HPE FlexNetwork 5130 EI Switch Series

Key features

- Fixed 10GbE 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 HPE FlexNetwork 5130 EI Switch Series comprises Gigabit Ethernet switches that support static and RIP Layer 3 routing, diversified services, and IPv6 forwarding, as well as provides 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.

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 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
• 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 or 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

• 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 wire-speed network monitoring and accounting with no impact on network performance; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes

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

**Connectivity**
• Auto-MDIX
Adjusts automatically 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/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**
• Non-blocking architecture
Up to 176 Gbps non-blocking switching fabric provides wire-speed switching with up to 130.9 million pps throughput

• Hardware-based wire-speed access control lists (ACLs)
Helps 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 under 100 ms failover between links

• Spanning Tree/PVST+, MSTP, RSTP
Provides redundant links while preventing network loops, supports up to 64 instances of MSTP
• 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 reduce 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
• IEEE 802.1ad QinQ and selective QinQ
  Increases the scalability of an Ethernet network by providing a hierarchical structure; connects 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
  Provides more control during route redistribution, allows filtering and altering of route metrics
• DHCP server
  Centralizes and reduces the cost of IPv4 address management

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
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 BPU 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 802.3at 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

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 HPE 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 hpe.com/networking/warrantysummary for warranty and support information included with your product purchase.
- Software releases
  To find software for your product, refer to hpe.com/networking/support for details on the software releases available with your product purchase, refer to hpe.com/networking/warrantysummary
# HPE FlexNetwork 5130 EI Switch Series

## Specifications

<table>
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<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPE FlexNetwork 5130-24G-4SFP+ EI Switch (JG932A)</td>
<td>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</td>
</tr>
<tr>
<td>HPE FlexNetwork 5130-24G-SFP-4SFP+ EI Switch (JG933A)</td>
<td>16 SFP 100/1000 Mbps ports 8 SFP dual-personality ports—10/100/1000BASE-T RJ-45 or 100/1000BASE-X Combo Ports 4 SFP+ fixed 1000/10000 SFP+ ports</td>
</tr>
<tr>
<td>HPE FlexNetwork 5130-48G-4SFP+ EI Switch (JG934A)</td>
<td>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</td>
</tr>
</tbody>
</table>

### I/O ports and slots
- 24 RJ-45 autosensing 10/100/1000 ports
- 4 SFP+ fixed 1000/10000 SFP+ ports

### Additional ports and slots
- 1 RJ-45 serial console port

### Power supplies
- 2 power supply slots
- 1 minimum power supply required (ordered separately)

### Physical characteristics

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>17.32(w) x 6.3(d) x 1.72(h) in</th>
<th>17.32(w) x 14.17(d) x 1.72(h) in</th>
<th>17.32(w) x 10.24(d) x 1.72(h) in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>11.02 lb (5 kg)</td>
<td>17.64 lb (8 kg)</td>
<td>11.02 lb (5 kg)</td>
</tr>
</tbody>
</table>

