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# HPE Networking Comware Switch Series 5140 EI QuickSpecs

## The HPE Networking Comware Switch Series 5140 EI comprises Gigabit Ethernet switches that support static, OSPF and RIP Layer 3 routing, convenient fixed 10GbE uplink ports, PoE+, ACLs, IPv6 and delivers energy savings with Energy Efficient Ethernet

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.

## Overview

High availability, simplified management, and comprehensive security control policies are among the key features that distinguish this series.



**HPE Networking Comware 5140 48G PoE+ 4SFP+ EI Switch (JL824A)**



**HPE Networking Comware 5140 24G PoE+ 4SFP+ EI Switch (JL827A)**



**HPE Networking Comware 5140 24G 4SFP+ EI Switch (JL828A)**

## Overview



**HPE Networking Comware 5140 48G 4SFP+ EI Switch (JL829A)**

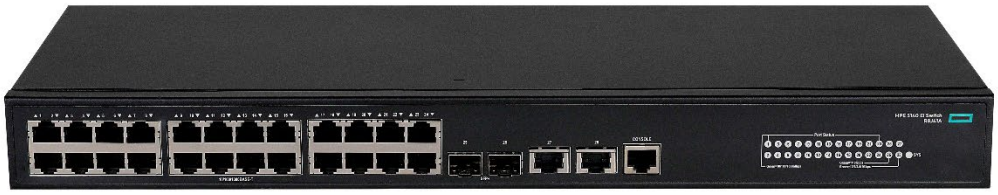


**HPE Networking Comware 5140 24G POE+2SFP+2XGT EI Switch (JL823A)**



**HPE Networking Comware 5140 48G PoE+ 4SFP+ EI Switch (JL824A)**

## Overview



**HPE Networking Comware 5140 24G 2SFP+ 2XGT EI Switch (R8J41A)**



**HPE Networking Comware 5140 8G 2SFP 2GT Combo EI Switch (R8J42A)**

Overview

## Models

| | |
|---|---|
| HPE Networking Comware Switch 24G POE+2SFP+2XGT EI 5140 | JL823A |
| HPE Networking Comware Switch 48G PoE+ 4SFP+ EI 5140 | JL824A |
| HPE Networking Comware Switch 48G POE+ 2SFP+ 2XGT EI 5140 | JL825A |
| HPE Networking Comware Switch 24G SFP w/8G Combo 4SFP+ EI 5140 | JL826A |
| HPE Networking Comware Switch 24G PoE+ 4SFP+ El 5140 | JL827A |
| HPE Networking Comware Switch 24G 4SFP+ EI 5140 | JL828A |
| HPE Networking Comware Switch 48G 4SFP+ EI 5140 | JL829A |
| HPE Networking Comware Switch 24G 2SFP+ 2XGT EI 5140 | R8J41A |
| HPE Networking Comware Switch 8G 2SFP 2GT Combo EI 5140 | R8J42A |

## Key features

- Gigabit Ethernet access switch with static layer 3 routing, RIP, high density 10GbE uplinks and POE+ models for voice, video and wireless
- IRF technology that enables plug-and-play device aggregation and link aggregation across multiple devices
- Embedded network management capabilities at no additional cost with Smart Management Centre (SmartMC)
- Energy-saving green design features such as automatic switching of idle ports to energy-saving mode and powering down unused ports

Standard Features

## 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

## Connectivity

- **Auto-MDIX**
  Automatically adjusts for straight-through or crossover cables on all 10/100/1000 ports
- **Flow control**
  Provides back pressure using standard IEEE 802.3x, reducing congestion in heavy traffic situations
- **High-density connectivity**
  Provides up to 48 fixed 10/100/1000BASE-T ports in a Layer 2/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

## Resiliency and high availability

- **Separate data and control paths**
  Separate control from services and keeps service processing isolated; increases security and performance
- **External redundant power supply**
  Provides high reliability
- **Smart link**
  Allows 100 ms failover between links
- **Spanning Tree/MSTP, RSTP, PVST+, RPVST+**
  Link redundancy with support for protocols such as Multiple Spanning Tree Protocol (MSTP), Rapid Spanning Tree Protocol (RSTP), Per-VLAN Spanning Tree (PVST+), Rapid Per-VLAN Spanning Tree (RPVST+), and Smart Link provides high availability

Standard Features

- **Intelligent Resilient Fabric (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, (), or VRRP, thereby simplifying network operation

## Layer 3 routing

- **Static IP routing**
  Provides manually configured routing for both IPv4 and IPv6 networks
- **Open Shortest Path First (OSPF)**
  An Interior Gateway Protocol (IGP) that uses a link state routing algorithm; supports OSPFv1/v2 and OSPFv3
- **Routing Information Protocol (RIP)**
  Uses a distance vector algorithm with UDP packets for route determination; supports RIPv1 and RIPv2 routing; includes loop protection

## 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/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 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, includingCLI/telnet, a Web browser interface, and SNMP

Standard Features

- **Remote intelligent mirroring**
  Mirrors ingress 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
- **Smart Management Center (SmartMC)**
  Embedded network management tool with a web-based GUI to simplify operations and facilitate centralized management. It is made available at no additional cost and offers centralized configuration backup, software version management and seamless switch replacement.
- **HPE Intelligent Management Center (IMC)**
  Integrates fault management, element configuration, and network monitoring from a central vantage point; built-in support for third-party devices enables network administrators to centrally manage all network elements with a variety of automated tasks, including discovery, categorization, baseline configurations, and software images; the software also provides configuration comparison tools, version tracking, change alerts, and more
- **Network Management**
  SNMP v1/v2c/v3, MIB-II with Traps, and RADIUS Authentication Client MIB (RFC 2618); embedded HTML management tool with secure access

