

### Overview

### HP 5130 EI Switch Series



**HP 5130-24G-4SFP+ EI Switch**



**HP 5130-24G-SFP-4SFP+ EI Switch**



**HP 5130-48G-4SFP+ EI Switch**

### Overview



**HP 5130-24G-PoE+-4SFP+ (370W) EI Switch**



**HP 5130-48G-PoE+-4SFP+ (370W) EI Switch**

### Models

HP 5130-24G-4SFP+ EI Switch	JG932A
HP 5130-24G-SFP-4SFP+ EI Switch	JG933A
HP 5130-48G-4SFP+ EI Switch	JG934A
HP 5130-24G-PoE+-4SFP+ (370W) EI Switch	JG936A
HP 5130-48G-PoE+-4SFP+ (370W) EI Switch	JG937A

### Key features

- Fixed 10G Ports for high speed Stacking or Uplinks
- Support for multiple services
- Comprehensive security control policies
- Diversified quality of service (QoS) policies
- Excellent manageability

### Product overview

The HP 5130 EI Switch Series is comprised of 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) extended interfaces. Unique Intelligent Resilient Framework (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

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access and can be used at the edge of a network or to connect server clusters in data centers. High availability, simplified management, and comprehensive security control policies are among the key features that distinguish this series.

### Features and benefits

#### 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 Layer 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a port, VLAN, or whole 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

- **Friendly port names**  
allows assignment of descriptive names to ports
- **Remote configuration and management**  
enables configuration and management through a secure Web browser or a CLI located on a remote device
- **Manager and operator privilege levels**  
provides read-only (operator) and read/write (manager) access on CLI and Web browser management interfaces
- **Command authorization**  
leverages HWTACACS to link a custom list of CLI commands to an individual network administrator's login; also provides an audit trail
- **Secure Web GUI**  
provides a secure, easy-to-use graphical interface for configuring the module via HTTPS
- **Multiple configuration files**  
stores easily to the flash image
- **Complete session logging**  
provides detailed information for problem identification and resolution
- **SNMPv1, v2c, and v3**  
facilitate centralized discovery, monitoring, and secure management of networking devices
- **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, a Web browser interface, 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)**

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monitors a cable between two 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

### 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
- **Jumbo packet support**  
supports up to 9216-byte frame size to improve the performance of large data transfers
- **High-density connectivity**  
provides up to 48 fixed 10/100/1000BASE-T ports in a Layer 2/Layer 3 switch
- **Optional 10GbE ports**  
deliver, through the use of optional modules, additional 10GbE connections, which are available for uplinks or high-bandwidth server connections; flexibly support copper, XFP, SFP+, or CX4 local connections
- **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
- **High-bandwidth CX4 local stacking**  
achieves 12 Gb/s per connection when using local CX4 stacking, allowing for up to 96 Gb/s total stacking bandwidth (full duplex) in a resilient stacking configuration

### Performance

- **Nonblocking architecture**  
up to 192 Gb/s nonblocking switching fabric provides wirespeed switching with up to 143 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
- **External redundant power supply**  
provides high reliability
- **Smart link**  
allows 50 ms failover between links
- **Spanning Tree/MSTP, RSTP**  
provides redundant links while preventing network loops
- **Rapid Ring Protection Protocol (RRPP)**  
connects multiple switches in a high-performance ring using standard Ethernet technology; traffic can be rerouted around the ring in less than 50 ms, reducing the impact on traffic and applications

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- **Intelligent Resilient Framework (IRF)**  
creates virtual resilient switching fabrics, where two or more 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 the need for complex protocols like Spanning Tree Protocol, Equal-Cost Multipath (ECMP), or VRRP, thereby simplifying network operation

### Layer 2 switching

- **16K MAC address table**  
provides access to many Layer 2 devices
- **VLAN support and tagging**  
supports IEEE 802.1Q with 4,094 simultaneous VLAN IDs
- **GARP VLAN Registration Protocol**  
allows automatic learning and dynamic assignment of VLANs
- **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
- **Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) protocol snooping**  
controls and manages the flooding of multicast packets in a Layer 2 network
- **Per-VLAN Spanning Tree Plus (PVST+)**  
allows each VLAN to build a separate spanning tree to improve link bandwidth usage in network environments with multiple VLANs

### 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

### Layer 3 routing

- **Static IP routing**  
provides manually configured routing for both IPv4 and IPv6 networks

### 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**

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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, and/or SNMPv3
- **Secure FTP**  
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
- **Endpoint Admission Defense (EAD)**  
provides security policies to users accessing a network
- **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

### Convergence

- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP)**  
facilitates easy mapping using network management applications with LLDP automated device discovery protocol
- **LLDP-MED**  
is a standard extension that automatically configures network devices, including LLDP-capable IP phones
- **LLDP-CDP compatibility**  
receives and recognizes CDP packets from Cisco's IP phones for seamless interoperation
- **IEEE 802.3af Power over Ethernet**  
provides up to 15.4 W per port to PoE-powered devices such as IP phones, wireless access points, and video cameras
- **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)**

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prevents flooding of IP multicast traffic

