Overview

HPE FlexNetwork HSR6800 Router Series

The HPE FlexNetwork HSR6800 Router Series is a portfolio of high-performance WAN services routers, ideal for large-scale data center and campus WAN networks.

These routers are built with a multi-core distributed processing architecture that scales up to 420 Mpps forwarding and up to 2 Tbps switch capacity. They deliver robust routing (MPLS, IPv4, IPv6, dynamic routing, nested QoS), security (stateful firewall, IPsec/Dynamic VPN, DoS protection, NAT), full Layer 2 switching, traffic analysis capabilities, and high-density 10 GbE (and 40/100 GbE-ready) WAN interface options, all integrated in a single powerful routing platform.
In addition, the HPE FlexNetwork HSR6800 Router Series are the first service aggregation routers in the industry to support system virtualization by taking advantage of Hewlett Packard Enterprise (HPE) innovative Intelligent Resilient Fabric (IRF) technology.

HPE FlexNetwork HSR6804 Router Chassis

Overview

HPE FlexNetwork HSR6802 Router Chassis

HPE FlexNetwork HSR6808 Router Chassis

Overview

Models

Description	SKU
HPE FlexNetwork HSR6802 Router Chassis	JG361B
HPE FlexNetwork HSR6804 Router Chassis	JG362B
HPE FlexNetwork HSR6808 Router Chassis	JG363B

Key features

- High-performance services with up to 420 Mpps forwarding and 2 Tbps switching capacity
- Multicore, distributed processing architecture
- Comprehensive routing, switching, and security
- High-density WAN connections
- Carrier-class resiliency with HPE Intelligent Resilient Fabric (IRF) technology

Standard Features

Connectivity

- **Multiple WAN interfaces**
  Support Fast Ethernet/Gigabit Ethernet/10GbE ports, OC3~OC48 POS/CPOS, and ATM ports
- **Flexible port selection**
  Provides a combination of fiber/copper interface modules, 100/1000BASE-X auto-speed selection, and 10/100/1000BASE-T auto-speed detection plus auto duplex and MDI/MDI-X; is speed adaptable between 155 M POS/622 M POS/Gigabit Ethernet
- **Loopback**
  Supports internal loopback testing for maintenance purposes and an increase in availability

Performance

- **High-performance platform**
  Provides up to 420 Mpps in forwarding and up to 2 Tbps switching capacity
- **Variety of high-performance FIP modules**
  Up to 15 Mpps and 40 Gbps with HW Encryption. FIP-240, FIP-310, FIP-260 (with 4 GB DDR4 SDRAM), and FIP-380 (with 8 GB DDR4 SDRAM).
- **Variety of high-performance SAP® Modules**
  Flexibility with 10GbE and 1GbE SAP Module options.
- **Variety of high-performance MIC-X Modules**
  JM047A HPE HSR6800 4p 10GbE SFP+ MIC-X Mod.
  JM048A HPE HSR6800 8p POS MIC-X Mod.
  R8V36A HPE HSR6800 10p GbE SFP MIC-X Mod
  R8V37A HPE HSR6800 2p 10GbE SFP+ MIC-X Mod

Resiliency and high availability

- **Hewlett Packard Enterprise (HPE) Intelligent Resilient Fabric (IRF) technology**
  HPE Intelligent Resilient Fabric (IRF) technology is HPE's innovative technology that connects multiple routers through physical IRF ports to achieve system virtualization. All routers appears as one node on the network to allow for simplified configuration, while achieving high resiliency and increased system expandability at lower cost.
- **Separate data and control planes**
  Provide greater flexibility and enable continual services
- **Hot-swappable modules**
  Facilitate the replacement of hardware interface modules without impacting the traffic flow through the system
- **Optional redundant power supply**
  Provides uninterrupted power; allows hot-swapping of one of the two supplies when installed
- **Virtual Router Redundancy Protocol (VRRP)**
  Allows groups of two routers to back each other up dynamically to create highly available routed environments
- **Graceful restart**
  Aeatures are fully supported, including graceful restart for OSPF, IS-IS, BGP, LDP, and RSVP; the network remains stable during the active-standby switchover; after the switchover, the device quickly learns the network routes by communicating with adjacent routers; forwarding remains uninterrupted during the switchover to achieve nonstop forwarding (NSF)
- **Hitless software upgrades**
  Allow patches to be installed without restarting the device, increasing network uptime and simplifying maintenance
- **IP Fast Reroute Framework (FRR)**
  Nodes are configured with backup ports and routes; local implementation requires no cooperation of