### Memory and processor
- 1 GB SDRAM, 512 MB flash, packet buffer size: 1.5 MB

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

### Performance

<table>
<thead>
<tr>
<th>Performance</th>
<th>1000 Mb Latency</th>
<th>10 Gbps Latency</th>
<th>Throughput</th>
<th>Routing/Switching capacity</th>
<th>Routing table size</th>
<th>MAC address table size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latency</td>
<td>&lt; 5 µs</td>
<td>&lt; 3 µs</td>
<td>96 Mpps</td>
<td>128 Gbps</td>
<td>512 entries (IPv4), 256 entries (IPv6)</td>
<td>16384 entries IPv6 Ready Certified</td>
</tr>
<tr>
<td>Throughput</td>
<td>22°F to 113°F (-5°C to 45°C)</td>
<td>22°F to 113°F (-5°C to 45°C)</td>
<td>22°F to 113°F (-5°C to 45°C)</td>
<td>10% to 90%, noncondensing</td>
<td>23°F to 113°F (-5°C to 45°C)</td>
<td>23°F to 113°F (-5°C to 45°C)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>22°F to 113°F (-5°C to 45°C)</td>
<td>22°F to 113°F (-5°C to 45°C)</td>
<td>22°F to 113°F (-5°C to 45°C)</td>
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<td>22°F to 113°F (-5°C to 45°C)</td>
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</tr>
<tr>
<td>Operating relative humidity</td>
<td>10% to 90%, noncondensing</td>
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</tr>
<tr>
<td>Non-operating/Storage temperature</td>
<td>-40°F to 158°F (-40°C to 70°C)</td>
<td>-40°F to 158°F (-40°C to 70°C)</td>
<td>-40°F to 158°F (-40°C to 70°C)</td>
<td>5% to 95%, noncondensing</td>
<td>-40°F to 158°F (-40°C to 70°C)</td>
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</tr>
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<td>Non-operating/Storage relative humidity</td>
<td>5% to 95%, noncondensing</td>
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### Environment

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<tr>
<th>Environment</th>
<th>Operating temperature</th>
<th>Operating relative humidity</th>
<th>Non-operating/Storage temperature</th>
<th>Non-operating/Storage relative humidity</th>
<th>Acoustic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>23°F to 113°F (-5°C to 45°C)</td>
<td>10% to 90%, noncondensing</td>
<td>-40°F to 158°F (-40°C to 70°C)</td>
<td>5% to 95%, noncondensing</td>
<td>High-speed fan: 39.7 dB, ISO 7779</td>
</tr>
<tr>
<td>Operating relative humidity</td>
<td>23°F to 113°F (-5°C to 45°C)</td>
<td>10% to 90%, noncondensing</td>
<td>-40°F to 158°F (-40°C to 70°C)</td>
<td>5% to 95%, noncondensing</td>
<td>High-speed fan: 47.1 dB, Low-speed fan: 47.1 dB,</td>
</tr>
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<td>Non-operating/Storage temperature</td>
<td>23°F to 113°F (-5°C to 45°C)</td>
<td>10% to 90%, noncondensing</td>
<td>-40°F to 158°F (-40°C to 70°C)</td>
<td>5% to 95%, noncondensing</td>
<td>High-speed fan: 50.7 dB, ISO 7779</td>
</tr>
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<td>Non-operating/Storage relative humidity</td>
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<tbody>
<tr>
<td>Frequency</td>
<td>50/60 Hz</td>
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</tr>
<tr>
<td>Voltage dissipation</td>
<td>64/88 BTU/hr (67.52/92.84 kJ/hr)</td>
<td>102/204 BTU/hr (107.61/215.22 kJ/hr), for AC powered units. For DC powered units heat dissipation is 330 BTU/hr minimum, 232 BTU/hr maximum.</td>
<td>130/153 BTU/hr (137.15/161.42 kJ/hr), for AC powered units. For DC powered units heat dissipation is 330 BTU/hr minimum, 271 BTU/hr maximum.</td>
</tr>
<tr>
<td>AC voltage</td>
<td>100–240 VAC</td>
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</tr>
<tr>
<td>DC voltage</td>
<td>26 W</td>
<td>5 A</td>
<td>10 A</td>
</tr>
<tr>
<td>Current</td>
<td>2 A</td>
<td>60 W</td>
<td>45 W</td>
</tr>
<tr>
<td>Maximum power rating</td>
<td>39 W</td>
<td>30 W</td>
<td>38 W</td>
</tr>
<tr>
<td>Idle power</td>
<td>Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.</td>
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<td>Generic</td>
<td>EN 55024</td>
<td>EN 55024</td>
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<tr>
<td>ESD</td>
<td>EN 300 386</td>
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<td>IMC—Intelligent Management Center; command-line interface; Web browser; SNMP Manager</td>
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### Services

Refer to the Hewlett Packard Enterprise website at 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.