### Device support

- **Cisco prestandard PoE support**  
detects and provides power to Cisco's prestandard 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

### Warranty and support

- **Lifetime Warranty 2.0**  
advance hardware replacement for as long as the original end user owns the product with next-business-day delivery (available in most countries)†
- **Electronic and telephone support (for Lifetime Warranty 2.0)**  
limited 24x7 telephone support is available from HP for the first 3 years; limited electronic and business hours telephone support is available from HP for the entire warranty period; to reach our support centers, refer to [www.hp.com/networking/contact-support](http://www.hp.com/networking/contact-support); for details on the duration of support provided with your product purchase, refer to [www.hp.com/networking/warrantysummary](http://www.hp.com/networking/warrantysummary)
- **Software releases**  
to find software for your product, refer to [www.hp.com/networking/support](http://www.hp.com/networking/support); for details on the software releases available with your product purchase, refer to

†HP warranty includes repair or replacement of hardware for as long as the original end-user owns the product, with next business day advance replacement (available in most countries). The disk drive included with HP AllianceOne Advanced Services and Services zL Modules, HP Threat Management Services zL Module, HP AllianceOne Extended zL Module with Riverbed Steelhead, HP MSM765 zL Mobility Controller and HP Survivable Branch Communication zL Module powered by Microsoft® Lync has a five-year hardware warranty. For details, refer to the Software license and hardware warranty statements at [www.hp.com/networking/warranty](http://www.hp.com/networking/warranty).

### 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.

#### Switch Chassis

HP 5130-24G-4SFP+ EI Switch <ul style="list-style-type: none"> <li>• 24 RJ-45 autosensing 10/100/1000 ports</li> <li>• 4 SFP+ ports</li> <li>• min=0 \ max=4 SFP+ Transceivers</li> <li>• Power supply included</li> <li>• 1U - Height</li> </ul>	JG932A See <a href="#">Configuration</a> Note:2, 4, 5
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	JG932A#B2B
PDU Cable ROW <ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (ROW)</li> </ul>	JG932A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"> <li>• NEMA L6-20P Cord (NA/MEX/JP/TW)</li> </ul>	JG932A#B2E
HP 5130-24G-SFP-4SFP+ EI Switch <ul style="list-style-type: none"> <li>• 24 SFP ports</li> <li>• (Of the 24, 8 are dual-personality ports - autosensing 10/100/1000BASE-T or SFP)</li> <li>• min=0 \ max=24 SFP Transceivers</li> <li>• 4 SFP+ ports</li> <li>• min=0 \ max=4 SFP+ Transceivers</li> <li>• Must select min 1 power supply</li> <li>• 1U - Height</li> </ul>	JG933A See <a href="#">Configuration</a> Note:1, 2
HP 5130-48G-4SFP+ EI Switch <ul style="list-style-type: none"> <li>• 48 RJ-45 autosensing 10/100/1000 ports</li> <li>• 4 SFP+ ports</li> <li>• min=0 \ max=4 SFP+ Transceivers</li> <li>• Power supply included</li> <li>• 1U - Height</li> </ul>	JG934A See <a href="#">Configuration</a> Note:2, 4, 5
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	JG934A#B2B
PDU Cable ROW <ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (ROW)</li> </ul>	JG934A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"> <li>• NEMA L6-20P Cord (NA/MEX/JP/TW)</li> </ul>	JG934A#B2E
HP 5130-24G-PoE+-4SFP+ EI Swch <ul style="list-style-type: none"> <li>• 24 RJ-45 autosensing 10/100/1000 ports</li> <li>• 4 SFP+ ports</li> </ul>	JG936A See <a href="#">Configuration</a>



### Configuration

<ul style="list-style-type: none"> <li>min=0 \ max=4 SFP+ Transceivers</li> <li>Power supply included</li> <li>1U - Height</li> </ul>	Note:2, 4, 5
<b>PDU Cable NA/MEX/TW/JP</b> <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	JG936A#B2B
<b>PDU Cable ROW</b> <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	JG936A#B2C
<b>High Volt Switch to Wall Power Cord</b> <ul style="list-style-type: none"> <li>NEMA L6-20P Cord (NA/MEX/JP/TW)</li> </ul>	JG936A#B2E
<b>HP 5130-48G-PoE+-4SFP+ EI Swch</b> <ul style="list-style-type: none"> <li>48 RJ-45 autosensing 10/100/1000 ports</li> <li>4 SFP+ ports</li> <li>min=0 \ max=4 SFP+ Transceivers</li> <li>Power supply included</li> <li>1U - Height</li> </ul>	JG937A See Configuration Note:2, 4, 5
<b>PDU Cable NA/MEX/TW/JP</b> <b>C15 PDU Jumper Cord (NA/MEX/TW/JP)</b>	JG937A#B2B
<b>PDU Cable ROW</b> <b>C15 PDU Jumper Cord (ROW)</b>	JG937A#B2C
<b>High Volt Switch to Wall Power Cord</b> <b>NEMA L6-20P Cord (NA/MEX/JP/TW)</b>	JG937A#B2E
<b>Configuration Rules:</b>	
<b>Note 1</b> The following Transceivers install into this Switch: (SFP Ports)	
HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B
HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X115 100M SFP LC BX 10-U Transceiver	JD100A
HP X115 100M SFP LC BX 10-D Transceiver	JD101A
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP LC LH100 Transceiver	JD103A
<b>Note 2</b> The following Transceivers install into this Switch: (SFP+ Ports)	
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B