Standard Features

adjacent devices, simplifying the deployment; solves the traditional convergence faults in IP forwarding; achieves restoration within 50 ms, with the restoration time independent of the number of routes and fast link switchovers without route convergence

Product architecture

- **Distributed processing**

  Two kinds of engines are hardware-separated: main controller engine (routing engine) and service engines (Flexible Interface Platform [FIP] and Service Aggregation Platform [SAP]); the main controller engine is used for route computing and system management, and service engines are used for processing services; SAP Module supports Jumbo Frame (9k+ bytes)

- **HPE Apollo Processor**

  HPE in-house designed service/forwarding processor supporting powerful parallel processing, encryption and comprehensive HQoS functionalities.

Layer 3 routing

- **Static IPv4 routing**

  Provides simple, manually configured IPv4 routing

- **Routing Information Protocol (RIP)**

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

- **Open Shortest Path First (OSPF)**

  Interior Gateway Protocol (IGP) uses link-state protocol for faster convergence; supports ECMP, NSSA, and MD5 authentication for increased security and graceful restart for faster failure recovery

- **Border Gateway Protocol 4 (BGP-4)**

  Exterior Gateway Protocol (EGP) with path vector protocol uses TCP for enhanced reliability for the route discovery process, reduces bandwidth consumption by advertising only incremental updates, and supports extensive policies for increased flexibility, as well as scales to very large networks

- **Intermediate system to intermediate system (IS-IS)**

  Interior Gateway Protocol (IGP) uses path vector protocol, which is defined by the ISO organization for IS-IS routing and extended by IETF RFC 1195 to operate in both TCP/IP and the OSI reference model (Integrated IS-IS)

- **Static IPv6 routing**

  Provides simple, manually configured IPv6 routing

- **Dual IP stack**

  Maintains separate stacks for IPv4 and IPv6 to ease the transition from an IPv4-only network to an IPv6-only network design

- **Routing Information Protocol next generation (RIPng)**

  Extends RIPv2 to support IPv6 addressing

- **OSPFv3**

  Provides OSPF support for IPv6

- **BGP+**

  Extends BGP-4 to support Multiprotocol BGP (MBGP), including support for IPv6 addressing

- **IS-IS for IPv6**

  Extends IS-IS to support IPv6 addressing

- **IPv6 tunneling**

  Is an important element for the transition from IPv4 to IPv6; allows IPv6 packets to traverse IPv4-only networks by encapsulating the IPv6 packet into a standard IPv4 packet; supports manually configured, 6to4, and Intra-Site Automatic Tunnel Addressing Protocol (ISATAP) tunnels

- **Multiprotocol Label Switching (MPLS)**

Standard Features

> Uses BGP to advertise routes across Label Switched Paths (LSPs), but uses simple labels to forward packets from any Layer 2 or Layer 3 protocol, which reduces complexity and increases performance; supports graceful restart for reduced failure impact; supports LSP tunneling and multilevel stacks

- **Multiprotocol Label Switching (MPLS) Layer 3 VPN**

  Allows Layer 3 VPNs across a provider network; uses MP-BGP to establish private routes for increased security; supports RFC 2547bis multiple autonomous system VPNs for added flexibility

- **Multiprotocol Label Switching (MPLS) Layer 2 VPN**

  Establishes simple Layer 2 point-to-point VPNs across a provider network using only MPLS Label Distribution Protocol (LDP); requires no routing and therefore decreases complexity, increases performance, and allows VPNs of non-routable protocols; uses no routing information for increased security; supports Circuit Cross Connect (CCC), Static Virtual Circuits (SVCs), Martini draft, and Kompella-draft technologies