## 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

## Standard Features

- **Secure FTP/ SCP**
  Allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- **Guest VLAN**
  Provides a browser-based environment to authenticated clients that is similar to IEEE 802.1X
- **Port security**
  Allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **Port isolation**
  Secures and adds privacy, and prevents malicious attackers from obtaining user information
- **STP BPDU port protection**
  Blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- **STP root guard**
  Protects the root bridge from malicious attacks or configuration mistakes
- **DHCP protection**
  Blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- **IP source guard**
  Helps prevent IP spoofing attacks
- **Dynamic ARP protection**
  Blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- **RADIUS/HWTACACS**
  Eases switch management security administration by using a password authentication server

Standard Features

## Performance

- **Nonblocking architecture**
  Up to 176 Gb/s nonblocking switching fabric provides wirespeed switching with up to 130.9 Mpps 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

## Device support

- **Prestandard PoE Support**
  Detects and provides power to prestandard PoE devices such as wireless LAN access points and IP phones

## 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

## Additional information

- **Green IT and power**
  Improves energy efficiency through the use of the latest advances in silicon development; shuts off unused ports and utilizes variable-speed fans, reducing energy costs
- **Green initiative support**
  Provides support for RoHS and WEEE regulations
- **Unified Hewlett Packard Enterprise Comware operating system with modular architecture**
  Provides an easy-to-enhance-and-extend feature set, which doesn't require whole-scale changes; all switching, routing, and security platforms leverage the Comware OS, a common unified modular operating system

Standard Features

## Energy Efficient Ethernet (EEE) Support

Reduces power consumption in accordance with IEEE 802.3az

## 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**
  Increase the scalability of an Ethernet network by providing a hierarchical structure; connect multiple LANs on a high-speed campus or metro network
- **10GbE port aggregation**
  Allows grouping of ports to increase overall data throughput to a remote device
- **Device Link Detection Protocol (DLDP)**
  Monitors link connectivity and shuts down ports at both ends if unidirectional traffic is detected, preventing loops in STP-based networks
- **Jumbo Frame Support**
  Improves the performance of large data transfers; supports frame size of up to 9K-bytes

## Layer 3 services

- **Address Resolution Protocol (ARP)**
  Determines the MAC address of another IP host in the same subnet; supports static ARPs; gratuitous ARP allows detection of duplicate IP addresses; proxy ARP allows normal ARP operation between subnets or when subnets are separated by a Layer 2 network
- **Dynamic Host Configuration Protocol (DHCP)**
  Simplifies the management of large IP networks; supports client; DHCP Relay enables DHCP operation across subnets
- **Loopback interface address**
  Defines an address that can always be reachable, improving diagnostic capability
- **User Datagram Protocol (UDP) helper function**
  Allows UDP broadcasts to be directed across router interfaces to specific IP unicast or subnet broadcast addresses and prevents server spoofing for UDP services such as DHCP
- **Route maps**
  Provide more control during route redistribution; allow filtering and altering of route metrics
- **DHCP server**
  Centralizes and reduces the cost of IPv4 address management

## Warranty and support

- **Limited Lifetime Warranty**
  See Warranty and support summary for details on what is included with your product purchase.
- **Software releases**
  To find software for your product, refer to http://www.hpe.com/networking/support; for details on the software releases available with your product purchase, refer to Warranty and support summary.

Configuration Information

# BTO Models

## Switch Chassis

| Description | SKU |
|---|---|
| HPE Networking Comware Switch 24G POE+2SFP+2XGT EI 5140 | JL823A |
| HPE Networking Comware Switch 24G POE+2SFP+2XGT EI 5140 | JL823A |
| HPE Networking Comware Switch 24G POE+2SFP+2XGT EI 5140 | JL823A |
| HPE Networking Comware Switch 24G POE+2SFP+2XGT EI 5140 | JL823A |
| HPE Networking Comware Switch 24G POE+2SFP+2XGT EI 5140 | JL823A |
| HPE Networking Comware Switch 48G PoE+ 4SFP+ EI 5140 | JL824A |
| HPE Networking Comware Switch 48G PoE+ 4SFP+ EI 5140 | JL824A |
| HPE Networking Comware Switch 48G PoE+ 4SFP+ EI 5140 | JL824A |
| HPE Networking Comware Switch 48G PoE+ 4SFP+ EI 5140 | JL824A |
| HPE Networking Comware Switch 48G PoE+ 4SFP+ EI 5140 | JL824A |
| HPE Networking Comware Switch 48G POE+ 2SFP+ 2XGT EI 5140 | JL825A |
| HPE Networking Comware Switch 48G POE+ 2SFP+ 2XGT EI 5140 | JL825A |
| HPE Networking Comware Switch 48G POE+ 2SFP+ 2XGT EI 5140 | JL825A |
| HPE Networking Comware Switch 48G POE+ 2SFP+ 2XGT EI 5140 | JL825A |
| HPE Networking Comware Switch 48G POE+ 2SFP+ 2XGT EI 5140 | JL825A |
| HPE Networking Comware Switch 24G SFP w/8G Combo 4SFP+ EI 5140 | JL826A |
| HPE Networking Comware Switch 24G PoE+ 4SFP+ EI 5140 | JL827A |
| HPE Networking Comware Switch 24G PoE+ 4SFP+ EI 5140 | JL827A |
| HPE Networking Comware Switch 24G PoE+ 4SFP+ EI 5140 | JL827A |
| HPE Networking Comware Switch 24G PoE+ 4SFP+ EI 5140 | JL827A |
| HPE Networking Comware Switch 24G PoE+ 4SFP+ EI 5140 | JL827A |
| HPE Networking Comware Switch 24G 4SFP+ EI 5140 | JL828A |
| HPE Networking Comware Switch 24G 4SFP+ EI 5140 | JL828A |
| HPE Networking Comware Switch 24G 4SFP+ EI 5140 | JL828A |
| HPE Networking Comware Switch 24G 4SFP+ EI 5140 | JL828A |
| HPE Networking Comware Switch 24G 4SFP+ EI 5140 | JL828A |
| HPE Networking Comware Switch 48G 4SFP+ EI 5140 | JL829A |
| HPE Networking Comware Switch 48G 4SFP+ EI 5140 | JL829A |
| HPE Networking Comware Switch 48G 4SFP+ EI 5140 | JL829A |
| HPE Networking Comware Switch 48G 4SFP+ EI 5140 | JL829A |
| HPE Networking Comware Switch 48G 4SFP+ EI 5140 | JL829A |
| HPE Networking Comware Switch 24G 2SFP+ 2XGT EI 5140 | R8J41A |
| HPE Networking Comware Switch 24G 2SFP+ 2XGT EI 5140 | R8J41A |
| HPE Networking Comware Switch 24G 2SFP+ 2XGT EI 5140 | R8J41A |
| HPE Networking Comware Switch 24G 2SFP+ 2XGT EI 5140 | R8J41A |
| HPE Networking Comware Switch 24G 2SFP+ 2XGT EI 5140 | R8J41A |
| HPE Networking Comware Switch 8G 2SFP 2GT Combo EI 5140 | R8J42A |
| HPE Networking Comware Switch 8G 2SFP 2GT Combo EI 5140 | R8J42A |
| HPE Networking Comware Switch 8G 2SFP 2GT Combo EI 5140 | R8J42A |
| HPE Networking Comware Switch 8G 2SFP 2GT Combo EI 5140 | R8J42A |
| HPE Networking Comware Switch 8G 2SFP 2GT Combo EI 5140 | R8J42A |