### Configuration

HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP LC LH100 Transceiver	JD103A
HP X130 10G SFP+ LC SR Transceiver	JD092B
HP X130 10G SFP+ LC LR Transceiver	JD094B
HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C

Note 4 Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) or #B2E. (See Localization Menu)

Note 5 #B2E is Offered only in NA, Mexico, Taiwan and Japan.

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)

### Box Level Integration CTO Models

#### CTO Solution Sku

HP 51xx CTO Switch Solution JG706A  
 • SSP trigger sku

#### CTO Base Sku

HP 5130-24G-4SFP+ EI Switch JG932A  
 • 24 RJ-45 autosensing 10/100/1000 ports  
 • 4 SFP+ ports  
 • min=0 \ max=4 SFP+ Transceivers  
 • Power supply included  
 • 1U - Height  
See Configuration Note:2, 4, 5, 6, 7

PDU Cable NA/MEX/TW/JP JG932A#B2B  
 • C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW JG932A#B2C  
 • C15 PDU Jumper Cord (ROW)

### Configuration

High Volt Switch to Wall Power Cord	JG932A#B2E
<ul style="list-style-type: none"> <li>NEMA L6-20P Cord (NA/MEX/JP/TW)</li> </ul>	
HP 5130-24G-SFP-4SFP+ EI Switch	JG933A
<ul style="list-style-type: none"> <li>24 SFP ports</li> <li>(Of the 24, 8 are dual-personality ports - autosensing 10/100/1000BASE-T or SFP)</li> <li>min=0 \ max=24 SFP Transceivers</li> <li>4 SFP+ ports</li> <li>min=0 \ max=4 SFP+ Transceivers</li> <li>Must select min 1 power supply</li> <li>1U - Height</li> </ul>	See Configuration Note:1, 2, 6, 7
HP 5130-48G-4SFP+ EI Switch	JG934A
<ul style="list-style-type: none"> <li>48 RJ-45 autosensing 10/100/1000 ports</li> <li>4 SFP+ ports</li> <li>min=0 \ max=4 SFP+ Transceivers</li> <li>Power supply included</li> <li>1U - Height</li> </ul>	See Configuration Note:2, 4, 5, 6, 7
PDU Cable NA/MEX/TW/JP	JG934A#B2B
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	
PDU Cable ROW	JG934A#B2C
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	
High Volt Switch to Wall Power Cord	JG934A#B2E
PDU Cable NA/MEX/TW/JP	JG936A#B2B
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	
PDU Cable ROW	JG936A#B2C
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	
High Volt Switch to Wall Power Cord	JG936A#B2E
<ul style="list-style-type: none"> <li>NEMA L6-20P Cord (NA/MEX/JP/TW)</li> </ul>	
HP 5130-48G-PoE+-4SFP+ EI Swch	JG937A
<ul style="list-style-type: none"> <li>48 RJ-45 autosensing 10/100/1000 ports</li> <li>4 SFP+ ports</li> <li>min=0 \ max=4 SFP+ Transceivers</li> <li>Power supply included</li> <li>1U - Height</li> </ul>	See Configuration Note:2, 4, 5, 6, 7
PDU Cable NA/MEX/TW/JP	JG937A#B2B
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	
PDU Cable ROW	JG937A#B2C
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	
High Volt Switch to Wall Power Cord	JG937A#B2E

### Configuration

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

#### Configuration Rules:

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

HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B
HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X115 100M SFP LC BX 10-U Transceiver	JD100A
HP X115 100M SFP LC BX 10-D Transceiver	JD101A
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP LC LH100 Transceiver	JD103A

Note 4 Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) or #B2E. (See Localization Menu)

Note 5 #B2E is Offered only in NA, Mexico, Taiwan and Japan.

Note 6 If this Switch is selected, Then a Minimum of 1 factory integrated accessory must be ordered and integrated to CTO chassis. See Menu below, option must have a #0D1 to be integrated to the CTO Chassis.