- **Policy routing**

  Allows custom filters for increased performance and security; supports ACLs, IP prefix, AS paths, community lists, and aggregate policies

- **Multicast VPN**

  Supports Multicast Domain (MD) multicast VPN, which can be distributed on separate service cards, providing high performance and flexible configuration

- **Virtual Private LAN Service (VPLS)**

  Establishes point-to-multipoint Layer 2 VPNs across a provider network

- **Bidirectional Forwarding Detection (BFD)**

  Enables link connectivity monitoring and reduces network convergence time for RIP, OSPF, BGP, IS-IS, VRRP, and MPLS

- **IGMPv1, v2, and v3**

  Allow individual hosts to be registered on a particular VLAN

- **PIM-SSM, PIM-DM, and PIM-SM (for IPv4 and IPv6)**

  Support IP Multicast address management and inhibition of DoS attacks

- **Equal-Cost/Unequal-Cost Multipath (ECMP/UCMP)**

  Enables multiple equal-cost and unequal-cost links in a routing environment to increase link redundancy and scale bandwidth

- **OSPFv3 MCE**

  Multi-VPN-Instance CE (MCE) binds different VPNs to different interfaces on one single CE; the OSPFv3 MCE feature creates and maintains separate OSPFv3 routing tables for each IPv6 VPN to isolate VPN services in the device

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

- **User Datagram Protocol (UDP) helper**

  Redirects UDP broadcasts to specific IP subnets to prevent server spoofing

- **Domain Name System (DNS)**

  Provides a distributed database that translates domain names and IP addresses, which simplifies network design; supports client and server

- **Dynamic Host Configuration Protocol (DHCP)**

  Simplifies the management of large IP networks

Security

- **Auto Discover VPN (ADVPN)**

Standard Features

Collects, maintains, and distributes dynamic public addresses through the VPN Address Management (VAM) protocol, making VPN establishment available between enterprise branches that use dynamic addresses to access the public network; compared to traditional VPN technologies, ADVPN technology is more flexible and has richer features, such as NAT traversal of ADVPN packets, AAA identity authentication, IPSec protection of data packets, and multiple VPN domains

- **Group Domain Virtual Private Network (GDVPN)**

Is a tunnel-less VPN technology that allows for native end-to-end security for a full meshed network; is suitable for an enterprise running encryption over a private Multiprotocol Label Switching (MPLS)/IP-based core network, as well as for encrypting multicast traffic

- **Stateful VPN firewall**

Provides enhanced stateful packet inspection and filtering; supports flexible security zones and virtual firewall containment; delivers advanced VPN services with Triple DES (3DES) and Advanced Encryption Standard (AES) encryption at high performance and low latency; allows for application prioritization and enhancement

- **Access control list (ACL)**

Supports powerful ACLs for both IPv4 and IPv6; ACLs are used for filtering traffic to prevent unauthorized users from accessing the network, or for controlling network traffic to save resources; rules can either deny or permit traffic to be forwarded; rules can be based on a Layer 2 header or a Layer 3 protocol header; rules can be set to operate on specific dates or times

- **Unicast Reverse Path Forwarding (URPF)**

Allows normal packets to be forwarded correctly, but discards the attaching packet due to lack of reverse path route or incorrect inbound interface; prevents source spoofing and distributed attacks; supports distributed UFPF

- **Secure shell (SSHv2)**

Uses external servers to securely log in to a remote device; with authentication and encryption, it protects against IP spoofing and plain-text password interception; increases the security of Secure FTP (SFTP) transfers

- **Remote Authentication Dial-In User Service (RADIUS)**

Eases switch security access administration by using a password authentication server

- **Terminal Access Controller Access-Control System (TACACS+)**

Is an authentication tool using TCP with encryption of the full authentication request, which provides additional security