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<td>HPE FlexNetwork 5130-48G-PoE+4SFP+ (370W) EI Switch (JG937A)</td>
<td></td>
</tr>
<tr>
<td>HPE FlexNetwork 5130-24G-2SFP+-2XGT EI Switch (JG938A)</td>
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#### I/O ports and slots

- **HPE FlexNetwork 5130-24G-PoE+4SFP+ (370W) EI Switch (JG936A):**
  - 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

- **HPE FlexNetwork 5130-48G-PoE+4SFP+ (370W) EI Switch (JG937A):**
  - 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

- **HPE FlexNetwork 5130-24G-2SFP+-2XGT EI Switch (JG938A):**
  - 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
  - 2 SFP+ fixed 1000/10000 SFP+ ports
  - 2 RJ-45 1/10GBASE-T ports

#### Additional ports and slots

- **1 RJ-45 Serial Console Port**
- **1 RJ-45 Serial Console Port**
- **1 RJ-45 Serial Console Port**

#### Physical characteristics

| Dimensions | 17.32(w) x 11.81(d) x 1.72(h) in. (44 x 30 x 4.37 cm) (1U height) |
| Weight | 17.64 lb (8 kg) |
| Memory and processor | 1 GB SDRAM, 512 MB flash; packet buffer size: 1.5 MB |
| Mounting and enclosure | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included) |

#### Performance

| 1000 Mb Latency | < 5 µs |
| 10 Gbps Latency | < 3 µs |
| Throughput | 96 Mpps |
| Routing/Switching capacity | 126 Gbps |
| Routing table size | 512 entries (IPv4), 256 entries (IPv6) |
| MAC address table size | 16384 entries |
| IPv6 Ready Certified | IPv6 Ready Certified |

#### Environment

| Operating temperature | 23°F to 113°F (-5°C to 45°C) |
| Operating relative humidity | 10% to 90%, noncondensing |
| Non-operating/Storage temperature | -40°F to 158°F (-40°C to 70°C) |
| Non-operating/Storage relative humidity | 5% to 95%, noncondensing |
| Acoustic | Low-speed fan: 49.8 dB, High-speed fan: 52.9 dB ISO 7779 |
## Specifications (continued)

<table>
<thead>
<tr>
<th>Electrical characteristics</th>
<th>HPE FlexNetwork 5130-24G-PoE+-4SFP+ (370W) EI Switch (JG956A)</th>
<th>HPE FlexNetwork 5130-48G-PoE+-4SFP+ (370W) EI Switch (JG957A)</th>
<th>HPE FlexNetwork 5130-24G-2SFP+-2XGT EI Switch (JG958A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>50/60 Hz</td>
<td>50/60 Hz</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>Maximum heat dissipation</td>
<td>102/156 BTU/hr (107.61/165.29 kJ/hr), for AC power.</td>
<td>160/1671 BTU/hr (168.8/1762.91 kJ/hr), for AC power.</td>
<td>68/116 BTU/hr (71.74/122.38 kJ/hr), for AC power.</td>
</tr>
<tr>
<td>AC voltage</td>
<td>100–240 VAC</td>
<td>100–240 VAC</td>
<td>100–240 VAC</td>
</tr>
<tr>
<td>DC voltage</td>
<td>-54 to -57 VDC</td>
<td>-54 to -57 VDC</td>
<td>-54 to -57 VDC</td>
</tr>
<tr>
<td>Current</td>
<td>1.0 A</td>
<td>4.0 A</td>
<td>2.0 A</td>
</tr>
<tr>
<td>Maximum power rating</td>
<td>460 W</td>
<td>47 W</td>
<td>34 W</td>
</tr>
<tr>
<td>Idle power</td>
<td>30 W</td>
<td>370 W PoE+</td>
<td>20 W</td>
</tr>
</tbody>
</table>
| PoE power                   | 370 W PoE+                                        | 68 W                                              | Idile 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.
| Notes                       | Maximum current rating for DC power is 25 A. AC input power is 30 W typical, and 460 W maximum (including 370 W PoE+ consumption). DC input voltage range is -54 to -57 VDC. Total DC input power is 25 W typical and 790 W with 740 W PoE power consumption. DC input voltage range is -54 VDC to -57 VDC. DC input source is the HPE RPS1600. | Maximum current rating for DC power is 25 A. AC input power is 47 W typical and 490 W maximum (including 370 W PoE+ consumption). DC input voltage range is -54 to -57 VDC. Total DC input power is 43 W typical and 890 W with 800 W PoE power consumption. DC input voltage range is -54 VDC to -57 VDC. DC input source is the HPE RPS1600. | Maximum current rating for DC power is 25 A. AC input power is 20 W typical, and 34 W maximum (including 370 W PoE+ consumption). DC input voltage range is -54 to -57 VDC. Total DC input power is 43 W typical and 890 W with 800 W PoE power consumption. DC input voltage range is -54 VDC to -57 VDC. DC input source is the HPE RPS1600. |