Note 7 If the Switch Chassis is to be Box Level Factory Integrated (CTO), Then the #0D1 is required on the Switch Chassis and integrated to the JG706A - HP 51xx CTO Enablement. (Min 1/Max 1 Switch per SSP)

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)

### Rack Level Integration CTO Models

#### Switch Chassis

HP 5130-24G-4SFP+ EI Switch

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power supply included
- 1U - Height

JG932A

See  
Configuration  
Note:2, 4, 7

### Configuration

PDU Cable NA/MEX/TW/JP	JG932A#B2B
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	
PDU Cable ROW	JG932A#B2C
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	
High Volt Switch to Wall Power Cord	JG932A#B2E
<ul style="list-style-type: none"> <li>NEMA L6-20P Cord (NA/MEX/JP/TW)</li> </ul>	
HP 5130-24G-SFP-4SFP+ EI Switch	JG933A
<ul style="list-style-type: none"> <li>24 SFP ports</li> <li>(Of the 24, 8 are dual-personality ports - autosensing 10/100/1000BASE-T or SFP)</li> <li>min=0 \ max=24 SFP Transceivers</li> <li>4 SFP+ ports</li> <li>min=0 \ max=4 SFP+ Transceivers</li> <li>Must select min 1 power supply</li> <li>1U - Height</li> </ul>	See Configuration Note:1, 2, 7
HP 5130-48G-4SFP+ EI Switch	JG934A
<ul style="list-style-type: none"> <li>48 RJ-45 autosensing 10/100/1000 ports</li> <li>4 SFP+ ports</li> <li>min=0 \ max=4 SFP+ Transceivers</li> <li>Power supply included</li> <li>1U - Height</li> </ul>	See Configuration Note:2, 4, 7
PDU Cable NA/MEX/TW/JP	JG934A#B2B
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	
PDU Cable ROW	JG934A#B2C
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	
High Volt Switch to Wall Power Cord	JG934A#B2E
<ul style="list-style-type: none"> <li>NEMA L6-20P Cord (NA/MEX/JP/TW)</li> </ul>	
HP 5130-24G-PoE+-4SFP+ EI Swch	JG936A
<ul style="list-style-type: none"> <li>24 RJ-45 autosensing 10/100/1000 ports</li> <li>4 SFP+ ports</li> <li>min=0 \ max=4 SFP+ Transceivers</li> <li>Power supply included</li> <li>1U - Height</li> </ul>	See Configuration Note:2, 4, 7
PDU Cable NA/MEX/TW/JP	JG936A#B2B
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	
PDU Cable ROW	JG936A#B2C
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	
High Volt Switch to Wall Power Cord	JG936A#B2E
<ul style="list-style-type: none"> <li>NEMA L6-20P Cord (NA/MEX/JP/TW)</li> </ul>	

### Configuration

HP 5130-48G-PoE+-4SFP+ EI Swch	JG937A
<ul style="list-style-type: none"> <li>• 48 RJ-45 autosensing 10/100/1000 ports</li> <li>• 4 SFP+ ports</li> <li>• min=0 \ max=4 SFP+ Transceivers</li> <li>• Power supply included</li> <li>• 1U - Height</li> </ul>	See Configuration Note:2, 4, 7

PDU Cable NA/MEX/TW/JP	JG937A#B2B
<ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	

PDU Cable ROW	JG937A#B2C
<ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (ROW)</li> </ul>	

#### Configuration Rules:

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

HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B
HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X115 100M SFP LC BX 10-U Transceiver	JD100A
HP X115 100M SFP LC BX 10-D Transceiver	JD101A
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP LC LH100 Transceiver	JD103A

Note 2 The following Transceivers install into this Switch: (SFP+ Ports) (Use #0D1 or #B01 quoted to switch if switch is CTO) - if applicable

HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP LC LH100 Transceiver	JD103A
HP X130 10G SFP+ LC SR Transceiver	JD092B
HP X130 10G SFP+ LC LR Transceiver	JD094B
HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C

### Configuration

- 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.
- Note 7** If HP CTO Switch Chassis is selected for Rack Level Integration, Then the Switch needs to integrate (with #OD1) to the Rack.

**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)

### Transceivers

#### SFP Transceivers

HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B
HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X110 100M SFP LC BX 10-U Transceiver	JD100A
HP X110 100M SFP LC BX 10-D Transceiver	JD101A
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X120 1G SFP LC LH40 1550nm XCVR	JD062A
HP X125 1G SFP LC LH40 1310nm XCVR	JD061A
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP LC LH100 Transceiver	JD103A

#### SFP+ Transceivers

HP X130 SFP+ LC SR Transceiver	JD092B
HP X130 SFP+ LC LR Transceiver	JD094B
HP X240 10G SFP+ SFP+ 0.65m DAC Cable	JD095C#B01
HP X240 10G SFP+ SFP+ 1.2m DAC Cable	JD096C#B01
HP X240 10G SFP+ SFP+ 3m DAC Cable	JD097C#B01
HP X240 10G SFP+ SFP+ 5m DAC Cable	JG081C#B01

### Cables

#### Multi-Mode Cables

HP .5m Multi-mode OM3 LC/LC FC Cable	AJ833A
HP 1m Multi-mode OM3 LC/LC FC Cable	AJ834A

### Configuration

HP 2 m Multimode OM3 LC/LC FC Cable	AJ835A
HP 5 m Multimode OM3 LC/LC FC Cable	AJ836A
HP 15 m Multimode OM3 LC/LC FC Cable	AJ837A
HP 30 m Multimode OM3 LC/LC FC Cable	AJ838A
HP 50 m Multimode OM3 LC/LC FC Cable	AJ839A
HP Premier Flex LC/LC OM4 2f 1m Cbl	QK732A
HP Premier Flex LC/LC OM4 2f 2m Cbl	QK733A
HP Premier Flex LC/LC OM4 2f 5m Cbl	QK734A
HP Premier Flex LC/LC OM4 2f 15m Cbl	QK735A
HP Premier Flex LC/LC OM4 2f 30m Cbl	QK736A
HP Premier Flex LC/LC OM4 2f 50m Cbl	QK737A

