

Overview

HPE Networking Comware Switch Series 5720

HPE Networking Comware 5720 Switch Series is designed to cater to diverse customer needs. This cost-effective access switch offers hybrid SFP+ and 10GBASE-T options, along with multigigabit support on 10GBASE-T ports, allowing scalability from 10GbE SFP+ to 100G QSFP28.

These data center leaf / access layer switches come with MACsec support with the 10GBASE-T additional modules. Features such as DRNI and HPE IRF enhance network resiliency while redundant pluggable power supplies ensure a dynamic and highly available network. Additionally, they provide investment protection by sharing AC and DC PSU with HPE Networking Comware 5710 Switch Series and a fan module with HPE Networking Comware 5944 Switch Series.

Moreover, these switches support HPE Intelligent Management Center (IMC), which delivers a consistent network manageability experience. Through centralized configuration, compliance, policy management, monitoring, and troubleshooting, HPE IMC streamlines network management processes for greater efficiency.



HPE NW CW Sw 24T 8P 6C 5720 (S2N59A)



HPE NW CW Sw 40T 8P 6C 5720 (S2N60A)



HPE NW CW Sw 32P 6C 5720 (S2N57A)



HPE NW CW Sw 48P 6C 5720 (S2N58A)

HPE Networking Comware Switch Series 5720

Key features

- Cost-effective access switch with hybrid SFP+ and 10GBASE-T with multigigabit options on 10GBASE-T port—5G, 2.5G, 1G
- DRNI combines multiple physical switches into one virtual distributed-relay (DR) system for doubling aggregate bandwidth, faster forwarding, resiliency, and high availability
- Virtual Extensible LAN (VXLAN) with lite Ethernet VPN allows greater flexibility, better performance with wirespeed, enhanced security, and better scalability
- Hardware-based MACsec enable end-to-end encrypted security
- HPE Intelligent Resilient Fabric technology enabling greater resilience and scalability with Intelligent Resilient Framework (IRF) stacking
- VXLAN and EVPN enable isolation and greater scalability of L2/L3 overlay services and multicast

Standard Features

Multigigabit High-Density Switches

- The HPE Networking Comware 5720 Switch Series provides medium and large enterprise networks with 24/40 port 1G/2.5G/5G/10GBASE-T and 32/48 port 10G SFP+ connectivity options, thereby resulting in high density and flexibility
- Delivers up to 1001.7 Mpps of packet forwarding rate and up to 2240 Gbps of switching capacity
- Supports jumbo frames with a frame size of up to 9216 bytes, improving the performance of large data transfers
- Supports Equal-Cost Multipath that enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth

Highly Available and Scalable Access Layer Switches

- The HPE Networking Comware 5720 Switch Series uses Intelligent Resilient Framework (IRF) that supports virtualization of up to nine physical switches into one logical device for simpler, flatter, and more agile networks.
- DRNI, an IEEE standard-based solution, enables link aggregation from multiple switches to implement device-level link backup for node redundancy. DRNI also simplifies network topology by virtualizing two physical devices into a logical device.
- Dual, redundant, hot-swappable power supplies maintain a dynamic and highly available network.
- Virtual Extensible LAN (VXLAN) and Ethernet VPN (EVPN) allow greater flexibility to integrate into existing networks, better scalability without redesigning the underlay network, enhanced security to restrict attacks, and improved performance, especially in spine-leaf architectures.

Robust Quality of Service (Qos)

- The HPE Networking Comware 5720 Switch Series supports operations, administration, and maintenance (OAM) and In-Service Software Upgrade (ISSU) for business continuity and improving manageability
- Supports advanced classifier-based QoS, which groups traffic using multiple match criteria based on Layer 2 and 3 information; it applies QoS policies such as setting priority level and rate limit to selected traffic on a port, VLAN, or the entire switch
- Provides extensive traffic prioritization with strict priority (SP) queuing, weighted round robin (WRR), and SP+WRR
- Broadcast control and limitation of broadcast traffic rate can reduce unwanted network traffic
- Supports ACLs for both inbound and outbound traffic enabling granular control over network security, access policies, traffic filtering, and other aspects of bidirectional network management
- Provides extensive traffic prioritization with strict priority (SP) queuing, weighted round robin (WRR), and SP+WRR
- Reduces unwanted network traffic with broadcast control and limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic

Comprehensive Security

- HPE Networking Comware 5720 Switch Series supports AAA authentication (including RADIUS authentication) and dynamic or static binding of user identifiers such as user account, IP address, MAC address, VLAN, and port number
- Supports methods including 802.1X and MAC authentication and encryption for greater device security and policy-driven application authentication. Per-user access control lists (ACLs) provide identity-driven security and access control.
- Dynamic ARP protection with functions such as ARP detection and ARP packet validation that block broadcasts from unauthorized hosts and prevent eavesdropping or theft of network data.

Simplified Management

- The HPE Networking Comware 5720 Switch Series provides thorough single pane management through HPE Intelligent Management Center (IMC), maintaining comprehensive configuration, compliance, and policy management to enable end-to-end network visibility, control, and a consistent network experience
- Supports OpenFlow enabling integration with mainstream cloud platforms or a third-party controller for flexible network customization and automated management
- Supports SmartMC, an embedded network management tool, with a web-based GUI to simplify operations and facilitate centralized management at no additional cost. It offers features such as configuration backup, software version management, and seamless switch replacement



Standard Features

- Supports HPE IMC Orchestrator and Analyzer that offers orchestration, underlay and overlay automated service provisioning, centralized control, and AI-enabled network health monitoring with telemetry and visual dashboards for fault detection and resolution
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Warranty and Support

- Limited lifetime warranty.
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Configuration Information