### Safety

- UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1, Anatel, ULAR, GOST; EN 60950-1/A11, FDA 21 CFR Subchapter J; NOM; RoHS Compliance

### Emissions


<table>
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<tr>
<th>Specifications (continued)</th>
<th>HPE FlexNetwork 5130-24G-PoE++-4SFP+ (370W) EI Switch (JG936A)</th>
<th>HPE FlexNetwork 5130-48G-PoE++-4SFP+ (370W) EI Switch (JG937A)</th>
<th>HPE FlexNetwork 5130-24G-2SFP++-2XGT EI Switch (JG938A)</th>
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<td>Immunity</td>
<td>EN 55024</td>
<td>EN 55024</td>
<td>EN 55024</td>
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<td></td>
<td>EN 300 386</td>
<td>EN 300 386</td>
<td>EN 300 386</td>
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<tr>
<td>Management</td>
<td>IMC—Intelligent Management Center; command-line interface; Web browser; SNMP Manager</td>
<td>IMC—Intelligent Management Center; command-line interface; Web browser; SNMP Manager</td>
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<td>Services</td>
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## HPE 5130 EI Switch Series

### Specifications (continued)

#### I/O ports and slots

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<tr>
<th>Model</th>
<th>Ports and Slots</th>
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<tbody>
<tr>
<td>HPE FlexNetwork 5130-48G-2SFP+-2XGT EI Switch (JG939A)</td>
<td>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, 2 SFP+ fixed 1000/10000 SFP+ ports, 2 RJ-45 1/10GBASE-T ports</td>
</tr>
<tr>
<td>HPE FlexNetwork 5130-24G-PoE+-2SFP+-2XGT (370W) EI Switch (JG940A)</td>
<td>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, 2 SFP+ fixed 1000/10000 SFP+ ports, 2 RJ-45 1/10GBASE-T ports</td>
</tr>
<tr>
<td>HPE FlexNetwork 5130-48G-PoE+-2SFP+-2XGT (370W) EI Switch (JG941A)</td>
<td>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, 2 SFP+ fixed 1000/10000 SFP+ ports, 2 RJ-45 1/10GBASE-T ports</td>
</tr>
</tbody>
</table>

#### Additional ports and slots

<table>
<thead>
<tr>
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<th>Ports and Slots</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPE FlexNetwork 5130-48G-2SFP+-2XGT EI Switch (JG939A)</td>
<td>1 RJ-45 serial console port</td>
</tr>
<tr>
<td>HPE FlexNetwork 5130-24G-PoE+-2SFP+-2XGT (370W) EI Switch (JG940A)</td>
<td>1 RJ-45 serial console port</td>
</tr>
<tr>
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<td>1 RJ-45 serial console port</td>
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</tbody>
</table>

