE MACsec

IEEE 802.1AX-2008 Link Aggregation

IEEE 802.1D MAC Bridges IEEE 802.1p Priority IEEE 802.1Q (GVRP) IEEE 802.1Q VLANs

IEEE 802.1s Multiple Spanning Trees

IEEE 802.1v VLAN classification by Protocol and Port IEEE 802.1w Rapid Reconfiguration of Spanning Tree

IEEE 802.1X PAE

IEEE 802.3 Type 10BASE-T IEEE 802.3ab 1000BASE-T

IEEE 802.3ac (VLAN Tagging Extension)

IEEE 802.3ad Link Aggregation Control Protocol (LACP)

IEEE 802.3ae 10-Gigabit Ethernet

IEEE 802.3af Power over Ethernet

IEEE 802.3at Power over Ethernet Plus

IEEE 802.3az Energy Efficient Ethernet

IEEE 802.3i 10BASE-T

IEEE 802.3u 100BASE-X

IEEE 802.3x Flow Control

IEEE 802.3z 1000BASE-X

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 855 Telnet Option Specification

RFC 894 IP over Ethernet

RFC 950 Internet Standard Subnetting Procedure

RFC 951 BOOTP

RFC 959 - File Transfer Protocol (FTP)

RFC 1027 Proxy ARP

RFC 1042 IP Datagrams

RFC 1071 Computing the Internet Checksum

RFC 1123 Requirements for Internet Hosts

RFC 1166 - IP Addresses

RFC 1213 Management Information Base for Network Management of TCP/IP-based internets

RFC 1256 - ICMP Router Discovery Protocol (IRDP)

RFC 1305 NTPv3

RFC 1350 TFTP Protocol (revision 2)

RFC 1519 CIDR

RFC 1533 DHCP Options and BOOTP Vendor Extensions

RFC 1591 DNS (client only)

RFC 1643 - Definitions of Managed Objects for the Ethernet-like Interface Types

RFC 1812 IPv4 Routing

RFC 1866 Hypertext Markup Language - 2.0

RFC 1901 - Introduction to Community-based SNMPv2

RFC 1902-1907 - SNMPv2

RFC 2131 DHCP

RFC 2236 IGMP Snooping

RFC 2462 IPv6 Stateless Address Autoconfiguration

RFC 2474 Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers

RFC 2475 Architecture for Differentiated Services

RFC 2597 Assured Forwarding PHB Group

RFC 2616 HTTP Compatibility v1.1

RFC 2665 Definitions of Managed Objects for the Ethernet-like Interface Types

RFC 2668 Definitions of Managed Objects for IEEE 802.3 Medium Attachment Units (MAUs)

RFC 2865 Remote Authentication Dial In User Service (RADIUS)

RFC 2866 RADIUS Accounting

RFC 2868 RADIUS Attributes for Tunnel Protocol Support

RFC 3046 - DHCP Relay Agent Information Option

RFC 3246 Expedited Forwarding PHB

RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management

Protocol (SNMPv3)

RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)

RFC 3416 Protocol Operations for SNMP

RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)

RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)

RFC 3576 Ext to RADIUS (CoA only)

RFC 3580 - IEEE 802.1X Remote Authentication Dial In User Service (RADIUS) Usage Guidelines

RFC 3587 IPv6 Global Unicast Address Format

RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6

RFC 4213 Basic IPv6 Transition Mechanisms

RFC 4291 IP Version 6 Addressing Architecture

RFC 4541 Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener

Discovery (MLD) Snooping Switches

RFC 4575 A Session Initiation Protocol (SIP) Event Package for Conference State

RFC 4675 RADIUS VLAN & Priority

RFC 5095 Deprecation of Type 0 Routing Headers in IPv6

802.1r - GARP Proprietary Attribute Registration Protocol (GPRP)

IPv6 RFC 1981 IPv6 Path MTU Discovery

RFC 2460 IPv6 Specification

RFC 2461 IPv6 Neighbor Discovery

RFC 2463 ICMPv6

RFC 2464 Transmission of IPv6 over Ethernet Networks

RFC 3162 RADIUS and IPv6

RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses

RFC 3315 DHCPv6 (client and relay)

RFC 3484 Default Address Selection for IPv6

RFC 3736 Stateless Dynamic Host Configuration Protocol (DHCP) Service for IPv6

RFC 4291 IP Version 6 Addressing Architecture

RFC 4293 MIB for IP

RFC 4443 ICMPv6

RFC 4861 IPv6 Neighbor Discovery

RFC 4862 IPv6 Stateless Address Auto-configuration

RFC 6724 Default Address Selection for Internet Protocol Version 6 (IPv6)

MIBs RFC 1157 A Simple Network Management Protocol (SNMP)

RFC 1212 Concise MIB Definitions

RFC 1213 MIB II

RFC 1215 A Convention for Defining Traps for use with the SNMP

RFC 1493 Bridge MIB

RFC 1757 Remote Network Monitoring MIB

RFC 2096 IP Forwarding Table MIB

RFC 2233 Interface 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 2618 RADIUS Authentication Client MIB

RFC 2620 RADIUS Accounting Client MIB

RFC 2665 Ethernet-Like-MIB

RFC 2668 802.3 MAU MIB

RFC 2674 802.1p and IEEE 802.1Q Bridge MIB

RFC 2737 Entity MIB (Version 2)

RFC 2819 RMON MIB

RFC 2863 The Interfaces Group MIB

RFC 2925 Ping MIB

RFC 3414 SNMP-User based-SM MIB RFC 3415 SNMP-View based-ACM MIB

RFC 3418 MIB for SNMPv3 RFC 3621 Power Ethernet MIB

Network Management IEEE 802.1AB Link Layer Discovery Protocol (LLDP)