BTO Models

Standard Switch Chassis

Rule #	Description	SKU
2, 3, 4, 5, 6	HPE Networking Comware Data Center Switch 48p SFP+ 1G/10G 6p QSFP28 100G 5720 • 48 - 1/10GbE SFP/SFP+ ports (min=0 \ max=48 SFP/SFP+ Transceivers) • 6 - 40/100GbE QSFP+/QSFP28 ports (min=0 \ max=6 QSFP+ /QSFP28Transceivers) • 1 Power Supply Required, 2 power supply slots • Must select min 4 Fan Tray, 4 fan tray slots • 1U - Height	S2N58A
2, 3, 4, 5, 6	HPE Networking Comware Data Center Switch 40p 10GBASE-T 8p SFP+ 1G/10G 6p QSFP28 100G 5720 • 40 RJ45 1/10GBase-T Copper ports (No Transceivers) • 8 - 1/10GbE SFP/SFP+ ports (min=0 \ max=8 SFP/SFP+ Transceivers) • 6 - 40/100GbE QSFP+/QSFP28 ports (min=0 \ max=6 QSFP+/QSFP28 Transceivers) • 1 Power Supply Required, 2 power supply slots • Must select min 4 Fan Tray, 4 fan tray slots • 1U - Height	S2N60A
2, 3, 4, 5, 6	HPE Networking Comware Data Center Switch 32p SFP+ 1G/10G 6p QSFP28 100G 5720 • 32 - 1/10GbE SFP/SFP+ ports (min=0 \ max=32 SFP/SFP+ Transceivers) • 6 - 40/100GbE QSFP+/QSFP28 ports (min=0 \ max=6 QSFP+ /QSFP28Transceivers) • 1 Power Supply Required, 2 power supply slots • Must select min 4 Fan Tray, 4 fan tray slots • 1U - Height	S2N57A
2, 3, 4, 5, 6	HPE Networking Comware Data Center Switch 24p 10GBASE-T 8p SFP+ 1G/10G 6p QSFP28 100G 5720 • 24 RJ45 1/10GBase-T Copper ports (No Transceivers) • 8 - 1/10GbE SFP/SFP+ ports (min=0 \ max=8 SFP/SFP+ Transceivers) • 6 - 40/100GbE QSFP+/QSFP28 ports (min=0 \ max=6 QSFP+/QSFP28 Transceivers) • 1 Power Supply Required, 2 power supply slots • Must select min 4 Fan Tray, 4 fan tray slots • 1U - Height	S2N59A

Configuration Rules

Rule #	Description	SKU
2	The following Transceivers install into this Switch's SFP+ Ports: HPE Networking Comware 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver S2N61A 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 X130 10G SFP+ LC SR Transceiver JD092B HPE Networking X130 10G SFP+ LC LR Transceiver JD094B 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	
3	The following Transceivers install into this switch's QSFP+ Ports: HPE Networking X140 40G QSFP+ MPO SR4 Transceiver JG325B HPE Networking X140 40G QSFP+ CSR4 300m Transceiver JG709A HPE Networking X140 40G QSFP+ LC BiDi 100m MM Transceiver JL251A	

Configuration Information

	HPE Networking X140 40G QSFP+ LC LR4 SM 10km 1310nm Transceiver	JG661A
	HPE Networking X140 40G QSFP+ LC LR4L 2km SM Transceiver	JL286A
	HPE QSFP/SFP+ Adapter Kit	655874-B21
	HPE Networking Comware X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable	JG326A
	HPE Networking Comware X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable	JG327A
	HPE Networking Comware X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable	JG328A
	HPE Networking Comware X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable	JG329A
	HPE Networking Comware X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	JG330A
	HPE Networking Comware X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable	JG331A
	HPE Networking X2A0 40G QSFP+ to QSFP+ 7m Active Optical Cable	JL287A
	HPE Networking X2A0 40G QSFP+ to QSFP+ 10m Active Optical Cable	JL288A
	HPE Networking X2A0 40G QSFP+ to QSFP+ 20m Active Optical Cable	JL289A
4	The following 100G Transceivers install into this switch's QSFP+/QSFP28 Ports:	
	HPE Networking Comware 100G FR1 QSFP28 LC 2km SMF Transceiver	S2P29A
	HPE Networking X150 100G QSFP28 MPO SR4 100m MM Transceiver	JL274A
	HPE Networking X150 100G QSFP28 LC BiDi 100m MM Transceiver	JQ344A
	HPE Networking X150 100G QSFP28 eSR4 300m MM Transceiver	JH672A
	HPE Networking X150 100G QSFP28 PSM4 500m SM Transceiver	JH420A
	HPE Networking X150 100G QSFP28 LC LR4 10km SM Transceiver	JL275A
	HPE Networking X150 100G QSFP28 CWDM4 2km SM Transceiver	JH673A
	HPE Networking X240 100G QSFP28 1m DAC Cable	JL271A
	HPE Networking X240 100G QSFP28 3m DAC Cable	JL272A
	HPE Networking X240 100G QSFP28 5m DAC Cable	JL273A
	HPE Networking X2A0 100G QSFP28 to QSFP28 7m Active Optical Cable	JL276A
	HPE Networking X2A0 100G QSFP28 to QSFP28 10m Active Optical Cable	JL277A
	HPE Networking X2A0 100G QSFP28 to QSFP28 20m Active Optical Cable	JL278A
	HPE Networking X240 QSFP28 4xSFP28 1m Direct Attach Copper Cable	JL282A
	HPE Networking X240 QSFP28 4xSFP28 3m Direct Attach Copper Cable	JL283A
	HPE Networking X240 QSFP28 4xSFP28 5m Direct Attach Copper Cable	JL284A
5	The following Transceivers install into this Switch's SFP+ Ports:	
	HPE Networking X120 1G SFP RJ45 T Transceiver	JD089B
	HPE Networking X120 1G SFP LC LH100 Transceiver	JD103A
	HPE Networking X120 1G SFP LC SX Transceiver	JD118B
	HPE Networking X120 1G SFP LC LX Transceiver	JD119B
	HPE Networking X120 1G SFP LC BX 10-U Transceiver	JD098B
	HPE Networking X120 1G SFP LC BX 10-D Transceiver	JD099B

6 **If ANY Option is integrated OD1 to this Switch, then the Switch requires OD1. (Box level integration is not allowed)**

Notes: [OCA Only Model Selection Form - HPE Aruba Networking > Switches > HPE Networking Comware > Access > 5720 Switch Series](#)