#### Physical characteristics

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPE FlexNetwork 5130-48G-2SFP+-2XGT EI Switch (JG939A)</td>
<td>17.32(w) x 10.63(d) x 1.72(h) in. (44 x 27 x 4.37 cm) (1U height)</td>
<td>11.02 lb (5 kg)</td>
</tr>
<tr>
<td>HPE FlexNetwork 5130-24G-PoE+-2SFP+-2XGT (370W) EI Switch (JG940A)</td>
<td>17.32(w) x 14.17(d) x 1.72(h) in. (44 x 36 x 4.37 cm) (1U height)</td>
<td>13.23 lb (6 kg)</td>
</tr>
<tr>
<td>HPE FlexNetwork 5130-48G-PoE+-2SFP+-2XGT (370W) EI Switch (JG941A)</td>
<td>17.32(w) x 16.54(d) x 1.72(h) in. (44 x 42 x 4.37 cm) (1U height)</td>
<td>15.43 lb (7 kg)</td>
</tr>
</tbody>
</table>

#### Mounting and enclosure

<table>
<thead>
<tr>
<th>Model</th>
<th>Mounting and Enclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPE FlexNetwork 5130-48G-2SFP+-2XGT EI Switch (JG939A)</td>
<td>Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)</td>
</tr>
<tr>
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<td>Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)</td>
</tr>
</tbody>
</table>

#### Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>1000 Mb Latency</th>
<th>10 Gbps Latency</th>
<th>Throughput</th>
<th>Routing/Switching capacity</th>
<th>Routing table size</th>
<th>MAC address table size</th>
<th>IPv6 Ready Certified</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPE FlexNetwork 5130-48G-2SFP+-2XGT EI Switch (JG939A)</td>
<td>&lt; 5 µs</td>
<td>&lt; 3 µs</td>
<td>up to 130.9 Mpps</td>
<td>176 Gbps</td>
<td>512 entries (IPv4), 256 entries (IPv6)</td>
<td>16384 entries</td>
<td>IPv6 Ready Certified</td>
</tr>
<tr>
<td>HPE FlexNetwork 5130-24G-PoE+-2SFP+-2XGT (370W) EI Switch (JG940A)</td>
<td>&lt; 5 µs</td>
<td>&lt; 3 µs</td>
<td>up to 96 Mpps</td>
<td>128 Gbps</td>
<td>512 entries (IPv4), 256 entries (IPv6)</td>
<td>16384 entries</td>
<td>IPv6 Ready Certified</td>
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<tr>
<td>HPE FlexNetwork 5130-48G-PoE+-2SFP+-2XGT (370W) EI Switch (JG941A)</td>
<td>&lt; 5 µs</td>
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<td>up to 130.9 Mpps</td>
<td>176 Gbps</td>
<td>512 entries (IPv4), 256 entries (IPv6)</td>
<td>16384 entries</td>
<td>IPv6 Ready Certified</td>
</tr>
</tbody>
</table>

#### Environment

<table>
<thead>
<tr>
<th>Model</th>
<th>Operating temperature</th>
<th>Operating relative humidity</th>
<th>Non-operating/Storage temperature</th>
<th>Non-operating/Storage relative humidity</th>
<th>Acoustic</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPE FlexNetwork 5130-48G-2SFP+-2XGT EI Switch (JG939A)</td>
<td>23°F to 113°F (-5°C to 45°C)</td>
<td>10% to 90% noncondensing</td>
<td>-40°F to 158°F (-40°C to 70°C)</td>
<td>5% to 95% noncondensing</td>
<td>Low-speed fan: 43.1 dB, High-speed fan: 53.4 dB, ISO 7779</td>
</tr>
<tr>
<td>HPE FlexNetwork 5130-24G-PoE+-2SFP+-2XGT (370W) EI Switch (JG940A)</td>
<td>23°F to 113°F (-5°C to 45°C)</td>
<td>10% to 90% noncondensing</td>
<td>-40°F to 158°F (-40°C to 70°C)</td>
<td>5% to 95% noncondensing</td>
<td>Low-speed fan: 47.3 dB, High-speed fan: 47.1 dB, ISO 7779</td>
</tr>
<tr>
<td>HPE FlexNetwork 5130-48G-PoE+-2SFP+-2XGT (370W) EI Switch (JG941A)</td>
<td>23°F to 113°F (-5°C to 45°C)</td>
<td>10% to 90% noncondensing</td>
<td>-40°F to 158°F (-40°C to 70°C)</td>
<td>5% to 95% noncondensing</td>
<td>Low-speed fan: 47.3 dB, High-speed fan: 50.4 dB, ISO 7779</td>
</tr>
</tbody>
</table>
### Specifications (continued)