### Internal Power Supplies

(JG933A Switch Only) (std 0 // max 2) User Selection (min 1 // max 2) per switch enclosure

HP 5500 150WDC Power Supply	JD366A See Configuration Note:4
HP 5500 150WAC Power Supply <ul style="list-style-type: none"> <li>includes 1 x c13, 910w</li> </ul>	JD362A See Configuration Note:2, 3, 4
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	JD362A#B2B
PDU Cable ROW <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	JD362A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"> <li>NEMA L6-20P Cord (NA/MEX/JP/TW)</li> </ul>	JD362A#B2E

#### Configuration Rules:

**Note 2** 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 3** 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 4** Not supported on JG932A, JG934A, JG936A, JG937A

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)



### Configuration

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)

### Switch Enclosure Options

#### External/Redundant Power Supplies

HP RPS 800 Redundant Power Supply

- Height = 1U
- includes 1 x c13, 800w

JD183A  
See  
Configuration  
Note:2, 3, 5, 7

HP RPS1600 Redundant Power System

- Height = 1U
- includes 1 x c13, 1600w and Power Supply port

JG136A  
See  
Configuration  
Note:2, 3, 6

HP RPS1600 1600W AC Power Supply

- Installs into JG136A only

JG137A  
See  
Configuration  
Note:1, 6

#### Configuration Rules:

Note 1 If this power supply is selected, The JG136A - HP A-RPS1600 Redundant Power System must be on order or onsite.

Note 2 Localization required. (See Localization Menu for list.)

Note 3 Only 1 JD183A or JG136A can be connected per switch.

Note 5 Supported on JG934A

Note 6 Supported on JG934A, JG933A, JG936A, JG937A

Note 7 Supported on JD366A when used in JG933A

#### External/Redundant Power Cables

HP X290 RPS 500/800 list V 1m Cable

JD186A  
See  
Configuration  
Note:1

HP X290 1000 A JD5 2m RPS Cable

JD187A  
See  
Configuration  
Note:2

### Configuration

HP RPS 1000/1600 A JD5 Non-PoE 2m Cable

JD188A  
See  
Configuration  
Note:3

#### Configuration Rules:

Note 1 Supported on JG934A and JD366A when used in JG933A or JG943A, to connect to JD183A.

Note 2 Supported on JG936A, JG937A to connect to JG136A.

Note 3 Supported on JG934A, JG933A, to connect to JG136A.

### Technical Specifications

#### HP 5130-24G-4SFP+ EI Switch (JG932A)

<b>I/O ports and slots</b>	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); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 SFP+ fixed 1000/10000 SFP+ ports	
<b>Additional ports and slots</b>	1 RJ-45 serial console port	
<b>Physical characteristics</b>	<b>Dimensions</b>	17.32(w) x 6.3(d) x 1.72(h) in (44 x 16 x 4.36 cm) (1U height)
	<b>Weight</b>	11.02 lb (5 kg)
<b>Memory and processor</b>	1 GB SDRAM, 128 MB flash; packet buffer size: 1.5 MB	
<b>Mounting and enclosure</b>	Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)	
<b>Performance</b>	<b>1000 Mb Latency</b>	< 5 $\mu$ s
	<b>10 Gbps Latency</b>	< 1.5 $\mu$ s
	<b>Throughput</b>	96 Mpps
	<b>Routing/Switching capacity</b>	128 Gbps
	<b>Routing table size</b>	512 entries (IPv4), 256 entries (IPv6)
	<b>MAC address table size</b>	16384 entries
<b>Reliability</b>	<b>MTBF (years)</b>	98.1
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	10% to 90%, noncondensing
	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Nonoperating/Storage relative humidity</b>	5% to 95%, noncondensing
	<b>Acoustic</b>	High-speed fan: 39.7 dB; ISO 7779
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz
	<b>Maximum heat dissipation</b>	64/88 BTU/hr (67.52/92.84 kJ/hr)
	<b>AC voltage</b>	100 - 240 VAC
	<b>Current</b>	2 A
	<b>Maximum power rating</b>	26 W
	<b>Idle power</b>	19 W
	<b>Notes</b>	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.
<b>Safety</b>	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	
<b>Emissions</b>	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	

### Technical Specifications

<b>Immunity</b>	<b>Generic</b>	EN 55024
	<b>ESD</b>	EN300 386
<b>Management Services</b>	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager	
	Refer to the HP website at: <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	