**Notes:**

– Drop down under power supply should offer the following options and results:

Configuration Information

- 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)
- No Localized Power Cord Selected - #AC3 Option

– OCA Only Model Selection Form -
HPE Offering > HPE Aruba Networking > Switches - FlexNetwork: 5140 EI Switch Series

## Transceivers

### SFP Transceivers

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

| Description | SKU |
|---|---|
| HPE Networking X115 100M SFP LC FX Transceiver | JD102B |
| HPE Networking X110 100M SFP LC LX Transceiver | JD120B |
| HPE Networking X115 100M SFP LC BX 10-U Transceiver | JD100A |
| HPE Networking X115 100M SFP LC BX 10-D Transceiver | JD101A |
| HPE Networking X120 1G SFP LC SX Transceiver | JD118B |
| HPE Networking X120 1G SFP LC LX Transceiver | JD119B |
| HPE Networking X120 1G SFP RJ45 T Transceiver | JD089B |
| HPE Networking X120 1G SFP LC BX 10-U Transceiver | JD098B |
| HPE Networking X120 1G SFP LC BX 10-D Transceiver | JD099B |
| HPE Networking X120 1G SFP LC LH100 Transceiver | JD103A |

### SFP+ Transceivers

| Description | SKU |
|---|---|
| HPE Networking X130 10G SFP+ LC SR Transceiver | JD092B |
| HPE Networking X130 10G SFP+ LC LR Transceiver | JD094B |
| HPE Networking X130 10G SFP+ LC BiDi 10km-Uplink Transceiver | JL737A |
| HPE Networking X130 10G SFP+ LC BiDi 10km-Downlink Transceiver | JL738A |
| HPE Networking X130 10G SFP+ LC BiDi 40km-Uplink Transceiver | JL739A |
| HPE Networking X130 10G SFP+ LC BiDi 40km-Downlink Transceiver | JL740A |
| HPE Networking X240 10G SFP+ SFP+ 0.65m DAC Cable | JD095C |
| HPE Networking X240 10G SFP+ SFP+ 1.2m DAC Cable | JD096C |
| HPE Networking X240 10G SFP+ SFP+ 3m DAC Cable | JD097C |
| HPE Networking X240 10G SFP+ SFP+ 5m DAC Cable | JG081C |
| HPE Networking X2A0 10G SFP+ to SFP+ 7m Active Optical Cable | JL290A |
| HPE Networking X2A0 10G SFP+ to SFP+ 10m Active Optical Cable | JL291A |
| HPE Networking X2A0 10G SFP+ to SFP+ 20m Active Optical Cable | JL292A |

Configuration Information

# Cables

### Multi-Mode Cables

| Description | SKU |
|---|---|
| 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 5.0m 1-Pack Fiber Optic Cable | AJ836A |
| HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable | AJ837A |
| HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable | AJ838A |
| HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable | AJ839A |
| HPE Premier Flex LC/LC Multi-mode OM4 2 Fiber 1m Cable | QK732A |
| HPE Premier Flex LC/LC Multi-mode OM4 2 Fiber 2m Cable | QK733A |
| HPE Premier Flex LC/LC Multi-mode OM4 2 Fiber 5m Cable | QK734A |
| HPE Premier Flex LC/LC Multi-mode OM4 2 Fiber 15m Cable | QK735A |
| HPE Premier Flex LC/LC Multi-mode OM4 2 Fiber 30m Cable | QK736A |
| HPE Premier Flex LC/LC Multi-mode OM4 2 Fiber 50m Cable | QK737A |

# Internal Power Supplies

### HPE X361 150W DC Power Supply

| Description | SKU |
|---|---|
| HPE Networking X361 150W 100-240VAC to 12VDC Power Supply | JD362B |
| HPE Networking X361 150W 100-240VAC to 12VDC Power Supply | JD362B |
| HPE Networking X361 150W 100-240VAC to 12VDC Power Supply | JD362B |
| HPE Networking X361 150W 100-240VAC to 12VDC Power Supply | JD362B |
| HPE Networking X361 150W 100-240VAC to 12VDC Power Supply | JD362B |

**Notes:**

- 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. (OCA Default B2B or B2C for Rack Level CTO)
  - Switch/Router/Power Supply to Wall Power Cord - Localized Option (OCA Default for BTO)
  - High Volt Switch/Router/Power Supply to Wall Power Cord - #B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)
  - No Localized Power Cord Selected - #AC3 Option