- **Network address translation (NAT)**

Supports repeated multiplexing of a port and automatic 5-tuple collision detection, enabling NAPT to support unlimited connections; supports deny list in NAT/NAPT/internal server, a limit on the number of connections, session log, and multi-instance

Quality of Service (QoS)

- **HQoS/Nested QoS**

Allows for precise and flexible traffic classification and scheduling

- **Traffic policing**

Supports Committed Access Rate (CAR) and line rate

- **Congestion management**

Supports FIFO, PQ, CQ, WFQ, CBQ, and RTPQ

- **Congestion avoidance**

Weighted Random Early Detection (WRED)/Random Early Detection (RED)

- **Other QoS technologies**

Support traffic shaping, FR QoS, MPLS QoS, and MP QoS/LFI

Management

- **Industry-standard CLI with a hierarchical structure**

Standard Features

Reduces training time and expenses, and increases productivity in multivendor installations

- **SNMPv1, v2, and v3**

  Provide complete support of SNMP; provide full support of industry-standard Management Information Base (MIB) plus private extensions; SNMPv3 supports increased security using encryption; provide alerts (via SNMP, logging, and/or SMTP) for system health and blocking/filtering actions

- **Management interface control**

  Enables or disables each of the following interfaces depending on security preferences: console port, Telnet port, or reset button

- **Remote monitoring (RMON)**

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

- **Management security**

  Restricts access to critical configuration commands; offers multiple privilege levels with password protection; ACLs provide Telnet and SNMP access; local and remote syslog capabilities allow logging of all access

- **FTP, TFTP, and SFTP support**

  FTP allows bidirectional transfers over a TCP/IP network and is used for configuration updates; Trivial FTP is a simpler method using User Datagram Protocol (UDP)

- **Debug and sampler utility**

  Supports ping and traceroute for both IPv4 and IPv6

- **Network Quality Analyzer (NQA)**

  Analyzes network performance and service quality by sending test packets, and provides network performance and service quality parameters such as jitter, TCP, or FTP connection delays and file transfer rates; allows a network manager to determine overall network performance and to diagnose and locate network congestion points or failures

- **Network Time Protocol (NTP)**

  Synchronizes timekeeping among distributed time servers and clients; keeps timekeeping consistent among all clock-dependent devices within the network so that the devices can provide diverse applications based on the consistent time

- **Info center**

  Provides a central information center for system and network information; aggregates all logs, traps, and debugging information generated by the system and maintains them in order of severity; outputs the network information to multiple channels based on user-defined rules

- **RFC3164 Syslog Support**

Standard Features

Multicast Support

- **Internet Group Management Protocol (IGMP)**
  Is used by IP hosts to establish and maintain multicast groups; supports v1, v2, and v3; utilizes Any-Source Multicast (ASM) or Source-Specific Multicast (SSM) to manage IPv4 multicast networks
- **Protocol Independent Multicast (PIM)**
  Is used for IPv4 and IPv6 multicast applications; supports PIM Dense Mode (PIM-DM), Sparse Mode (PIM-SM), and Source-Specific Mode (PIM-SSM)
- **Multicast Source Discovery Protocol (MSDP)**
  Is used for interdomain multicast applications, allowing multiple PIM-SM domains to interoperate
- **Multicast Border Gateway Protocol (MBGP)**
  Allows multicast traffic to be forwarded across BGP networks separately from unicast traffic

Additional Information

- **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

Warranty and Support

- **1-year warranty:** See **hpe.com/networking/warrantysummary** for warranty and support information included with your product purchase.
- **Software releases:** To find software for your product, refer to **hpe.com/networking/support**; for details on the software releases available with your product purchase, refer to **hpe.com/networking/warrantysummary.**

Configuration Information

Build To Order: BTO is a standalone unit with no integration. BTO products ship standalone are not part of a CTO or Rack-Shippable solution.