RFC 1215 SNMP Generic traps

RFC 2579 Textual Conventions for SMIv2 RFC 2580 Conformance Statements for SMIv2

RFC 2818 HTTP over TLS

RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)

RFC 6398 IP Router Alert Considerations and Usage

ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)

SNMPv1/v2c/v3

QoS/CoS RFC 2474 DS Field in the IPv4 and IPv6 Headers

RFC 3260 New Terminology and Clarifications for DiffServ

Security IEEE 802.1X Port Based Network Access Control

RFC 1492 TACACS+

RFC 2138 RADIUS Authentication RFC 2139 RADIUS Accounting RFC 2865 RADIUS (client only) RFC 2866 RADIUS Accounting

RFC 3260 New Terminology and Clarifications for DiffServ

RFC 4716 SSH Public Key File Format

Secure Sockets Layer (SSL)

SSHv2 Secure Shell

Accessories

HPE FlexNetwork 5130 HI Switch Series accessories

Modules	
HPE FlexNetwork 5130/5510 10GBASE-T 2p Module ¹	JH156A
HPE FlexNetwork 5130/5510 10GbE SFP+ 2p Module ¹	JH157A
Transceivers	
HPE X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HPE X120 1G SFP LC LH40 1550nm Transceiver ²	JD062A
HPE X125 1G SFP LC LH70 Transceiver	JD063B
HPE X120 1G SFP LC LH100 Transceiver ²	JD103A
HPE X120 1G SFP LC SX Transceiver ²	JD118B
HPE X120 1G SFP LC LX Transceiver ²	JD119B
HPE X120 1G SFP LC BX 10-U Transceiver ²	JD098B
HPE X120 1G SFP LC BX 10-D Transceiver ²	JD099B
HPE X120 1G SFP RJ45 T Transceiver ²	JD089B
HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LRM Transceiver ⁴	JD093B
HPE X130 10G SFP+ LC LR Transceiver	JD094B
HPE X2A0 10G SFP+ to SFP+ 7m Active Optical Cable ³	JL290A
HPE X2A0 10G SFP+ to SFP+ 10m Active Optical Cable ³	JL291A
HPE X2A0 10G SFP+ to SFP+ 20m Active Optical Cable ³	JL292A
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 FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HPE X130 10G SFP+ LC ER 40km Transceiver ⁴	JG234A
HPE X130 10G SFP+ LC LH 80km Transceiver ⁴	JG915A
Cables	
Aruba X2C2 RJ45 to DB9 Console Cable	JL448A
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 5.0m 1-Pack Fiber Optic Cable	AJ836A
HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable	AJ839A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A
HPE LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
The Ede to Edition mode of to Eliber Eloni Eliber optic dable	7,00007.
HPE FlexNetwork 5130 24G 4SFP+ 1-slot HI Switch (JH323A)	
HPE X361 150W 100-240VAC to 12VDC Power Supply ⁵	JD362B
HPE X361 150W 48-60VDC to 12VDC Power Supply ⁵	JD366B
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Accessories

HPE FlexNetwork 5130 48G 4SFP+ 1-slot HI Switch (JH324A) HPE X361 150W 100-240VAC to 12VDC Power Supply 5 JD362B HPE X361 150W 48-60VDC to 12VDC Power Supply 5 JD366B HPE FlexNetwork 5130 24G PoE+ 4SFP+ 1-slot HI Switch (JH325A) HPE X362 720W 100-240VAC to 56VDC PoE Power Supply 5 JG544A HPE RexNetwork 5130 48G PoE+ 4SFP+ 1-slot HI Switch (JH326A) HPE X362 720W 100-240VAC to 56VDC PoE Power Supply 5 JG544A HPE X362 1110W 115-240VAC to 56VDC PoE Power Supply 5 JG545A

¹ Module supports MACsec

² Transceiver cannot be used on optional module JH157A

³ Requires R1122P02 code version or later

⁴ Transceiver can only be used on optional module JH157A

⁵ Products covered by 1 year warranty. See details at www.hpe.com/networking/warrantyquickref

Summary of Changes

Date	Version History	Action	Description of Change
01-Oct-2018	Version 17	Changed	Recommended and Extended markings removed from the document.
04-Sep-2018	Version 16	Changed	Accessories and Configuration updated
06-Aug-2018	Version 15	Changed	Configuration section updated: Added AOC compatibility and appropriate SFP+ Rules
07-May-2018	Version 14	Changed	Configuration section updated
05-Feb-2018	Version 13	Changed	Standards and protocols updated
03-Jul-2017	Version 12	Added	SKU added: JL448A
09-Jan-2017	Version 11	Added	SKUs added: JH693A, JH694A, JH695A
		Changed	Changes made on Features and Benefits
03-Oct-2016	Version 10	Added	SKUs added:JD362B, JD366B
		Changed	Updates made on Technical Specifications
19-Aug-2016	Version 9	Changed	Product description updated.
12-Aug-2016	Version 8	Changed	Changes made on Accessories and Configuration sections
20-May-2016	Version 7	Changed	Updates made on Technical Specifications and Accessories
08-Apr-2016	Version 6	Changed	Changes made on Configuration section, SKU descriptions updated on all document
18-Mar-2016	Version 5	Changed	Minor changes on Features and benefits, Configuration and Standard Protocols
05-Feb-2016	Version 4	Changed	Technical Specifications updated
08-Jan-2016	Version 3	Removed	SKUs Removed: JD090A, JD091A, JD102B, JD120B, JD100A, JD101A
11-Dec-2015	Version 2	Changed	Minor changes on Technical Specifications, Transceivers updated.
01-Dec-2015	Version 1	Created	Document creation



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Products within this series are IPv6 Ready certified. See the Specifications section of this series for more information.

To learn more, visit: http://www.hpe.com/networking

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