Configuration Information

## Switch Enclosure Options

### Rack Mount Kits

| Description | SKU |
|---|---|
| HPE Networking Comware 5140 Rack Mount Kit | R8M91A |

### External/Redundant Power Supplies

| Description | SKU |
|---|---|
| HPE Networking RPS 800 Redundant Power Supply | JD183A |
| **Notes** Height = 1U, includes 1 x c13, 800w | |
| HPE Networking RPS1600 Redundant Power System | JG136A |
| **Notes** Height = 1U, includes 1 x c13, 1600w and Power Supply port | |
| HPE Networking RPS1600 1600W AC Power Supply | JG137A |
| **Notes** Installs into JG136A only | |

### External/Redundant Power Cables

| Description | SKU |
|---|---|
| HPE Networking X290 500 V 1m RPS Cable | JD186A |
| HPE Networking X290 1000 A JD5 2m RPS Cable | JD187A |
| HPE Networking X290 1000 A JD5 NonPoE 2m RPS Cable | JD188A |

Technical Specifications

| HPE FlexNetwork 5140 24G 4SFP+ EI Switch (JL828A) | | |
|---|---|---|
| **I/O ports and slots** | 24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only | |
| | 4 SFP+ fixed 1000/10000 SFP+ ports | |
| **Additional ports and slots** | 1 RJ-45 serial console port | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 6.3(d) x 1.72(h) in (44 x 16 x 4.36 cm) (1U height) |
| | **Weight** | 5.5 lb (2.5 kg) |
| **Memory and processor** | 512 MB SDRAM, 256 MB flash | |
| **Mounting and enclosure** | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (Rack Mount Kit R8M91A sold separately) | |
| **Performance** | IPv6 Ready Certified | |
| | **1000 Mb Latency** | < 5 µs |
| | **10 Gbps Latency** | < 3 µs |
| | **Throughput** | 95 Mpps |
| | **Routing/Switching capacity** | 128 Gbps |
| | **Routing table size** | 1024 entries |
| | **MAC address table size** | 16384 entries |
| **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** | High-speed fan: 36.8 dB; ISO 7779 |
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 64/88 BTU/hr (67.52/92.84 kJ/hr) |
| | **Voltage** | 100 - 240 VAC, rated |
| | **Current** | 2 A |
| | **Maximum power rating** | 24 W |
| | **Idle power** | 19 W |

Technical Specifications

| | | |
|---|---|---|
| | **Notes:** | – Idle power is the actual power consumption of the device with no ports connected.<br>– Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. |
| **Safety** | UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; IEC 62368-1; CAN/CSA-C22.2 No. 60950-1; EN 62368-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance | |
| **Emissions** | FCC Part 15 Subpart B CLASS A; ICES-003 CLASS A; VCCI-CISPR 32 CLASS A; EN 55032 CLASS; AS/NZS CISPR32 CLASS A; CISPR 24; EN 55024; EN 61000-3-2; EN 61000-3-3; ETSI EN 300 386; GB/T 9254; YD/T 993 | |
| **Immunity** | **Generic** | EN 55024 |
| | **ESD** | EN300 386 |
| **Management** | IMC - Intelligent Management Center; SmartMC; command-line interface; Web browser; SNMP Manager | |
| **Services** | Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office. | |

## HPE FlexNetwork 5140 24G SFP 4SFP+ EI Switch (JL826A)

| | | |
|---|---|---|
| **I/O ports and slots** | 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 | |
| **Additional ports and slots** | 1 RJ-45 serial console port | |
| **Power supplies** | 2 power supply slots<br>1 minimum power supply required (ordered separately) | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 14.17(d) x 1.72(h) in (44 x 36 x 4.36 cm) (1U height) |
| | **Weight** | 13.23 lb (6kg) |
| **Memory and processor** | 512 MB SDRAM, 256 MB flash; | |
| **Mounting and enclosure** | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (Rack Mount Kit R8M91A sold separately) | |
| **Performance** | IPv6 Ready Certified | |
| | **1000 Mb Latency** | < 5 µs |
| | **10 Gbps Latency** | < 3 µs |
| | **Throughput** | 95 Mpps |
| | **Routing/Switching capacity** | 128 Gbps |
| | **Routing table size** | 1024 entries |

## Technical Specifications

| | | |
|---|---|---|
| | **MAC address table size** | 16384 entries |
| **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: 41.4 dB, High-speed fan: 47.7 dB; ISO 7779 |
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 102/204 BTU/hr (107.61/215.22 kJ/hr), for AC Powered units. For DC powered units heat dissipation is 130 BTU/hr min, 232 BTU/hr max. |
| | **Voltage** | 100 - 240 VAC<br>-48 to -60 VDC |
| | **Current** | 5 A |
| | **Maximum power rating** | 60 W |
| | **Idle power** | 30 W |
| | **Notes:** | – Idle power is the actual power consumption of the device with no ports connected.<br>– 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.<br>– Power Ratings for AC Power Supply indicated above.<br>– For DC input power, Idle Power is 38W and Max is 68W.<br>– DC Max input current is 8A. Units are supplied without a power supply. Customer must buy 1 or 2 JD362B (AC) or JD366B (DC) power supply. |
| **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; IEC 62368-1; CAN/CSA-C22.2 No. 60950-1; EN 62368-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance | |
| **Emissions** | FCC Part 15 Subpart B CLASS A; ICES-003 CLASS A; VCCI-CISPR 32 CLASS A; EN 55032 CLASS; AS/NZS CISPR32 CLASS A; CISPR 24; EN 55024; EN 61000-3-2; EN 61000-3-3; ETSI EN 300 386; GB/T 9254; YD/T 993 | |
| **Immunity** | **Generic** | EN 55024 |
| | **ESD** | EN300 386 |
| **Management** | IMC - Intelligent Management Center; SmartMC;command-line interface; Web browser; SNMP Manager | |