BTO Models

Rule #	Description	SKU
	HPE FlexNetwork HSR6802 Router Chassis	JG361B

- 2 SAP slots or 4 HIM slots or 8 MIM slots, or a combination
- 2 MPU (for management modules) slots
- Must select min 1 MPU
- Must select min 1 Power Supply
- 5U - Height

	HPE FlexNetwork HSR6804 Router Chassis	JG362B

- 4 SAP slots or 8 HIM slots or 16 MIM slots, or a combination
- 2 MPU (for management modules) slots
- Must select min 1 MPU
- Must select min 1 Power Supply
- 7U - Height

	HPE FlexNetwork HSR6808 Router Chassis	JG363B

- 8 SAP slots or 16 HIM slots or 32 MIM slots, or a combination
- 2 MPU (for management modules) slots
- 1 switch fabric slot
- Must select min 1 MPU
- Must select min 2 Power Supply
- 20U - Height

Rack Level Integration CTO Models

Rule #	Description	SKU
Notes:	If HPE CTO Router Chassis is selected to be Rack Level Integration, Then the Router Chassis needs to integrate (with #0D1) to the HPE Universal Rack.	
	HPE FlexNetwork HSR6802 Router Chassis	JG361B

- 2 SAP slots or 4 HIM slots or 8 MIM slots, or a combination
- 2 MPU (for management modules) slots
- Must select min 1 MPU
- Must select min 1 Power Supply
- 5U - Height

	HPE FlexNetwork HSR6804 Router Chassis	JG362B

- 4 SAP slots or 8 HIM slots or 16 MIM slots, or a combination
- 2 MPU (for management modules) slots
- Must select min 1 MPU
- Must select min 1 Power Supply
- 7U - Height

	HPE FlexNetwork HSR6808 Router Chassis	JG363B

- 8 SAP slots or 16 HIM slots or 32 MIM slots, or a combination
- 2 MPU (for management modules) slots
- 1 switch fabric slot
- Must select min 1 MPU
- Must select min 2 Power Supply
- 20U - Height

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

Configuration Information

Modules

Management Module

System (std 0 // max 2) User Selection (min 1 // max 2)

Rule #	Description	SKU
1, 5	HPE FlexNetwork HSR6800 RSE-X3 Router Main Processing Unit	JH075A
	• 2 - 2GB DDR3 SDRAM Included (JG482A)	
	• 2 CF Memory slots: (Min 0 // Max 1)	
	• Supports up to 4095 VRF instances and 4000 multicast routes	
	HPE HSR6800 RSE-X3 Router MPU	JH075A#A59

Configuration Rules

1	If this product is ordered for delivery to Russia, it must be ordered with the A59 option (also allowed for other countries desiring Low Encryption), then #A59 is the required option for BTO, and must be added in addition to #0D1 for CTO.
5	The following Service Modules (SAP) and Flexible Interface Platform (FIP) Modules are supported with this MPU in all Router Chassis for ComwareV7:

Description	SKU
HPE HSR6800 FIP-260 Flex Interface Platform Module	JM049A
HPE HSR6800 FIP-380 Flex Interface Platform Module	JM050A

Switching Fabric Engine (SFE), Flexible Interface Platform (FIP) and Service Modules (SAP)

(JG361B Router Only) System (std 0 // max 2) User Selection (min 0 // max 2) per router

(JG362B Router Only) System (std 0 // max 4) User Selection (min 0 // max 4) per router

(JG363B Router Only) System (std 0 // max 8) User Selection (min 0 // max 8) per router

Rule #	Description	SKU
10	HPE HSR6800 FIP-260 Flex Interface Platform Module	JM049A
	• Min=0 \ max=4 MIC-X slots	
	• 4GB DDR4 Memory Included	
10	HPE HSR6800 FIP-380 Flex Interface Platform Module	JM050A
	• 2 10GBASE-R-SFP+ ports	
	• 14 1000BASE-X-SFP ports	
	• 8 100/1000BASE-T ports	
	• Min=0 \ max=2 MIC-X slots	
	• 8GB DDR4 Memory Included	