Configuration Information

Rack Level Integration CTO Models

Standard Switch Chassis		SKU
Rule #	Description	
2, 3, 4, 5, 6	HPE Networking Comware Data Center Switch 48p SFP+ 1G/10G 6p QSFP28 100G 5720 48 - 1/10GbE SFP/SFP+ ports (min=0 \ max=48 SFP/SFP+ Transceivers) 6 - 40/100GbE QSFP+/QSFP28 ports (min=0 \ max=6 QSFP+/QSFP28 Transceivers) 1 Power Supply Required, 2 power supply slots - Must select min 4 Fan Tray, 4 fan tray slots 1U - Height	S2N58A
2, 3, 4, 5, 6	HPE Networking Comware Data Center Switch 40p 10GBASE-T 8p SFP+ 1G/10G 6p QSFP28 100G 5720 40 RJ45 1/10GBase-T Copper ports (min=0 \ max=40 SFP/SFP+ No Transceivers) 8 - 1/10GbE SFP/SFP+ ports (min=0 \ max=8 SFP/SFP+ Transceivers) 6 - 40/100GbE QSFP+/QSFP28 ports (min=0 \ max=6 QSFP+/QSFP28 Transceivers) 1 Power Supply Required, 2 power supply slots - Must select min 4 Fan Tray, 4 fan tray slots 1U - Height	S2N60A
2, 3, 4, 5, 6	HPE Networking Comware Data Center Switch 32p SFP+ 1G/10G 6p QSFP28 100G 5720 32 - 1/10GbE SFP/SFP+ ports (min=0 \ max=32 SFP/SFP+ Transceivers) 6 - 40/100GbE QSFP+/QSFP28 ports (min=0 \ max=6 QSFP+/QSFP28 Transceivers) 1 Power Supply Required, 2 power supply slots - Must select min 4 Fan Tray, 4 fan tray slots 1U - Height	S2N57A
2, 3, 4, 5, 6	HPE Networking Comware Data Center Switch 24p 10GBASE-T 8p SFP+ 1G/10G 6p QSFP28 100G 5720 24 RJ45 1/10GBase-T Copper ports (min=0 \ max=24 SFP/SFP+ No Transceivers) 8 - 1/10GbE SFP/SFP+ ports (min=0 \ max=8 SFP/SFP+ Transceivers) 6 - 40/100GbE QSFP+/QSFP28 ports (min=0 \ max=6 QSFP+/QSFP28 Transceivers) 1 Power Supply Required, 2 power supply slots - Must select min 4 Fan Tray, 4 fan tray slots 1U - Height	S2N59A
Configuration Rules		
Rule #	Description	
1	The following Transceivers install into this Switch's SFP Management Port: HPE Networking X115 100M SFP LC FX Transceiver HPE Networking X110 100M SFP LC LX Transceiver HPE Networking X120 1G SFP LC LH100 Transceiver	JD102B JD120B JD103A
2	The following Transceivers install into this Switch's SFP+ Ports: (Use #0D1 or #B01 quoted to switch if switch is CTO) - if applicable HPE Networking Comware 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver HPE Networking X130 10G SFP+ LC BiDi 10km-Uplink Transceiver HPE Networking X130 10G SFP+ LC BiDi 10km-Downlink Transceiver HPE Networking X130 10G SFP+ LC BiDi 40km-Uplink Transceiver HPE Networking X130 10G SFP+ LC BiDi 40km-Downlink Transceiver HPE Networking X130 10G SFP+ LC SR Transceiver HPE Networking X130 10G SFP+ LC LR Transceiver HPE Networking X240 10G SFP+ SFP+ 0.65m DAC Cable HPE Networking X240 10G SFP+ SFP+ 1.2m DAC Cable HPE Networking X240 10G SFP+ SFP+ 3m DAC Cable HPE Networking X240 10G SFP+ SFP+ 5m DAC Cable HPE Networking X2A0 10G SFP+ to SFP+ 7m Active Optical Cable HPE Networking X2A0 10G SFP+ to SFP+ 10m Active Optical Cable	S2N61A JL737A JL738A JL739A JL740A JD092B JD094B JD095C JD096C JD097C JG081C JL290A JL291A

Configuration Information

3	HPE Networking X2A0 10G SFP+ to SFP+ 20m Active Optical Cable	JL292A
	The following Transceivers install into this switch's QSFP+ Ports: (Use #0D1 or #B01 quoted to switch if switch is CTO) - if applicable	
	HPE Networking X140 40G QSFP+ MPO SR4 Transceiver	JG325B
	HPE Networking X140 40G QSFP+ CSR4 300m Transceiver	JG709A
	HPE Networking X140 40G QSFP+ LC BiDi 100m MM Transceiver	JL251A
	HPE Networking X140 40G QSFP+ LC LR4 SM 10km 1310nm Transceiver	JG661A
	HPE Networking X140 40G QSFP+ LC LR4L 2km SM Transceiver	JL286A
	HPE QSFP/SFP+ Adapter Kit	655874-B21
	HPE Networking Comware X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable	JG326A
	HPE Networking Comware X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable	JG327A
	HPE Networking Comware X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable	JG328A
	HPE Networking Comware X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable	JG329A
	HPE Networking Comware X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	JG330A
	HPE Networking Comware X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable	JG331A
	HPE Networking X2A0 40G QSFP+ to QSFP+ 7m Active Optical Cable	JL287A
	HPE Networking X2A0 40G QSFP+ to QSFP+ 10m Active Optical Cable	JL288A
	HPE Networking X2A0 40G QSFP+ to QSFP+ 20m Active Optical Cable	JL289A
4	The following 100G Transceivers install into this switch's QSFP+/QSFP28 Ports: (Use #0D1 or #B01 quoted to switch if switch is CTO) - if applicable	
	HPE Networking Comware 100G FR1 QSFP28 LC 2km SMF Transceiver	S2P29A
	HPE Networking X150 100G QSFP28 MPO SR4 100m MM Transceiver	JL274A
	HPE Networking X150 100G QSFP28 LC BiDi 100m MM Transceiver	JQ344A
	HPE Networking X150 100G QSFP28 eSR4 300m MM Transceiver	JH672A
	HPE Networking X150 100G QSFP28 PSM4 500m SM Transceiver	JH420A
	HPE Networking X150 100G QSFP28 LC LR4 10km SM Transceiver	JL275A
	HPE Networking X150 100G QSFP28 CWD4M4 2km SM Transceiver	JH673A
	HPE Networking X240 100G QSFP28 1m DAC Cable	JL271A
	HPE Networking X240 100G QSFP28 3m DAC Cable	JL272A
	HPE Networking X240 100G QSFP28 5m DAC Cable	JL273A
	HPE Networking X2A0 100G QSFP28 to QSFP28 7m Active Optical Cable	JL276A
	HPE Networking X2A0 100G QSFP28 to QSFP28 10m Active Optical Cable	JL277A
	HPE Networking X2A0 100G QSFP28 to QSFP28 20m Active Optical Cable	JL278A
	HPE Networking X240 QSFP28 4xSFP28 1m Direct Attach Copper Cable	JL282A
	HPE Networking X240 QSFP28 4xSFP28 3m Direct Attach Copper Cable	JL283A
	HPE Networking X240 QSFP28 4xSFP28 5m Direct Attach Copper Cable	JL284A
5	If HPE CTO Switch Chassis is selected for Rack Level Integration, Then the Switch needs to integrate (with #0D1) to the HPE Rack.	
6	The following Transceivers install into this Switch's SFP+ Ports:	
	HPE Networking X120 1G SFP RJ45 T Transceiver	JD089B
	HPE Networking X120 1G SFP LC LH100 Transceiver	JD103A
	HPE Networking X120 1G SFP LC SX Transceiver	JD118B
	HPE Networking X120 1G SFP LC LX Transceiver	JD119B
	HPE Networking X120 1G SFP LC BX 10-U Transceiver	JD098B
	HPE Networking X120 1G SFP LC BX 10-D Transceiver	JD099B