#### HP 5130-24G-SFP-4SFP+ EI Switch (JG933A)

<b>I/O ports and slots</b>	16 SFP 100/1000 Mbps ports 8 SFP dual-personality ports; 100/1000BaseX or 100/1000BASET RJ-45 Combo Ports 4 SFP+ fixed 1000/10000 SFP+ ports	
<b>Additional ports and slots</b>	1 RJ-45 serial console port	
<b>Power supplies</b>	2 power supply slots 1 minimum power supply required (ordered separately)	
<b>Physical characteristics</b>	<b>Dimensions</b>	17.32(w) x 14.17(d) x 1.72(h) in (44 x 36 x 4.36 cm) (1U height)
	<b>Weight</b>	17.64 lb (8 kg)
<b>Memory and processor</b>	1 GB SDRAM, 128 MB flash; packet buffer size: 1.5 MB	
<b>Mounting and enclosure</b>	Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)	
<b>Performance</b>	<b>1000 Mb Latency</b>	< 5 $\mu$ s
	<b>10 Gbps Latency</b>	< 1.5 $\mu$ s
	<b>Throughput</b>	96 Mpps
	<b>Routing/Switching capacity</b>	128 Gbps
	<b>Routing table size</b>	512 entries (IPv4), 256 entries (IPv6)
	<b>MAC address table size</b>	16384 entries
<b>Reliability</b>	<b>MTBF (years)</b>	52.79
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	10% to 90%, noncondensing
	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Nonoperating/Storage relative humidity</b>	5% to 95%, noncondensing
	<b>Acoustic</b>	Low-speed fan: 47.1 dB, High-speed fan: 50.7 dB; ISO 7779
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz
	<b>Maximum heat dissipation</b>	102/204 BTU/hr (107.61/215.22 kJ/hr), for AC Powered units. For DC powered units heat dissipation is 130BTU/hr min, 232BTU/hr max.
	<b>AC voltage</b>	100 - 240 VAC
	<b>DC voltage</b>	-48 to -60 VDC
	<b>Current</b>	5 A
	<b>Maximum power rating</b>	60 W
	<b>Idle power</b>	30 W
	<b>Notes</b>	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

### Technical Specifications

with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.

Power Ratings for AC Power Supply indicated above.

For DC input power, Idle Power is 38W and Max is 68W.

DC Max input current is 8A. Units are supplied without a power supply.

Customer must buy 1 or 2 JD362A(AC) or JD366A (DC) power supply.

<b>Safety</b>	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
<b>Emissions</b>	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
<b>Immunity</b>	<b>Generic</b> EN 55024 <b>ESD</b> EN300 386
<b>Management Services</b>	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager Refer to the HP website at: <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

#### HP 5130-48G-4SFP+ EI Switch (JG934A)

<b>I/O ports and slots</b>	48 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); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 SFP+ fixed 1000/10000 SFP+ ports
<b>Additional ports and slots</b>	1 RJ-45 serial console port
<b>Physical characteristics</b>	<b>Dimensions</b> 17.32(w) x 10.24(d) x 1.72(h) in (44 x 26 x 4.36 cm) (1U height) <b>Weight</b> 11.02 lb (5 kg)
<b>Memory and processor</b>	1 GB SDRAM, 128 MB flash; packet buffer size: 3 MB
<b>Mounting and enclosure</b>	Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)
<b>Performance</b>	<b>1000 Mb Latency</b> < 5 $\mu$ s <b>10 Gbps Latency</b> < 1.5 $\mu$ s <b>Throughput</b> 130.9 Mpps <b>Routing/Switching capacity</b> 176 Gbps <b>Routing table size</b> 512 entries (IPv4), 256 entries (IPv6) <b>MAC address table size</b> 16384 entries
<b>Reliability</b>	<b>MTBF (years)</b> 61.4
<b>Environment</b>	<b>Operating temperature</b> 32°F to 113°F (0°C to 45°C) <b>Operating relative humidity</b> 10% to 90%, noncondensing <b>Nonoperating/Storage temperature</b> -40°F to 158°F (-40°C to 70°C) <b>Nonoperating/Storage relative humidity</b> 5% to 95%, noncondensing <b>Acoustic</b> Low-speed fan: 43.1 dB, High-speed fan: 53.4 dB; ISO 7779
<b>Electrical characteristics</b>	<b>Frequency</b> 50/60 Hz <b>Maximum heat</b> 130/153 BTU/hr (137.15/161.42 kJ/hr), For AC powered units. For DC

### Technical Specifications

<b>dissipation</b>	powered units heat dissipation is 130BTU/hr min, 171 BTU/hr max
<b>AC voltage</b>	100 - 240 VAC
<b>DC voltage</b>	-48 to -60 VDC
<b>Current</b>	10 A
<b>Maximum power rating</b>	45 W
<b>Idle power</b>	38 W
<b>Notes</b>	<p>Idle power is the actual power consumption of the device with no ports connected.</p> <p>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.</p> <p>Power ratings for AC power indicated above. Current used is 5A Max when DC Power used. For DC input power, idle power is 38W, maximum DC power used is 50W.</p>

<b>Safety</b>	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
<b>Emissions</b>	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
<b>Immunity</b>	<p><b>Generic</b> EN 55024</p> <p><b>ESD</b> EN300 386</p>
<b>Management Services</b>	<p>IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager</p> <p>Refer to the HP website at: <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.</p>