Configuration Rules

2	The following Transceivers install into this Service Module: (Use #0D1 if router is CTO) - if applicable	
	HPE X120 1G SFP LC SX Transceiver	JD118B
	HPE X120 1G SFP LC LX Transceiver	JD119B
	HPE X120 1G SFP LC LH100 Transceiver	JD103A
	HPE X120 1G SFP LC BX 10-U Transceiver	JD098B
	HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
	HPE X115 100M SFP LC FX Transceiver	JD102B
	HPE X110 100M SFP LC LX Transceiver	JD120B
	HPE X115 100M SFP LC BX 10-U Transceiver	JD100A

Configuration Information

	HPE X115 100M SFP LC BX 10-D Transceiver	JD101A
	HPE X120 1G SFP RJ45 T Transceiver	JD089B
9	The following Modules installs into this Service Engine Module: Max = 2 full-height or 4 half-height (Use #0D1 if router is CTO) - if applicable	
	HPE FlexNetwork HSR6800 1-port Clear Channel T3 MIM Module	JH663A
10	The following Modules only installs into this Service Engine Module: Max = 2 full-height or 4 half-height (Use #0D1 if router is CTO) - if applicable	
	HPE HSR6800 4-Port 10GbE SFP+ MIC-X Module	JM047A
	HPE HSR6800 8-Port OC-3c/STM-1c POS MIC-X Module	JM048A
	HPE FlexNetwork HSR6800 10p GbE SFP MIC-X Module	R8V36A
	HPE FlexNetwork HSR6800 2p 10GbE SFP+ MIC-X Module	R8V37A

MIM and MIC-X router Modules

System (std 0 // max 2 or 4) User Selection (min 0 // max 2 or 4) per Service Module
(See Service Modules for Port information)

Rule #	Description	SKU
2, 4	HPE HSR6800 4-Port 10GbE SFP+ MIC-X Module	JM047A
	• min=0 \ max=4 SFP/SFP+	
2	HPE HSR6800 8-Port OC-3c/STM-1c POS MIC-X Module	JM048A
	• min=0 \ max=8 SFP	
	HPE FlexNetwork HSR6800 10p GbE SFP MIC-X Module	R8V36A
	• min=0 \ max=10 SFP	
	HPE FlexNetwork HSR6800 2p 10GbE SFP+ MIC-X Module	R8V37A
	• min=0 \ max=2 SFP/SFP+	

Configuration Rules

Rule #	Description	SKU
2	The following Transceivers install into this Module: (Use #0D1 if router is CTO) - if applicable	
	HPE X120 1G SFP RJ45 T Transceiver	JD089B
	HPE X120 1G SFP LC SX Transceiver	JD118B
	HPE X120 1G SFP LC LX Transceiver	JD119B
	HPE X120 1G SFP LC LH100 Transceiver	JD103A
	HPE X120 1G SFP LC BX 10-U Transceiver	JD098B
	HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
	HPE X115 100M SFP LC BX 10-U Transceiver	JD100A
	HPE X115 100M SFP LC BX 10-D Transceiver	JD101A
	HPE X115 100M SFP LC FX Transceiver	JD102B
	HPE X110 100M SFP LC LX Transceiver	JD120B
4	The following Transceivers install into this Module: (Use #0D1 if router is CTO) - if applicable	
	HPE X130 10G SFP+ LC SR Transceiver	JD092B
	HPE X130 10G SFP+ LC LR Transceiver	JD094B
	HPE X130 10G SFP+ LC ER 40km Transceiver	JG234A
10	The following E3/T3 Cable and Connector install into this Module:	
	HPE FlexNetwork X260 T3/E3 Router Cable	JD531A
15	Available in Korea only	