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

Configuration Information

Modules

Rule #	Description	SKU
3	HPE Networking Comware Module 2-port 40G QSFP+ 5520HI/5600HI min=0 \ max=2 QSFP+ Transceivers	JH155A
	HPE Networking Comware Module 2p 10GBASE-T MACsec 5140/5520 No Transceivers	R9L65A
1, 2	HPE Networking Comware Module 8 Port SFP+ 5520HI/5600HI min=0 \ max=8 SFP/SFP+ Transceivers	SOT03A
1, 2, 4	HPE Networking Comware Module 4-port 1/10G SFP+ 5140HI/5520HI/5600HI min=0 \ max=4 SFP/SFP+ Transceivers	SOT04A
	HPE Networking Comware Module 8-port 1/2.5/5/10GBASE-T 5520HI/5600HI No Transceivers	SOT05A
Configuration Rules		
Rule #	Description	
1	The following 1G Transceivers install into this Module: (Use #0D1 or #B01 if switch is CTO) HPE Networking X120 1G SFP RJ45 T Transceiver HPE Networking X120 1G SFP LC SX Transceiver HPE Networking X120 1G SFP LC LX Transceiver HPE Networking X120 1G SFP LC BX 10-U Transceiver HPE Networking X120 1G SFP LC BX 10-D Transceiver HPE Networking X120 1G SFP LC LH100 Transceiver	JD089B JD118B JD119B JD098B JD099B JD103A
2	The following 10G Transceivers install into this Module: (Use #0D1 or #B01 if switch is CTO) HPE Networking X130 10G SFP+ LC BiDi 40km-Downlink Transceiver HPE Networking X130 10G SFP+ LC ER 40km Transceiver HPE Networking X130 10G SFP+ LC BiDi 40km-Uplink Transceiver HPE Networking X130 10G SFP+ LC LH 80km Transceiver HPE Networking X130 10G SFP+ LC SR Transceiver HPE Networking X130 10G SFP+ LC LR Transceiver HPE Networking X130 10G SFP+ LC BiDi 10km-Uplink Transceiver HPE Networking X130 10G SFP+ LC BiDi 10km-Downlink Transceiver HPE Networking X240 10G SFP+ SFP+ 0.65m DAC Cable HPE Networking X240 10G SFP+ SFP+ 1.2m DAC Cable HPE Networking X240 10G SFP+ SFP+ 3m DAC Cable HPE Networking X240 10G SFP+ SFP+ 5m DAC Cable HPE Networking X2A0 10G SFP+ to SFP+ 7m Active Optical Cable HPE Networking X2A0 10G SFP+ to SFP+ 10m Active Optical Cable HPE Networking X2A0 10G SFP+ to SFP+ 20m Active Optical Cable	JL740A JG234A JL739A JG915A JD092B JD094B JL737A JL738A JD095C JD096C JD097C JG081C JL290A JL291A JL292A
3	The following 40G Transceivers install into this Module: (Use #0D1 or #B01 if switch is CTO) HPE Networking X140 40G QSFP+ MPO SR4 Transceiver HPE Networking X140 40G QSFP+ CSR4 300m Transceiver HPE Networking X140 40G QSFP+ LC BiDi 100m MM Transceiver HPE Networking X140 40G QSFP+ LC LR4 SM 10km 1310nm Transceiver HPE Networking X140 40G QSFP+ LC LR4L 2km SM Transceiver HPE Networking Comware X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable HPE Networking Comware X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable HPE Networking Comware X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable HPE Networking Comware X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable HPE Networking Comware X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable HPE Networking Comware X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable HPE Networking X2A0 40G QSFP+ to QSFP+ 7m Active Optical Cable HPE Networking X2A0 40G QSFP+ to QSFP+ 10m Active Optical Cable	JG325B JG709A JL251A JG661A JL286A JG326A JG327A JG328A JG329A JG330A JG331A JL287A JL288A

Configuration Information

4	HPE Networking X2A0 40G QSFP+ to QSFP+ 20m Active Optical Cable	JL289A
	This Module can support min0/max1 between ports 52/53/54 only	