<table>
<thead>
<tr>
<th></th>
<th>HPE FlexNetwork 5130-48G-2SFP+-2XGT EI Switch (JG939A)</th>
<th>HPE FlexNetwork 5130-24G-PoE+-2SFP+-2XGT (370W) EI Switch (JG940A)</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Electrical characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Frequency</strong></td>
<td>50/60 Hz</td>
<td>50/60 Hz</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td><strong>Maximum heat dissipation</strong></td>
<td>122/184 BTU/hr (128.71/194.12 kJ/h) for AC power. For DC power min heat dissipation is 122 BTU/hr and 184 BTU/hr max.</td>
<td>105/1450 BTU/hr (159.3/1529.75 kJ/h), for AC power. For DC Power 68 BTU/hr and max heat dissipation is 2627.3 BTU/hr</td>
<td>147/1643 BTU/hr (155.08/1691.17 kJ/h), for AC power. For DC power min heat dissipation is 102 BTU/hr and max heat dissipation is 3105 BTU/hr</td>
</tr>
<tr>
<td><strong>AC Voltage</strong></td>
<td>100–240 VAC</td>
<td>100–240 VAC</td>
<td>100–240 VAC</td>
</tr>
<tr>
<td><strong>DC Voltage</strong></td>
<td>-48 to -60 VDC</td>
<td>-54 to -57 VDC</td>
<td>-54 to -57 VDC</td>
</tr>
<tr>
<td><strong>Current</strong></td>
<td>2 A</td>
<td>10 A</td>
<td>10 A</td>
</tr>
<tr>
<td><strong>Maximum power rating</strong></td>
<td>54 W</td>
<td>425 W</td>
<td>470 W</td>
</tr>
<tr>
<td><strong>Idle Power</strong></td>
<td>36 W</td>
<td>31 W</td>
<td>4.3 W</td>
</tr>
<tr>
<td><strong>PoE Power</strong></td>
<td></td>
<td>370 W PoE+</td>
<td>370 W PoE+</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td></td>
<td>PoE Power is the power supplied by the internal power supply. When supplemented with the use of an HPE RPS1600 or RPS800 Redundant Power System, up to 54 W of DC power can be supplied: DC input voltage range is -48 to -60 VDC. Total DC input power is 36 W typical and 54 W maximum. DC input voltage range is -48 VDC to -60 VDC. DC input source is the HPE RPS1600 or RPS800.</td>
<td>PoE Power is the power supplied by the internal power supply. When supplemented with the use of an HPE RPS1600 Redundant Power System, up to 740 W of PoE+ can be supplied. Max current rating for DC power is 25 A. AC Input power is 43 W typical, and 425 W max (including 370 W PoE+ consumption). DC Input voltage range is -54 to -57 VDC. Total DC input power is 20 W typical and 770 W with -740 W PoE+ Power consumption. DC Input Source is the HPE RPS1600.</td>
</tr>
</tbody>
</table>

### Safety

- UL 60950-1: EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; RoHS Compliance

### Emissions


### Immunity

- Generic ESD EN 55024; EN 300 386
- ESD EN 55024; EN 300 386
- ESD EN 55024; EN 300 386

### Management

- IMC—Intelligent Management Center; Command-line interface; Web browser; SNMP Manager
- IMC—Intelligent Management Center; Command-line interface; Web browser; SNMP Manager
- IMC—Intelligent Management Center; Command-line interface; Web browser; SNMP Manager

### Services

- Refer to the Hewlett Packard Enterprise website at 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.
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## Data sheet

### Standards and protocols

(plies to all products in series)