#### HP 5130-24G-PoE+-4SFP+ (370W) EI Switch (JG936A)

<b>I/O ports and slots</b>	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); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 SFP+ fixed 1000/10000 SFP+ ports
<b>Additional ports and slots</b>	1 RJ-45 serial console port
<b>Physical characteristics</b>	<p><b>Dimensions</b> 17.32(w) x 11.81(d) x 1.72(h) in (44 x 30 x 4.37 cm) (1U height)</p> <p><b>Weight</b> 17.64 lb (8 kg)</p>
<b>Memory and processor</b>	1 GB SDRAM, 128 MB flash; packet buffer size: 1.5 MB
<b>Mounting and enclosure</b>	Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)
<b>Performance</b>	<p><b>1000 Mb Latency</b> &lt; 5 <math>\mu</math>s</p> <p><b>10 Gbps Latency</b> &lt; 1.5 <math>\mu</math>s</p> <p><b>Throughput</b> 96 Mpps</p> <p><b>Routing/Switching capacity</b> 128 Gbps</p> <p><b>Routing table size</b> 512 entries (IPv4), 256 entries (IPv6)</p> <p><b>MAC address table size</b> 16384 entries</p>
<b>Reliability</b>	<b>MTBF (years)</b> 48.3
<b>Environment</b>	<b>Operating temperature</b> 32°F to 113°F (0°C to 45°C)

### Technical Specifications

	<b>Operating relative humidity</b>	10% to 90%, noncondensing
	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Nonoperating/Storage relative humidity</b>	5% to 95%, noncondensing
	<b>Acoustic</b>	Low-speed fan: 49.8 dB, High-speed fan: 52.9 dB; ISO 7779
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz
	<b>Maximum heat dissipation</b>	102/1569 BTU/hr (107.61/1655.29 kJ/hr), for AC Power. For DC Power min heat dissipation is 85BTU/hr and max heat dissipation is 2559 BTU/hr
	<b>AC voltage</b>	100 - 240 VAC
	<b>Current</b>	10 A
	<b>Maximum power rating</b>	460 W
	<b>Idle power</b>	N/A
	<b>PoE power</b>	370 W PoE+
	<b>Notes</b>	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 is the power supplied by the internal power supply. When supplemented with the use of an HP RPS1600 Redundant Power System, up to 740 W of PoE+ can be supplied. Max current rating for DC power is 25A. AC Input power is 30W typical, and 460W max(including 370W PoE+ consumption. DC Input voltage range is -54 to -57VDC. Total DC input power is 25W Typical and 790W with 740W PoE+ Power consumption. DC Input voltage range is -54VDC to -57VDC. DC Input Source is the HP RPS1600.
<b>Safety</b>	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	
<b>Emissions</b>	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	
<b>Immunity</b>	<b>Generic</b>	EN 55024
	<b>ESD</b>	EN300 386
<b>Management Services</b>	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager. Refer to the HP website at: <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	

#### HP 5130-48G-PoE+-4SFP+ (370W) EI Switch (JG937A)

<b>I/O ports and slots</b>	48 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); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 SFP+ fixed 1000/10000 SFP+ ports	
<b>Additional ports and slots</b>	1 RJ-45 serial console port	
<b>Physical characteristics</b>	<b>Dimensions</b>	17.32(w) x 14.17(d) x 1.72(h) in (44 x 36 x 4.36 cm) (1U height)
	<b>Weight</b>	17.64 lb (8 kg)
<b>Memory and processor</b>	1 GB SDRAM, 128 MB flash; packet buffer size: 3 MB	

### Technical Specifications

<b>Mounting and enclosure</b>	Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)		
<b>Performance</b>	<b>1000 Mb Latency</b>	< 5 $\mu$ s	
	<b>10 Gbps Latency</b>	< 1.5 $\mu$ s	
	<b>Throughput</b>	130.9 Mpps	
	<b>Routing/Switching capacity</b>	176 Gbps	
	<b>Routing table size</b>	512 entries (IPv4), 256 entries (IPv6)	
<b>Reliability</b>	<b>MAC address table size</b>	16384 entries	
	<b>MTBF (years)</b>	37.1	
	<b>Environment</b>		
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)	
	<b>Operating relative humidity</b>	10% to 90%, noncondensing	
	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)	
	<b>Nonoperating/Storage relative humidity</b>	5% to 95%, noncondensing	
	<b>Acoustic</b>	Low-speed fan: 50.6 dB, High-speed fan: 54.6 dB; ISO 7779	
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz	
	<b>Maximum heat dissipation</b>	160/1671 BTU/hr (168.8/1762.91 kJ/hr), for AC power. For DC power min heat dissipation is 147BTU/hr and 3037BTU/hr max.	
	<b>AC voltage</b>	100 - 240 VAC	
	<b>Current</b>	10 A	
	<b>Maximum power rating</b>	490 W	
	<b>Idle power</b>	47 W	
	<b>PoE power</b>	370 W PoE+	
	<b>Notes</b>	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 is the power supplied by the internal power supply. When supplemented with the use of an HP RPS1600 Redundant Power System, up to 740 W of PoE+ can be supplied. Max current rating for DC power is 25A. AC Input power is 47W typical, and 490W max(including 370W PoE+ consumption. DC Input voltage range is -54 to -57VDC. Total DC input power is 43W typical and 890W with 800W PoE+ Power consumption. DC Input voltage range is -54VDC to -57VDC. DC Input Source is the HP RPS1600.	
	<b>Safety</b>	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	
	<b>Emissions</b>	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	
<b>Immunity</b>	<b>Generic</b>	EN 55024	
	<b>ESD</b>	EN300 386	
<b>Management Services</b>	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager Refer to the HP website at: <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> for details on the service-level		