Technical Specifications

| | |
|---|---|
| **Services** | Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office. |

## HPE FlexNetwork 5140 48G 4SFP+ EI Switch (JL829A)

| | | |
|---|---|---|
| **I/O ports and slots** | 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 | |
| **Additional ports and slots** | 1 RJ-45 serial console port | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 9.04(d) x 1.72(h) in (44 x 23 x 4.36 cm) (1U height) |
| | **Weight** | 7.72 lb (3.5 kg) |
| **Memory and processor** | 512 MB SDRAM, 256 MB flash | |
| **Mounting and enclosure** | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (Rack Mount Kit R8M91A sold separately) | |
| **Performance** | **IPv6 Ready Certified** | |
| | **1000 Mb Latency** | < 5 µs |
| | **10 Gbps Latency** | < 3 µs |
| | **Throughput** | 131 Mpps |
| | **Routing/Switching capacity** | 176 Gbps |
| | **Routing table size** | 1024 entries |
| | **MAC address table size** | 16384 entries |
| **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: 42.2 dB, High-speed fan: 49.3 dB; ISO 7779 |
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 130/153 BTU/hr (137.15/161.42 kJ/hr), For AC powered units. For DC powered units heat dissipation is 130 BTU/hr min, 171 BTU/hr max |
| | **Voltage** | 100 - 240 VAC<br>-48 to -60 VDC |

Technical Specifications

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|---|---|---|
| | **Current** | 10 A |
| | **Maximum power rating** | 44 W |
| | **Idle power** | 38 W |
| | **Notes:** | – Idle power is the actual power consumption of the device with no ports connected.<br>– 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.<br>– 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. |
| **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; IEC 62368-1; CAN/CSA-C22.2 No. 60950-1; EN 62368-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance | |
| **Emissions** | FCC Part 15 Subpart B CLASS A; ICES-003 CLASS A; VCCI-CISPR 32 CLASS A; EN 55032 CLASS; AS/NZS CISPR32 CLASS A; CISPR 24; EN 55024; EN 61000-3-2; EN 61000-3-3; ETSI EN 300 386; GB/T 9254; YD/T 993 | |
| **Immunity** | **Generic** | EN 55024 |
| | **ESD** | EN300 386 |
| **Management** | IMC - Intelligent Management Center; SmartMC; command-line interface; Web browser; SNMP Manager | |
| **Services** | Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office. | |

## HPE FlexNetwork 5140 24G PoE+ 4SFP+ (370W) EI Switch (JL827A)

| | | |
|---|---|---|
| **I/O ports and slots** | 24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T) with 4 combo ports (RJ-45 or SFP); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only | |
| **Additional ports and slots** | 1 RJ-45 serial console port | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 10.24(d) x 1.72(h) in (44 x 26 x 4.36 cm) (1U height) |
| | **Weight** | 17.64 lb (8 kg) |
| **Memory and processor** | 512 MB SDRAM, 256 MB flash | |
| **Mounting and enclosure** | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (Rack Mount Kit R8M91A sold separately) | |

## Technical Specifications

| | | |
|---|---|---|
| **Performance** | **IPv6 Ready Certified** | |
| | **1000 Mb Latency** | < 5 µs |
| | **10 Gbps Latency** | < 3 µs |
| | **Throughput** | 95 Mpps |
| | **Routing/Switching capacity** | 128 Gbps |
| | **Routing table size** | 1024 entries |
| | **MAC address table size** | 16384 entries |
| **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: 44.4 dB, High-speed fan: 53.6 dB; ISO 7779 |
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 102/1569 BTU/hr (107.61/1655.29 kJ/hr), for AC Power. For DC Power min heat dissipation is 85 BTU/hr and max heat dissipation is 2695 BTU/hr |
| | **Voltage** | 100 - 240 VAC,<br>-54 to -57 VDC |
| | **Current** | 10 A |
| | **Maximum power rating** | 451 W |
| | **Idle power** | 30 W |
| | **PoE power** | 370 W PoE+ |
| | **Notes:** | – 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 HPE RPS1600 Redundant Power System, up to 740 W of PoE+ can be supplied.<br>– 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 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; IEC 62368-1; CAN/CSA-C22.2 No. 60950-1; EN 62368-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance | |

Technical Specifications

| | | |
|---|---|---|
| **Emissions** | FCC Part 15 Subpart CLASS A; ICES-003 CLASS A; VCCI-CISPR 32 CLASS A; EN 55032 CLASS; AS/NZS CISPR32 CLASS A; CISPR 24; EN 55024; EN 61000-3-2; EN 61000-3-3; ETSI EN 300 386; GB/T 9254; YD/T 993 | |
| **Immunity** | **Generic** | EN 55024 |
| | **ESD** | EN300 386 |
| **Management** | IMC - Intelligent Management Center; SmartMC; command-line interface; Web browser; SNMP Manager. | |
| **Services** | Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office. | |

## HPE FlexNetwork 5140 48G PoE+ 4SFP+ (370W) EI Switch (JL824A)

| | | |
|---|---|---|
| **I/O ports and slots** | 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 | |
| **Additional ports and slots** | 1 RJ-45 serial console port | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 14.17(d) x 1.72(h) in (44 x 36 x 4.36 cm) (1U height) |
| | **Weight** | 17.64 lb (8 kg) |
| **Memory and processor** | 512 MB SDRAM, 256 MB flash | |
| **Mounting and enclosure** | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (Rack Mount Kit R8M91A sold separately) | |

| | | |
|---|---|---|
| **Performance** | IPv6 Ready Certified | |
| | **1000 Mb Latency** | < 5 µs |
| | **10 Gbps Latency** | < 3 µs |
| | **Throughput** | 131 Mpps |
| | **Routing/Switching capacity** | 176 Gbps |
| | **Routing table size** | 1024 entries |
| | **MAC address table size** | 16384 entries |
| **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: 43.5 dB, High-speed fan: 52.8 dB; ISO 7779 |