Transceivers

SFP Transceivers

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

SFP+ Transceivers

Rule #	Description	SKU
	HPE Networking Comware 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver	S2N61A
	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 X130 10G SFP+ LC SR Transceiver	JD092B
	HPE Networking X130 10G SFP+ LC LR Transceiver	JD094B
	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

QSFP+ Transceivers

Rule #	Description	SKU
	HPE Networking X140 40G QSFP+ MPO SR4 Transceiver	JG325B
	HPE Networking X140 40G QSFP+ CSR4 300m Transceiver	JG709A
	HPE Networking X140 40G QSFP+ LC BiDi 100m MM Transceiver	JL251A
	HPE Networking X140 40G QSFP+ LC LR4 SM 10km 1310nm Transceiver	JG661A
	HPE Networking X140 40G QSFP+ LC LR4L 2km SM Transceiver	JL286A
	HPE Networking Comware X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable	JG326A
	HPE Networking Comware X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable	JG327A
	HPE Networking Comware X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable	JG328A
	HPE Networking Comware X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable	JG329A
	HPE Networking Comware X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	JG330A
	HPE Networking Comware X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable	JG331A
	HPE Networking X2A0 40G QSFP+ to QSFP+ 7m Active Optical Cable	JL287A
	HPE Networking X2A0 40G QSFP+ to QSFP+ 10m Active Optical Cable	JL288A
	HPE Networking X2A0 40G QSFP+ to QSFP+ 20m Active Optical Cable	JL289A

Configuration Information

QSFP28 Transceivers

Rule #	Description	SKU
	HPE Networking Comware 100G FR1 QSFP28 LC 2km SMF Transceiver	S2P29A
	HPE Networking X150 100G QSFP28 MPO SR4 100m MM Transceiver	JL274A
	HPE Networking X150 100G QSFP28 LC BiDi 100m MM Transceiver	JQ344A
	HPE Networking X150 100G QSFP28 eSR4 300m MM Transceiver	JH672A
	HPE Networking X150 100G QSFP28 PSM4 500m SM Transceiver	JH420A
	HPE Networking X150 100G QSFP28 LC LR4 10km SM Transceiver	JL275A
	HPE Networking X150 100G QSFP28 CWD4 2km SM Transceiver	JH673A
	HPE Networking X240 100G QSFP28 1m DAC Cable	JL271A
	HPE Networking X240 100G QSFP28 3m DAC Cable	JL272A
	HPE Networking X240 100G QSFP28 5m DAC Cable	JL273A
	HPE Networking X2A0 100G QSFP28 to QSFP28 7m Active Optical Cable	JL276A
	HPE Networking X2A0 100G QSFP28 to QSFP28 10m Active Optical Cable	JL277A
	HPE Networking X2A0 100G QSFP28 to QSFP28 20m Active Optical Cable	JL278A
	HPE Networking X240 QSFP28 4xSFP28 1m Direct Attach Copper Cable	JL282A
	HPE Networking X240 QSFP28 4xSFP28 3m Direct Attach Copper Cable	JL283A
	HPE Networking X240 QSFP28 4xSFP28 5m Direct Attach Copper Cable	JL284A

Internal Power Supplies

Rule #	Description	SKU
1, 2, 4, 5	HPE Networking 5710 450W FB AC Power Supply Unit includes 1 x c13, 450w	JL592A
	HPE Networking 5710 450W FB AC Power Supply Unit C15 PDU Jumper Cord (NA/MEX/TW/JP)	JL592A
	HPE Networking 5710 450W FB AC Power Supply Unit C15 PDU Jumper Cord (ROW)	JL592A
	HPE Networking 5710 450W FB AC Power Supply Unit NEMA L6-20P Cord (NA/MEX/JP/TW)	JL592A
	HPE Networking 5710 450W FB AC Power Supply Unit No Localized Power Cord Selected	JL592A
1, 2, 4, 6	HPE Networking 5710 450W BF AC Power Supply Unit includes 1 x c13, 450w	JL593A
	HPE Networking 5710 450W BF AC Power Supply Unit C15 PDU Jumper Cord (NA/MEX/TW/JP)	JL593A
	HPE Networking 5710 450W BF AC Power Supply Unit C15 PDU Jumper Cord (ROW)	JL593A
	HPE Networking 5710 450W BF AC Power Supply Unit NEMA L6-20P Cord (NA/MEX/JP/TW)	JL593A
	HPE Networking 5710 450W BF AC Power Supply Unit No Localized Power Cord Selected	JL593A
1, 4, 5	HPE Networking 5710 450W 48V FB DC Power Supply Unit includes 1 x c13, 450w	JL688A

Configuration Rules

Rule #	Description
1	If 2 power supplies are selected they must be the same Sku number.
2	Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord, #B2E and #AC3. (See Localization Menu)
	REMARK: When Switches/Routers are Factory Racked, Then #B2B, or #B2C should be the Defaulted Power Cable option on the Switches/Routers.
3	This power supply is only supported on S2N57A, S2N58A.
4	This power supply is only supported on S2N57A, S2N58A, S2N59A, S2N60A

Configuration Information

- 5 If this Front to Back PSU is selected, then only allow customer to select the following FanTray under Switch Enclosure Options Section:
- | | |
|--|--------|
| HPE Networking X721 FB Fan Tray | JL594A |
| HPE Networking 5944 Port-to-Power Fan Module | JL837A |
- 6 If this Back to Front PSU is selected, then only allow customer to select the following FanTray under Switch Enclosure Options Section:
- | | |
|--|--------|
| HPE Networking X722 BF Fan Tray | JL595A |
| HPE Networking 5944 Power-to-Port Fan Module | JL838A |
- 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. (Configurators Default B2B or B2C for Rack Level CTO)
 - Switch/Router/Power Supply to Wall Power Cord - Localized Option (Configurators 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 Power Cord Selected - #AC3 Option
 - The 450 Watt PSUs are supported in the SFP+ Switches but are not required.