Transceivers

Configuration Information

Remarks	Description	SKU
	SFP Transceivers	
	HPE X110 100M SFP LC LX Transceiver	JD120B
	HPE X115 100M SFP LC BX 10-U Transceiver	JD100A
	HPE X115 100M SFP LC BX 10-D Transceiver	JD101A
	HPE X115 100M SFP LC FX Transceiver	JD102B
	HPE X120 1G SFP LC LH100 Transceiver	JD103A
	HPE X120 1G SFP LC SX Transceiver	JD118B
	HPE X120 1G SFP LC LX Transceiver	JD119B
	HPE X120 1G SFP RJ45 T Transceiver	JD089B
	HPE X120 1G SFP LC BX 10-U Transceiver	JD098B
	HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
	SFP+ Transceivers	
	HPE X130 10G SFP+ LC SR Transceiver	JD092B
	HPE X130 10G SFP+ LC LR Transceiver	JD094B
	HPE X130 10G SFP+ LC ER 40km Transceiver	JG234A
	Internal Power Supplies	
	(JG361B and JG352B Only) - System (std 0 // max 2) User Selection (min 1 // max 2) per router	
	(JG363B Only) System (std 0 // max 4) User Selection (min 2 // max 4) per router	
	HPE FlexNetwork HSR6800 1200W AC Power Supply	JG335A

Notes: If more than 1 power supply is selected they, must all be the same SKU number.

Localization required on orders without #B2B, #B2C or #B2E options.

If #B2E is selected Then replace Localized option with #B2E for power supply.

(Offered only in NA, Mexico, Taiwan and Japan)
- includes 1 x c19, 1800w

	HPE FlexNetwork HSR6800 1200W AC Power Supply PDU Cable NA/JP/TW	JG335A#B2B

- C19 PDU Jumper Cord (NA/MEX/TW/JP)

	HPE FlexNetwork HSR6800 1200W AC Power Supply PDU Cable ROW	JG335A#B2C

- C19 PDU Jumper Cord (ROW)

	HPE FlexNetwork HSR6800 1200W AC Power Supply 220V N.A. - english localized	JG335A#B2E

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

	HPE HSR6800 1200W AC Power Supply	JG335A#AC3

- No Localized Power Cord Selected

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. (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)

Configuration Information

Cables

Remarks	Description	SKU
	HPE FlexNetwork X200 V.24 DTE 3m Serial Port Cable	JD519A
	HPE FlexNetwork X200 V.24 DCE 3m Serial Port Cable	JD521A
	HPE FlexNetwork X200 V.35 DTE 3m Serial Port Cable	JD523A
	HPE FlexNetwork X200 V.35 DCE 3m Serial Port Cable	JD525A
	HPE FlexNetwork X260 E1 RJ45 BNC 75-120 ohm Conversion Router Cable	JD511A
	HPE FlexNetwork X260 T3/E3 Router Cable	JD531A

Notes: The following cable is used for RJ45 BNC Conversion JD511A - HPE FlexNetwork X260 E1 RJ45 BNC 75-120 ohm Conversion Router Cable

Router Enclosure Options

Compact Flash cards

Description	SKU
HPE X600 1G Compact Flash Card	JC684A

Notes: Supported in JH075A - HPE FlexNetwork HSR6800 RSE-X3 Router Main Processing Unit,JG364A - HPE FlexNetwork HSR6800 RSE-X2 Router Main Processing Unit

Technical Specifications

HPE FlexNetwork HSR6802 Router Chassis (JG361B)		
I/O ports and slots	2 SAP slots, or 4 HIM slots, or 8 MIM slots, or a combination	
Additional ports and slots	2 MPU slots	
Physical characteristics	**Dimensions**	17.17(w) x 18.9(d) x 8.66(h) in (43.6 x 48 x 22 cm) (5U height)
	Weight	50.15 lb (22.75 kg)
Mounting and enclosure	EIA-standard 19 in. rack	
Performance	**Throughput**	up to 120 Mpps
	Routing table size	4000000 entries (IPv4), 2000000 entries (IPv6)
	Forwarding table size	1000000 entries (IPv4), 1000000 entries (IPv6)
	Backplane bandwidth	1024 Gbps
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	5% to 95%
	Altitude	up to 13,123 ft (4 km)
Electrical characteristics	**Voltage**	100 - 240 VAC, rated -48 to -60 VDC, rated (depending on power supply chosen)
	Maximum power rating	521 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.
Safety	UL 60950-1; CAN/CSA 22.2 No. 60950-1; AS/NZS 60950; IEC 60950-1; FDA 21 CFR Subchapter J; EN60825-2:2004+A1:2007	
Emissions	EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 301 489-1; EN 301 489-17; ICES-003 Class A; CISPR 24; EN 61000-6-1; AS/NZS CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; FCC (CFR 47, Part 15) Class A; KN22 Class A; VCCI-3 CLASS A; VCCI-4 CLASS A; ETSI EN 300 386	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3; KN24
	EN	EN 55024, CISPR 24
Management	Command-line interface; Out-of-band management; SNMP manager; Telnet; RMON1; Terminal interface (serial RS-232c); Ethernet interface mib	
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 HSR6804 Router Chassis (JG362B)