## Technical Specifications

| | | |
|---|---|---|
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 160/1671 BTU/hr (168.8/1762.91 kJ/hr), for AC power. For DC power min heat dissipation is 147 BTU/hr and 3037 BTU/hr max. |
| | **Voltage** | 100 - 240 VAC<br>-54 to -57 VDC |
| | **Current** | 10 A |
| | **Maximum power rating** | 478 W |
| | **Idle power** | 47 W |
| | **PoE power** | 370 W PoE+ |
| | **Notes:** | – Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE Power 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.<br>– 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 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; IEC 62368-1; CAN/CSA-C22.2 No. 60950-1; EN 62368-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance | |
| **Emissions** | FCC Part 15 Subpart B CLASS A; ICES-003 CLASS A; VCCI-CISPR 32 CLASS A; EN 55032 CLASS; AS/NZS CISPR32 CLASS A; CISPR 24; EN 55024; EN 61000-3-2; EN 61000-3-3; ETSI EN 300 386; GB/T 9254; YD/T 993 | |
| **Immunity** | **Generic** | EN 55024 |
| | **ESD** | EN300 386 |
| **Management** | IMC - Intelligent Management Center; SmartMC; command-line interface; Web browser; SNMP Manager | |
| **Services** | Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office. | |

Technical Specifications

| HPE FlexNetwork 5140 24G PoE+ 2SFP+ 2XGT (370W) EI Switch (JL823A) | | |
|---|---|---|
| **I/O ports and slots** | 24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: Ports 1-24 support 10BASE-T/100BASE-TX, 1000BASE-T (full only) | |
| | 2 SFP+ fixed 1000/10000 SFP+ ports | |
| | 2X1/2.5/5/10G BASE-T ports | |
| **Additional ports and slots** | 1 RJ-45 serial console port | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 12.6(d) x 1.72(h) in (44 x 32 x 4.36 cm) (1U height) |
| | **Weight** | 9.92 lb (4.5 kg) |
| **Memory and processor** | 512 MB SDRAM, 256 MB flash | |
| **Mounting and enclosure** | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (Rack Mount Kit R8M91A sold separately) | |
| **Performance** | **IPv6 Ready Certified** | |
| | **1000 Mb Latency** | < 5 µs |
| | **10 Gbps Latency** | < 3 µs |
| | **Throughput** | 95 Mpps |
| | **Routing/Switching capacity** | 128 Gbps |
| | **Routing table size** | 1024 entries |
| | **MAC address table size** | 16384 entries |
| **Environment** | **Operating temperature** | 23°F to 122°F (-5°C to 50°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: 44.4 dB, High-speed fan: 52.8 dB; ISO 7779 |
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 83.6/1433 BTU/hr (88.2/1511.9 kJ/hr) |
| | **Voltage** | 100 - 240 VAC |
| | **Current** | 10 A |
| | **Maximum power rating** | 420 W |
| | **Idle power** | 24.5 W |
| | **PoE power** | 370 W PoE+ |
| | **Notes:** | 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, |

Technical Specifications

| | | |
|---|---|---|
| | | all ports plugged in, and all modules populated. PoE Power is the power supplied by the internal power supply. |
| **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; IEC 62368-1; CAN/CSA-C22.2 No. 60950-1; EN 62368-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance | |
| **Emissions** | FCC Part 15 Subpart CLASS A; ICES-003 CLASS A; VCCI-CISPR 32 CLASS A; EN 55032 CLASS; AS/NZS CISPR32 CLASS A; CISPR 24; EN 55024; EN 61000-3-2; EN 61000-3-3; ETSI EN 300 386; GB/T 9254; YD/T 993 | |
| **Immunity** | **Generic** | EN 55024 |
| | **ESD** | EN300 386 |
| **Management** | IMC - Intelligent Management Center; SmartMC; command-line interface; Web browser; SNMP Manager. | |
| **Services** | Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office. | |

## HPE FlexNetwork 5140 48G PoE+ 2SFP+ 2XGT (370W) EI Switch (JL825A)

| | | |
|---|---|---|
| **I/O ports and slots** | 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 | |
| | 2X1/2.5/5/10G BASE-T ports | |
| **Additional ports and slots** | 1 RJ-45 serial console port | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 12.6(d) x 1.72(h) in (44 x 32 x 4.36 cm) (1U height) |
| | **Weight** | 13.23 lb (6 kg) |
| **Memory and processor** | 512 MB SDRAM, 256 MB flash | |
| **Mounting and enclosure** | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (Rack Mount Kit R8M91A sold separately) | |
| **Performance** | **IPv6 Ready Certified** | |
| | **1000 Mb Latency** | < 5 µs |
| | **10 Gbps Latency** | < 3 µs |
| | **Throughput** | 131 Mpps |
| | **Routing/Switching capacity** | 176 Gbps |
| | **Routing table size** | 1024 entries |
| | **MAC address table size** | 16384 entries |

Technical Specifications

| | | |
|---|---|---|
| **Environment** | **Operating temperature** | 23°F to 122°F (-5°C to 50°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: 43.5 dB, High-speed fan: 52.8 dB; ISO 7779 |
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 117.7/1467 BTU/hr (124/1547.77 kJ/hr) |
| | **Voltage** | 100 - 240 VAC |
| | **Current** | 10 A |
| | **Maximum power rating** | 430 W |
| | **Idle power** | 34.5 W |
| | **PoE power** | 370 W PoE+ |
| | **Notes:** | 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. |
| **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; IEC 62368-1; CAN/CSA-C22.2 No. 60950-1; EN 62368-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance | |
| **Emissions** | FCC Part 15 Subpart CLASS A; ICES-003 CLASS A; VCCI-CISPR 32 CLASS A; EN 55032 CLASS; AS/NZS CISPR32 CLASS A; CISPR 24; EN 55024; EN 61000-3-2; EN 61000-3-3; ETSI EN 300 386; GB/T 9254; YD/T 993 | |
| **Immunity** | **Generic** | EN 55024 |
| | **ESD** | EN300 386 |
| **Management** | IMC - Intelligent Management Center; SmartMC; command-line interface; Web browser; SNMP Manager. | |
| **Services** | Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office. | |