Switch Enclosure Options

Fan Trays		
Rule #	Description	SKU
1	HPE Networking 5944 Port-to-Power Fan Module	JL837A
1	HPE Networking 5944 Power-to-Port Fan Module	JL838A
Configuration Rules		
Rule #	Description	
1	Fan Trays cannot be mixed in the same switch enclosure	

Software

IMC		
Orchestrator		
1, 2	HPE Networking IMC Orchestrator Base License E-LTU	JL849AAE
1, 3	HPE Networking IMC Orchestrator Analyzer Add-on License E-LTU	JL850AAE
1, 4	HPE Networking IMC Orchestrator Network Node Add-on License E-LTU	JL851AAE
1, 3	HPE Networking IMC Orchestrator Analyzer IP Host Add-on License E-LTU	JL852AAE
Configuration Rules		
Rule #	Description	
1	When configuring 12900 Switch Chassis(JH262A or JL255A), this Orchestrator Service is available when one of the following Type X MPUs is added:	
	HPE Networking 12904E Type X Main Processing Unit	JL844A
	HPE Networking 12900E Type X Main Processing Unit	JL845A
2	IMC Orchestrator Base E-LTU sku must be Qty 1 per solution	
3	If this analyzer E-LTU is selected, then Qty 1 must be added per solution. Additionally, if this Analyzer E-LTU is selected, then IP Host E-LTU must match qty of desired Hosts.	
4	This Network Node Add-on E-LTU must match the switch qty in the solution	



Technical Specifications

Specifications	HPE NW CW Sw 32P 6C 5720 (S2N57A)	HPE NW CW Sw 48P 6C (S2N58A)
I/O ports and slots	32 x SFP+, 6 x QSFP28+ 1 slot	48 x SFP+, 6 x QSFP28+ 1 slot
Additional ports and slots	1 console port, 1 Type-C console port, 1 out-of-band management port, 1 USB port, 1 reset key	1 console port, 1 Type-C console port, 1 out-of-band management port, 1 USB port, 1 reset key
Power supplies	2 power supply slots. 1 minimum power supply required (ordered separately)	2 power supply slots. 1 minimum power supply required (ordered separately)
Physical Characteristics		
Dimensions	440 mm x 400 mm x 44 mm	440 mm x 400 mm x 44 mm
Weight	≤ 8.1 kg	≤ 7.9 kg
Memory and processor	Quad Core Arm®v8-Cortex-A72; 4G DDR4	Quad Core Armv8-Cortex-A72; 4G DDR4
Mounting and enclosure	Mounts in an EIA standard 19-inch rack or other equipment cabinet (hardware included); horizontal surface mounting only	Mounts in an EIA standard 19-inch rack or other equipment cabinet (hardware included); horizontal surface mounting only
Performance		
1000 Mb latency	< 5 μs	< 5 μs
10 Gbps latency	< 3 μs	< 3 μs
Throughput	1001 Mpps	1001 Mpps
Routing/switching capacity	2240 Gbps	2560 Gbps
Routing table size	324K IPv4 / 120K IPv6	324K IPv4 / 120K IPv6
MAC address table size	Up to 280K	Up to 280K
Environment		
Operating temperature	0°C–45°C	0°C–45°C
Operating relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing
Nonoperating/storage temperature	–40°F to 158°F (–40°C to 70°C)	–40°F to 158°F (–40°C to 70°C)
Nonoperating/storage relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing
Acoustic	68.9 dB ISO 7779	68.9 dB ISO 7779
Airflow direction	From front to rear	From front to rear
Electrical Characteristics		
Frequency	50/60 Hz	50/60 Hz
Maximum heat dissipation	785 BTU/hr	887 BTU/hr
Current	37.5A 12V	37.5A 12V
AC voltage	100V to 240V	100V to 240V
DC voltage	–48V to –60V	–48V to –60V
Maximum power rating	242W	255W
Idle power	Dual AC 90W	Dual AC 89W
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, 100% traffic, all ports plugged in, and all modules populated	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, 100% traffic, all ports plugged in, and all modules populated
Safety	UL 62368-1 CAN/CSA C22.2 No 62368-1 IEC 62368-1 EN 62368-1	UL 62368-1 CAN/CSA C22.2 No 62368-1 IEC 62368-1 EN 62368-1

Technical Specifications

Emissions	FCC Part 15 Subpart B Class A ICES-003 Class A VCCI Class A CISPR 32 Class A EN 55032 Class A AS/NZS CISPR 32 Class A CISPR 35 EN 55035 EN 61000-3-2 EN 61000-3-3 ETSI EN 300 386	FCC Part 15 Subpart B Class A ICES-003 Class A VCCI Class A CISPR 32 Class A EN 55032 Class A AS/NZS CISPR 32 Class A CISPR 35 EN 55035 EN 61000-3-2 EN 61000-3-3 ETSI EN 300 386
Immunity		
Generic	EN 55024	EN 55024
ESD	EN 300 386	EN 300 386
Management	HPE IMC; CLI; out-of-band management; SNMP Manager; Telnet; FTP Notes: The customer must install a minimum of one power supply, as the device does not come with one. The customer must install 4 fan kits, as the device does not come with one. The direction of PSU and fan tray should remain the same	HPE IMC; CLI; out-of-band management; SNMP Manager; Telnet; FTP Notes: The customer must install a minimum of one power supply, as the device does not come with one. The customer must install 4 fan kits, as the device does not come with one. The direction of PSU and fan tray should remain the same
Services	See 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, contact your local HPE sales office	See the HPE 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, contact your local HPE sales office