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<th>RFC Number</th>
</tr>
</thead>
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<td>IP Multicast</td>
<td>RFC 1112 IGMPv1, RFC 3376 IGMPV3</td>
</tr>
<tr>
<td>Device management</td>
<td>RFC 1157 SNMPv1/v2c, RFC 1305 NTPv3, RFC 2573 (SNMPv3 Applications)</td>
</tr>
<tr>
<td>General protocols</td>
<td>RFC 2819 (RMON groups Alarm, Event, History, and Statistics only), RFC 3416 (SNMP Protocol Operations v2), HTML and Telnet management</td>
</tr>
</tbody>
</table>

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## Network Management

- **RFC 2572 SNMP Framework MIB**
- **RFC 2573 SNMP-MPD MIB**
- **RFC 2573 SNMP-Target MIB**
- **RFC 2574 SNMP USM MIB**
- **RFC 2618 RADIUS Authentication**
- **RFC 2620 RADIUS Accounting**
- **RFC 2665 Ethernet-like-MIB**
- **RFC 2668 802.3 MAU MIB**
- **RFC 2674 802.1p and IEEE 802.1D Bridge MIB**
- **RFC 2737 Entity MIB (version 2)**
- **RFC 2839 RMON MIB**
- **RFC 2863 The Interfaces Group MIB**
- **RFC 2892 Ping MIB**
- **RFC 3414 SNMP-user-based-SM MIB**
- **RFC 3415 SNMP-view-based-ACM MIB**
- **RFC 3416 MIB for SNMP**
- **RFC 3417 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 3621 Power Ethernet MIB**
- **RFC 3736 Stateless Dynamic Host Configuration Protocol (DHCP) Service for IPv6**
- **RFC 4123 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**
- **RFC 6274 Default Address Selection for IPv6**
- **RFC 6724 Default Address Selection for IPv6**
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<th>Network management</th>
<th>IEEE 802.1AB Link Layer Discovery Protocol (LLDP)</th>
<th>RFC 2819 four groups of RMQN: 1 (statistics), 2 (history), 3 (alarm), and 9 (events)</th>
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<tr>
<td></td>
<td>RFC 2579 Textual Conventions for SMIv2</td>
<td>ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED) SMIv1/2/3</td>
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<tr>
<td></td>
<td>RFC 2580 Conformance Statements for SMIv2</td>
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<tr>
<td>Security</td>
<td>IEEE 802.1X Port-based Network</td>
<td>RFC 2139 RADIUS Accounting</td>
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<td></td>
<td>Access Control</td>
<td>RFC 2865 RADIUS (client only)</td>
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<td></td>
<td>RFC 1492 TACACS+</td>
<td>RFC 2866 RADIUS Accounting</td>
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<td></td>
<td>RFC 213B RADIUS Authentication</td>
<td>RFC 3260 New Terminology and Clarifications for DiffServ</td>
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<tr>
<td></td>
<td></td>
<td>Secure Sockets Layer (SSL) SSIv2 Secure Shell</td>
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</table>

### HPE FlexNetwork 5130 EI Switch Series accessories

#### Transceivers
- HPE X115 100M SFP LC FX Transceiver (JD102B)
- HPE X110 100M SFP LC LX Transceiver (JD102B)
- HPE X115 100M SFP LC BX 10-U Transceiver (JD100A)
- HPE X115 100M SFP LC BX 10-D Transceiver (JD101A)
- HPE X125 3G SFP LC LH40 1310nm Transceiver (JD061A)
- HPE X120 3G SFP LC LH40 1550nm Transceiver (JD062A)
- HPE X125 3G SFP LC LH40 Transceiver (JD063B)
- HPE X120 3G SFP LC LH100 Transceiver (JD101A)
- HPE X120 3G SFP LC SX Transceiver (JD118B)
- HPE X120 1G SFP LC LX Transceiver (JD119B)
- HPE X120 1G SFP LC BX 10-U Transceiver (JD098B)
- HPE X120 1G SFP LC BX 10-D Transceiver (JD099B)
- HPE X120 1G SFP RJ45 1000BASE-T Transceiver (JD098B)
- HPE X130 10G SFP+ LC LR Transceiver (JD094B)
- HPE X240 10G SFP+ SFP+ 0.65m DAC Campus-Cable (JH693A)
- HPE X240 10G SFP+ SFP+ 1.2m DAC Campus-Cable (JH694A)
- HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable (JG081C)