## HPE FlexNetwork 5140 8G 2SFP 2GT Combo EI Switch (R8J42A )

| | |
|---|---|
| **I/O ports and slots** | 8 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: Ports 1-8 support 10BASE-T/100BASE-TX, 1000BASE-T (full only) |
| | 2 SFP fixed 1GbE ports |
| | 2 GT ports |

## Technical Specifications

| | | |
|---|---|---|
| **Additional ports and slots** | 1 RJ-45 serial console port | |
| **Physical characteristics** | **Dimensions** | 10.47(w) x 6.3(d) x 1.72(h) in (26.6 x 16 x 4.36 cm) (1U height) |
| | **Weight** | 3.3 lb (1.5 kg) |
| **Memory and processor** | 512 MB SDRAM, 256 MB flash | |
| **Mounting and enclosure** | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (Rack Mount Kit R8M91A sold separately) | |
| **Performance** | **IPv6 Ready Certified** | |
| | **1000 Mb Latency** | < 5 µs |
| | **10 Gbps Latency** | < 3 µs |
| | **Throughput** | 18 Mpps |
| | **Routing/Switching capacity** | 24 Gbps |
| | **Routing table size** | 1024 entries |
| | **MAC address table size** | 16384 entries |
| **Environment** | **Operating temperature** | 23°F to 122°F (-5°C to 50°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** | High-speed fan: 36.8 dB; ISO 7779 |
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 27.3/51.2 BTU/hr (28.8/54 kJ/hr) |
| | **Voltage** | 100 - 240 VAC |
| | **Current** | 10 A |
| | **Maximum power rating** | 15 W |
| | **Idle power** | 8 W |
| | **Notes:** | 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. |
| **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; IEC 62368-1; CAN/CSA-C22.2 No. 60950-1; EN 62368-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance | |
| **Emissions** | FCC Part 15 Subpart CLASS A; ICES-003 CLASS A; VCCI-CISPR 32 CLASS A; EN 55032 CLASS; AS/NZS CISPR32 CLASS A; CISPR 24; EN 55024; EN 61000-3-2; EN 61000-3-3; ETSI EN 300 386; GB/T 9254; YD/T 993 | |

Technical Specifications

| | | |
|---|---|---|
| **Immunity** | **Generic** | EN 55024 |
| | **ESD** | EN300 386 |
| **Management** | IMC - Intelligent Management Center; SmartMC; command-line interface; Web browser; SNMP Manager. | |
| **Services** | Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office. | |

## HPE FlexNetwork 5140 24G 2SFP+ 2XGT EI Switch (R8J41A)

| | | |
|---|---|---|
| **I/O ports and slots** | 24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: Ports 1-24 support 10BASE-T/100BASE-TX, 1000BASE-T (full only) | |
| | 2 SFP+ fixed 1000/10000 SFP+ ports | |
| | 2X1/2.5/5/10G BASE-T ports | |
| **Additional ports and slots** | 1 RJ-45 serial console port | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 6.3(d) x 1.72(h) in (44 x 16 x 4.36 cm) (1U height) |
| | **Weight** | 5.51 lb (2.5 kg) |
| **Memory and processor** | 512 MB SDRAM, 256 MB flash | |
| **Mounting and enclosure** | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (Rack Mount Kit R8M91A sold separately) | |

| | | |
|---|---|---|
| **Performance** | **IPv6 Ready Certified** | |
| | **1000 Mb Latency** | < 5 µs |
| | **10 Gbps Latency** | < 3 µs |
| | **Throughput** | 95 Mpps |
| | **Routing/Switching capacity** | 128 Gbps |
| | **Routing table size** | 1024 entries |
| | **MAC address table size** | 16384 entries |
| **Environment** | **Operating temperature** | 23°F to 122°F (-5°C to 50°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: 41.4 dB, High-speed fan: 47.7 dB; ISO 7779 |

## Technical Specifications

| | | |
|---|---|---|
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 49.5/112.6 BTU/hr (52.2/118.8 kJ/hr) |
| | **Voltage** | 100 - 240 VAC |
| | **Current** | 10 A |
| | **Maximum power rating** | 33 W |
| | **Idle power** | 14.5 W |
| | **Notes:** | 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. |
| **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; IEC 62368-1; CAN/CSA-C22.2 No. 60950-1; EN 62368-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance | |
| **Emissions** | FCC Part 15 Subpart CLASS A; ICES-003 CLASS A; VCCI-CISPR 32 CLASS A; EN 55032 CLASS; AS/NZS CISPR32 CLASS A; CISPR 24; EN 55024; EN 61000-3-2; EN 61000-3-3; ETSI EN 300 386; GB/T 9254; YD/T 993 | |
| **Immunity** | **Generic** | EN 55024 |
| | **ESD** | EN300 386 |
| **Management** | IMC - Intelligent Management Center; SmartMC; command-line interface; Web browser; SNMP Manager. | |
| **Services** | Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office. | |

## Standards and Protocols (Applies to all products in series)

### Device Management

- RFC 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

## QoS/CoS

- RFC 2474 DS Field in the IPv4 and IPv6 Headers
- RFC 3260 New Terminology and Clarifications for DiffServ

## General Protocols

- IEEE 802.1ad Q-in-Q
- IEEE 802.1ak Multiple Registration Protocol (MRP) and Multiple VLAN Registration Protocol (MVRP)
- IEEE 802.1AX-2008 Link Aggregation
- 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 1000BASE-T
- IEEE 802.3ac (VLAN Tagging Extension)
- IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- IEEE 802.3ae 10-Gigabit Ethernet
- IEEE 802.3af Power over Ethernet
- IEEE 802.3at Power over Ethernet Plus
- IEEE 802.3az Energy Efficient Ethernet
- IEEE 802.3i 10BASE-T
- IEEE 802.3u 100BASE-X
- IEEE 802.3x Flow Control
- IEEE 802.3z 1000BASE-X
- RFC 768 UDP
- RFC 783 TFTP Protocol (revision 2)