Technical Specifications

Specifications	HPE NW CW Sw 24T 8P 6C 5720 (S2N59A)	HPE NW CW Sw 40T 8P 6C 5720 (S2N60A)
I/O ports and slots	24 x 10GBASE-T + 8 x SFP+, 6 x QSFP28+ 1 slot	40 x 10GBASE-T + 8 x SFP+, 6 x QSFP28+ 1 slot
Additional ports and slots	1 console port, 1 Type-C console port, 1 out-of-band management port, 1 USB port, 1 reset key	1 console port, 1 Type-C console port, 1 out-of-band management port, 1 USB port, 1 reset key
Physical characteristics		
Dimensions	440 mm x 400 mm x 44 mm	440 mm x 400 mm x 44 mm
Weight	≤ 7.9 kg	≤ 8.0 kg
Memory and processor	Quad Core Armv8-Cortex-A72; 4G DDR4	Quad Core Armv8-Cortex-A72; 4G DDR4
Mounting and enclosure	Mounts in an EIA standard 19-inch rack or other equipment cabinet (hardware included); horizontal surface mounting only	Mounts in an EIA standard 19-inch rack or other equipment cabinet (hardware included); horizontal surface mounting only
Performance		
1000 Mb latency	< 5 μs	< 5 μs
10 Gbps latency	< 3 μs	< 3 μs
Throughput	1001 Mpps	1001 Mpps
Routing/switching capacity	2240 Gbps	2560 Gbps
Routing table size	324K IPv4 / 120K IPv6	324K IPv4 / 120K IPv6
MAC address table size	Up to 280K	Up to 280K
Environment		
Operating temperature	0°C–45°C	0°C–45°C
Operating relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing
Non-operating/Storage temperature	–40°F to 158°F (–40°C to 70°C)	–40°F to 158°F (–40°C to 70°C)
Non-operating/Storage relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing
Acoustic	68.7 dB ISO 7779	68.7 dB ISO 7779
Airflow direction	From front to rear	From front to rear
Electrical Characteristics		
Maximum heat dissipation	50/60 Hz	50/60 Hz
Frequency	818 BTU/hr	921 BTU/hr
Current	37.5A 12V	37.5A 12V
AC voltage	100V to 240V	100V to 240V
DC voltage	–48 to –60V	–48 to –60V
Maximum power rating	235W	263W
Idle power	Dual AC 94W	Dual AC 99W
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 100% traffic, all ports plugged in, and all modules populated	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 100% traffic, all ports plugged in, and all modules populated
Safety	UL 62368-1 CAN/CSA C22.2 No 62368-1 IEC 62368-1 EN 62368-1	UL 62368-1 CAN/CSA C22.2 No 62368-1 IEC 62368-1 EN 62368-1

Technical Specifications

Emissions	FCC Part 15 Subpart B Class A ICES-003 Class A VCCI Class A CISPR 32 Class A EN 55032 Class A AS/NZS CISPR 32 Class A CISPR 35 EN 55035 EN 61000-3-2 EN 61000-3-3 ETSI EN 300 386	FCC Part 15 Subpart B Class A ICES-003 Class A VCCI Class A CISPR 32 Class A EN 55032 Class A AS/NZS CISPR 32 Class A CISPR 35 EN 55035 EN 61000-3-2 EN 61000-3-3 ETSI EN 300 386
Immunity		
Generic	EN 55024	EN 55024
ESD	EN 300 386	EN 300 386
Management	HPE IMC; CLI; out-of-band management; SNMP Manager; Telnet; FTP Notes: The customer must install a minimum of one power supply, as the device does not come with one. The customer must install 4 fan kits, as the device does not come with one. The direction of PSU and fan tray should remain same	HPE IMC; CLI; out-of-band management; SNMP Manager; Telnet; FTP Notes: The customer must install a minimum of one power supply, as the device does not come with one. The customer must install 4 fan kits, as the device does not come with one. The direction of PSU and fan tray should remain same
Services	See the HPE 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, contact your local HPE sales office.	See the HPE 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, contact your local HPE sales office.



Technical Specifications

Standards and Protocols (Applies to all products in series)

BGP

- RFC 1657 Definitions of Managed Objects for BGP-4
- RFC 1771 BGP-4
- RFC 2385 BGP Session Protection via TCP MD5
- RFC 2858 BGP-4 Multi-Protocol Extensions

Device Management

- RFC 1155 Structure and Mgmt. Information (SMIv1)
- RFC 1157 SNMPv1/v2c
- RFC 1305 NTPv3
- RFC 2573 (SNMPv3 Applications) RFC 2578-2580 SMIv2
- RFC 2819 (RMON groups Alarm, Event, History, and Statistics only)
- RFC 3416 (SNMP Protocol Operations v2) RFC 3417 (SNMP Transport Mappings) HTML and Telnet management
- Multiple Configuration Files SNMPv3 and RMON RFC support
- SSHv1/SSHv2
- Secure Shell TACACS/ TACACS+

General Protocols

- IEEE 802.1ad Q-in-Q
- IEEE 802.1ak Multiple Registration Protocol (MRP) and Multiple VLAN Registration Protocol (MVRP)
- IEEE 802.1AE MACsec
- IEEE 802.1AX—2008 Link Aggregation IEEE 802.1D MAC Bridges
- IEEE 802.1p Priority IEEE 802.1Q (GVRP) IEEE 802.1Q VLANs
- IEEE 802.1s Multiple Spanning Trees IEEE 802.1v VLAN classification by Protocol and Port
- IEEE 802.1w Rapid Reconfiguration of Spanning Tree
- IEEE 802.1X PAE
- IEEE 802.3 Type 10BASE-T IEEE 802.3ab 1000BASE-T
- IEEE 802.3ac (VLAN Tagging Extension) IEEE 802.3ad Link Aggregation (LAG) IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- IEEE 802.3ae 10-Gigabit Ethernet IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3az Energy Efficient Ethernet IEEE 802.3i 10BASE-T
- IEEE 802.3u 100BASE-X
- IEEE 802.3x Flow Control IEEE 802.3z 1000BASE-X RFC 768 UDP
- RFC 783 TFTP Protocol (revision 2)
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet
- RFC 855 Telnet Option Specification RFC 894 IP over Ethernet
- RFC 925 Multi-LAN Address Resolution RFC 950 Internet Standard Subnetting Procedure
- RFC 951 BOOTP
- RFC 959 File Transfer Protocol (FTP) RFC 1027 Proxy ARP
- RFC 1042 IP Datagrams RFC 1058 RIPv1
- RFC 1071 Computing the Internet Checksum
- RFC 1166 IP Addresses
- RFC 1122 Requirements for Internet Hosts—Communication Layers
- RFC 1123 Requirements for Internet Hosts