### Technical Specifications

descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

#### Standards and protocols (applies to all products in series)

#### Device management

RFC 1157 SNMPv1/v2c  
 RFC 1305 NTPv3  
 RFC 2573 (SNMPv3 Applications)  
 RFC 2819 (RMON groups Alarm, Event, History and Statistics only)  
 RFC 3416 (SNMP Protocol Operations v2)  
 HTML and telnet management  
 Multiple Configuration Files  
 SNMP v3 and RMON RFC support  
 SSHv1/SSHv2 Secure Shell  
 TACACS/TACACS+  
 Web UI

#### General protocols

IEEE 802.1ad Q-in-Q  
 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 802.1X PAE  
 IEEE 802.3 Type 10BASE-T  
 IEEE 802.3ab 100BASE-T  
 IEEE 802.3ad Link Aggregation Control Protocol (LACP)  
 IEEE 802.3ae 10-Gigabit Ethernet  
 IEEE 802.3af Power over Ethernet  
 IEEE 802.3i 10BASE-T  
 IEEE 802.3u 100BASE-X  
 IEEE 802.3x Flow Control  
 IEEE 802.3z 100BASE-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 951 BOOTP  
 RFC 1213 Management Information Base for Network Management of TCP/IP-based internets  
 RFC 1305 NTPv3  
 RFC 1350 TFTP Protocol (revision 2)  
 RFC 1519 CIDR  
 RFC 1812 IPv4 Routing  
 RFC 1866 Hypertext Markup Language - 2.0  
 RFC 2131 DHCP  
 RFC 2236 IGMP Snooping  
 RFC 2616 HTTP Compatibility v1.1  
 RFC 2665 Definitions of Managed Objects for the Ethernet-like Interface Types

#### IPv6

RFC 2461 IPv6 Neighbor Discovery  
 RFC 2463 ICMPv6  
 RFC 3162 RADIUS and IPv6  
 RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses  
 RFC 3315 DHCPv6 (client and relay)

#### MIBs

RFC 1212 Concise MIB Definitions  
 RFC 1213 MIB II  
 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 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)  
 ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)  
 SNMPv1/v2c/v3

#### 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  
 Secure Sockets Layer (SSL)  
 SSHv2 Secure Shell

### Technical Specifications

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 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 3418 Management Information Base (MIB) for  
the Simple Network Management Protocol (SNMP)  
RFC 3576 Ext to RADIUS (CoA only)  
RFC 4213 Basic IPv6 Transition Mechanisms  
802.1r - GARP Proprietary Attribute Registration  
Protocol (GPRP)

### Accessories

#### HP FlexFabric 5700 Switch Series accessories

##### Transceivers

HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B
HP X115 100M SFP LC BX 10-U Transceiver	JD100A
HP X115 100M SFP LC BX 10-D Transceiver	JD101A
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP LC LH100 Transceiver	JD103A
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X130 10G SFP+ LC SR Transceiver	JD092B
HP X130 10G SFP+ LC LR Transceiver	JD094B
HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HP X130 10G SFP+ LC LH 80km Transceiver	JG915A

##### Cables

HP LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A
HP LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
HP LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
HP LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
HP LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
HP LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
HP LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable	AJ839A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A

##### HP 5130-24G-SFP-4SFP+ EI Switch (JG933A)

HP 5500 150WAC Power Supply	JD362A
HP 5500 150WDC Power Supply	JD366A

##### HP 5130-48G-4SFP+ EI Switch (JG934A)

HP RPS 800 Redundant Power Supply	JD183A
HP RPS1600 Redundant Power System	JG136A
HP RPS1600 1600W AC Power Supply	JG137A
HP X290 500 V 1m RPS Cable	JD186A

### Accessories

HP X290 1000 A JD5 Non-PoE 2m RPS Cable

JD188A

#### **HP 5130-24G-PoE+-4SFP+ (370W) EI Switch (JG936A)**

HP RPS1600 Redundant Power System

JG136A

HP RPS1600 1600W AC Power Supply

JG137A

HP X290 1000 A JD5 2m RPS Cable

JD187A

#### **HP 5130-48G-PoE+-4SFP+ (370W) EI Switch (JG937A)**

HP RPS1600 Redundant Power System

JG136A

HP RPS1600 1600W AC Power Supply

JG137A

HP X290 1000 A JD5 2m RPS Cable

JD187A

To learn more, visit: [www.hp.com/networking](http://www.hp.com/networking)

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