## Technical Specifications

- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 TELNET
- RFC 855 Telnet Option Specification
- RFC 894 IP over Ethernet
- RFC 950 Internet Standard Subnetting Procedure
- RFC 951 BOOTP
- RFC 1027 Proxy ARP
- RFC 1042 IP Datagrams
- RFC 1071 Computing the Internet Checksum
- RFC 1123 Requirements for Internet Hosts
- RFC 1166 - IP Addresses
- RFC 1213 Management Information Base for Network Management of TCP/IP-based internets
- RFC 1256 ICMP Router Discovery Protocol (IRDP)
- RFC 1305 NTPv3
- RFC 1350 TFTP Protocol (revision 2)
- RFC 1519 CIDR
- RFC 1533 DHCP Options and BOOTP Vendor Extensions
- RFC 1591 DNS (client only)
- RFC 1643 - Definitions of Managed Objects for the Ethernet-like Interface Types
- RFC 1812 IPv4 Routing
- RFC 1866 Hypertext Markup Language - 2.0
- RFC 1901 - Introduction to Community-based SNMPv2
- RFC 1902-1907 - SNMPv2
- RFC 2131 DHCP
- RFC 2236 IGMP Snooping
- RFC 2462 IPv6 Stateless Address Autoconfiguration
- RFC 2474 Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers
- RFC 2475 Architecture for Differentiated Services
- RFC 2597 Assured Forwarding PHB Group
- RFC 2616 HTTP Compatibility v1.1
- RFC 2665 Definitions of Managed Objects for the Ethernet-like Interface Types
- RFC 2668 Definitions of Managed Objects for IEEE 802.3 Medium Attachment Units (MAUs)
- RFC 2865 Remote Authentication Dial In User Service (RADIUS)
- RFC 2866 RADIUS Accounting
- RFC 3046 - DHCP Relay Agent Information Option
- RFC 3246 Expedited Forwarding PHB
- RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)
- RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)
- RFC 3416 Protocol Operations for SNMP
- RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)
- RFC 3576 Ext to RADIUS (CoA only)
- RFC 3580 - IEEE 802.1X Remote Authentication Dial In User Service (RADIUS) Usage Guidelines

- RFC 3587 IPv6 Global Unicast Address Format
- RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6
- RFC 4030 Authentication Suboption for DHCP Relay Agent
- RFC 4213 Basic IPv6 Transition Mechanisms
- RFC 4291 IP Version 6 Addressing Architecture
- RFC 4541 Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches
- RFC 4575 A Session Initiation Protocol (SIP) Event Package for Conference State
- RFC 4675 RADIUS VLAN & Priority
- RFC 5095 Deprecation of Type 0 Routing Headers in IPv6
- 802.1r - GARP Proprietary Attribute Registration Protocol (GPRP)

## IPv6

- RFC 1981 IPv6 Path MTU Discovery
- RFC 2460 IPv6 Specification
- RFC 2461 IPv6 Neighbor Discovery
- RFC 2463 ICMPv6
- RFC 2464 Transmission of IPv6 over Ethernet Networks
- RFC 3162 RADIUS and IPv6
- RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses
- RFC 3315 DHCPv6 (client and relay)
- RFC 3484 Default Address Selection for IPv6
- RFC 3736 Stateless Dynamic Host Configuration Protocol (DHCP) Service for IPv6
- RFC 4291 IP Version 6 Addressing Architecture
- RFC 4293 MIB for IP
- RFC 4443 ICMPv6
- RFC 4861 IPv6 Neighbor Discovery
- RFC 4862 IPv6 Stateless Address Auto-configuration
- RFC 6724 Default Address Selection for Internet Protocol Version 6 (IPv6)

## MIBs

- RFC 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

## IP Multicast

- RFC 1112 IGMPv1
- RFC 3376 IGMPv3

## Network Management

- IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
- RFC 2579 Textual Conventions for SMIv2
- RFC 2580 Conformance Statements for SMIv2
- 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
- RFC 3260 New Terminology and Clarifications for DiffServ
- Secure Sockets Layer (SSL)
- SSHv2 Secure Shell

## Summary of Changes

| Date | Version History | Action | Description of Change |
|---|---|---|---|
| 19-Oct-2026 | Version 14 | Changed | Survey link text was updated. |
| 27-Feb-2026 | Version 13 | Changed | Rebranding update applied to QuickSpecs |
| 04-Dec-2023 | Version 12 | Changed | Series name was updated. |
| 17-Apr-2023 | Version 11 | Changed | Standard Features section was updated. |
| 20-Feb-2023 | Version 10 | Changed | Technical Specifications section was updated. |
| 03-Oct-2022 | Version 9 | Changed | Configuration Information section was updated. |
| 06-Jun-2022 | Version 8 | Changed | Standard Features section was updated. |
| 16-May-2022 | Version 7 | Changed | Configuration Information and Technical Specifications sections were updated. |
| 18-Apr-2022 | Version 6 | Changed | Configuration Information and Technical Specifications sections were updated. |
| 17-Jan-2022 | Version 5 | Changed | Technical Specifications section was updated. |
| 06-Dec-2021 | Version 4 | Changed | Technical Specifications section was updated. |
| 25-Oct-2021 | Version 3 | Changed | Technical Specifications section was updated. |
| 02-Aug-2021 | Version 2 | Changed | Overview, Standard Features, Configuration Information, and Technical Specifications sections were updated, and SKUs were added. |
| 07-Jun-2021 | Version 1 | New | New QuickSpecs |

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

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