Technical Specifications

- RFC 1141 Incremental updating of the Internet checksum
- RFC 1191 Path MTU discovery
- 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 1542 BOOTP Extensions RFC 1591 DNS (client only)
- RFC 1643 Definitions of Managed Objects for the Ethernet-like Interface Types
- RFC 1723 RIP v2
- RFC 1812 IPv4 Routing
- RFC 1866 Hypertext Markup Language—2.0 RFC 1887 An Architecture for IPv6 Unicast Address Allocation
- RFC 1901 Introduction to Community-based SNMPv2
- RFC 1902-1907 SNMPv2
- RFC 2131 DHCP
- RFC 2236 IGMP Snooping RFC 2338 VRRP
- RFC 2375 IPv6 Multicast Address Assignments
- 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 Hypertext Transfer Protocol—HTTP/1.1
- RFC 2644 Directed Broadcast Control
- 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 2711 IPv6 Router Alert Option
- RFC 2784 Generic Routing Encapsulation (GRE)
- RFC 2865 Remote Authentication Dial In User Service (RADIUS)
- RFC 2866 RADIUS Accounting
- RFC 2868 RADIUS Attributes for Tunnel Protocol Support
- RFC 3046 DHCP Relay Agent Information Option
- RFC 3209 RSVP-TE Extensions to RSVP for LSP Tunnels
- RFC 3246 Expedited Forwarding PHB
- RFC 3410 Applicability Statements for SNMP
- RFC 3414 User-based Security Model
- (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)
- RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)
- RFC 3416 Protocol Operations for SNMP RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)
- RFC 3418 Management Information Base (MIB) for the Simple Network Management
- RFC 3484 Default Address Selection for Internet Protocol version 6 (IPv6)
- RFC 3493 Basic Socket Interface Extensions for IPv6
- RFC 3542 Advanced Sockets Application Program Interface (API) for IPv6
- 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 3596 DNS Extensions to Support IP Version 6
- RFC 3623 Graceful OSPF Restart
- RFC 3704 Unicast Reverse Path Forwarding (URPF)
- RFC 3768 Virtual Router Redundancy Protocol (VRRP)
- RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6

Technical Specifications

- RFC 4090 Fast Reroute Extensions to RSVP-TE for LSP Tunnels
- RFC 4113 Management Information Base for the User Datagram Protocol (UDP)
- RFC 4213 Basic IPv6 Transition Mechanisms
- RFC 4250 The Secure Shell (SSH) Protocol Assigned Numbers
- RFC 4251 The Secure Shell (SSH) Protocol Architecture
- RFC 4252 The Secure Shell (SSH) Authentication Protocol
- RFC 4253 The Secure Shell (SSH) Transport Layer Protocol
- RFC 4254 The Secure Shell (SSH) Connection Protocol
- RFC 4291 IP Version 6 Addressing Architecture
- RFC 4443 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
- 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 4594 Configuration Guidelines for DiffServ Service Classes
- RFC 4675 RADIUS VLAN & Priority RFC 4750 OSPF Version 2 Management Information Base
- RFC 4762 Virtual Private LAN Service (VPLS) Using Label Distribution Protocol (LDP) Signaling
- RFC 5095 Deprecation of Type 0 Routing Headers in IPv6

IP Multicast

- RFC 1112 IGMPv1
- RFC 2236 IGMPv2
- RFC 2710 Multicast Listener Discovery (MLD) for IPv6
- RFC 2858 Multiprotocol Extensions for BGP-4 RFC 3376 IGMPv3
- RFC 3569 An Overview of Source-Specific Multicast (SSM)
- RFC 3618 Multicast Source Discovery Protocol (MSDP)
- RFC 3973 PIM Dense Mode
- RFC 4601 PIM Sparse Mode

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 2545 Use of BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing
- RFC 3162 RADIUS and IPv6
- RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses
- RFC 3307 IPv6 Multicast Address Allocation 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 1215 A Convention for Defining Traps for use with the SNMP
- RFC 1493 Bridge MIB
- RFC 1757 Remote Network Monitoring MIB RFC 2096 IP Forwarding Table MIB
- RFC 2233 Interface MIB
- RFC 2571 SNMP Framework MIB RFC 2572 SNMP-MPD MIB

Technical Specifications

- 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 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and Virtual Extensions
- 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

MPLS

- RFC 2961 RSVP Refresh Overhead Reduction Extensions
- RFC 3031 Multiprotocol Label Switching Architecture
- RFC 3032 MPLS Label Stack Encoding RFC 3036 LDP Specification
- RFC 4762 Virtual Private LAN Service (VPLS) Using Label Distribution Protocol (LDP) Signaling

Network management

- IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
- RFC 1215 Convention for Defining Traps for use with the SNMP
- RFC 2579 Textual Conventions for SMIv2 RFC 2580 Conformance Statements for SMIv2
- RFC 2818 HTTP over TLS
- RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
- RFC 6398 IP Router Alert Considerations and Usage
- ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED) SNMPv1/v2c/v3

OSPF

- RFC 1587 OSPF NSSA
- RFC 1850 OSPFv2 Management Information Base (MIB), traps
- RFC 2328 OSPFv2
- RFC 2370 OSPF Opaque LSA Option

QoS/CoS

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

Security

- IEEE 802.1X Port Based Network Access Control
- RFC 1492 TACACS+
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Accounting RFC 2865 RADIUS Authentication RFC 2866 RADIUS Accounting
- RFC 3260 New Terminology and Clarifications for DiffServ
- RFC 4716 SSH Public Key File Format
- Secure Sockets Layer

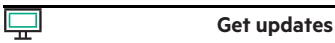
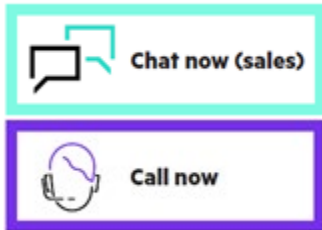
Summary of Changes

Date	Version History	Action	Description of Change
28-Apr-2025	Version 4	Changed	Configuration Information section was updated.
02-Dec-2024	Version 3	Changed	Configuration Information section was updated.
18-Nov-2024	Version 2	Changed	QuickSpecs was updated.
07-Oct-2024	Version 1	New	New QuickSpecs



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