#### Cables
- 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 2.0m 1-Pack Fiber Optic Cable (AJ835A)
- HPE LC to LC Multi-mode OM3 2-Fiber 3.0m 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 3m Cable (QK734A)
- HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable (QK735A)
- HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable (QK736A)

### HPE FlexNetwork 5130 24G SFP 4SFP+ EI Switch (JG933A)
- HPE X361 150W 100-240VAC to 12VDC Power Supply (JD362B)
- HPE X361 150W 48-60VDC to 12VDC Power Supply (JD366B)
- HPE RPS800 Redundant Power Supply (JD183A)
- HPE X290 500 V 1m RPS Cable (JD186A)

### HPE FlexNetwork 5130-48G-4SFP+ EI Switch (JG934A)
- HPE RPS800 Redundant Power Supply (JD183A)
- HPE RPS1600 Redundant Power System (JG136A)
- HPE RPS1600 1600W AC Power Supply (JG137A)
- HPE X290 500 V 1m RPS Cable (JD186A)
- HPE X290 1000 A JD5 Non-PoE 2m RPS Cable (JD188A)

### HPE FlexNetwork 5130-24G-PoE-4SFP+ (370W) EI Switch (JG936A)
- HPE RPS1600 Redundant Power System (JG136A)
- HPE RPS1600 1600W AC Power Supply (JG137A)
- HPE X290 1000 A JD5 2m RPS Cable (JD187A)
## HPE FlexNetwork 5130 EI Switch Series accessories (continued)

| HPE FlexNetwork 5130-48G-PoE+-4SFP+ (370W) EI Switch (JG937A) | HPE RPS1600 Redundant Power System (JG136A)²  
| | HPE RPS1600 1600W AC Power Supply (JG137A)²  
| | HPE X290 1000 A JD5 2m RPS Cable (JD187A)  
| HPE FlexNetwork 5130-48G-2SFP+-2XGT EI Switch (JG939A) | HPE RPS 800 Redundant Power Supply (JD183A)²  
| | HPE RPS1600 Redundant Power System (JG136A)²  
| | HPE RPS1600 1600W AC Power Supply (JG137A)²  
| | HPE X290 500 V 1m RPS Cable (JD186A)  
| | HPE X290 1000 A JD5 Non-PoE 2m RPS Cable (JD188A)  
| HPE FlexNetwork 5130-24G-PoE+-2SFP+-2XGT (370W) EI Switch (JG940A) | HPE RPS1600 Redundant Power System (JG136A)²  
| | HPE RPS1600 1600W AC Power Supply (JG137A)²  
| | HPE X290 1000 A JD5 2m RPS Cable (JD187A)  
| HPE FlexNetwork 5130-48G-PoE+-2SFP+-2XGT (370W) EI Switch (JG941A) | HPE RPS1600 Redundant Power System (JG136A)²  
| | HPE RPS1600 1600W AC Power Supply (JG137A)²  
| | HPE X290 1000 A JD5 2m RPS Cable (JD187A)  

¹ Supported only on the HPE 5130-24G-SFP-4SFP+ EI Switch (JG933A), and only when used in the 1G downlink configuration  
² Products covered by one year warrant; see details at [hpe.com/networking/warrantyquickref](http://hpe.com/networking/warrantyquickref)  
³ Supported on JG933A only when connected to HPE 5500 150WDC Power Supply (JD366A) or HPE X361 150W 48-60VDC to 12VDC Power Supply (JD366B) with HPE X290 500 V 1m RPS Cable (JD186A)

Learn more at [hpe.com/networking](http://hpe.com/networking)

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