I/O ports and slots	4 SAP slots, or 8 HIM slots, or 16 MIM slots, or a combination	
Additional ports and slots	2 MPU slots	
Physical characteristics	**Dimensions**	17.17(w) x 18.98(d) x 12.13(h) in (43.6 x 48.2 x 30.8 cm) (7U height)
	Weight	56.22 lb (25.5 kg)
Mounting and enclosure	EIA standard 19 in. rack	
Performance	**Throughput**	up to 240 Mpps
	Routing table size	4000000 entries (IPv4), 2000000 entries (IPv6)
	Forwarding table size	1000000 entries (IPv4), 1000000 entries (IPv6)
	Backplane bandwidth	1024 Gbps
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	5% to 95%
	Altitude	up to 13,123 ft (4 km)
Electrical characteristics	**Voltage**	100 - 240 VAC, rated -48 to -60 VDC, rated (depending on power supply chosen)
	Maximum power rating	851 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.
Safety	UL 60950-1; CAN/CSA 22.2 No. 60950-1; AS/NZS 60950; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; GB 4943	
Emissions	EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 301 489-1; EN 301 489-17; ICES-003 Class A; CISPR 24; EN 61000-6-1; AS/NZS CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; FCC (CFR 47, Part 15) Class A; KN22 Class A; VCCI-3 CLASS A; VCCI-4 CLASS A; ETSI EN 300 386	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3; KN24
	EN	EN 55024, CISPR 24
Management	Command-line interface; Out-of-band management; SNMP manager; Telnet; RMON1; Terminal interface (serial RS-232c); Ethernet interface mib	
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 HSR6808 Router Chassis (JG363B)		
I/O ports and slots	8 SAP slots, or 16 HIM slots, or 32 MIM slots, or a combination	
Additional ports and slots	2 MPU slots 1 switch fabric slot	
Physical characteristics	**Dimensions**	17.17(w) x 20.08(d) x 34.88(h) in (43.6 x 51.0 x 88.6 cm) (20U height)
	Weight	118.17 lb (53.6 kg)
Mounting and enclosure	EIA standard 19 in. rack	
Performance	**Throughput**	up to 420 Mpps
	Routing table size	4000000 entries (IPv4), 2000000 entries (IPv6)
	Forwarding table size	1000000 entries (IPv4), 1000000 entries (IPv6)
	Backplane bandwidth	2048 Gbps
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	5% to 95%
	Altitude	up to 13,123 ft (4 km)
Electrical characteristics	**Voltage**	100 - 240 VAC, rated -48 to -60 VDC, rated (depending on power supply chosen)
	Maximum power rating	1816 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.
Safety	UL 60950-1; CAN/CSA 22.2 No. 60950-1; AS/NZS 60950; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; GB 4943	
Emissions	EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 301 489-1; EN 301 489-17; ICES-003 Class A; CISPR 24; EN 61000-6-1; AS/NZS CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; FCC (CFR 47, Part 15) Class A; KN22 Class A; VCCI-3 CLASS A; VCCI-4 CLASS A; ETSI EN 300 386	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3; KN24
	EN	EN 55024, CISPR 24
Management	Command-line interface; Out-of-band management; SNMP manager; Telnet; RMON1; Terminal interface (serial RS-232c); Ethernet interface mib	
Notes:	Switch fabric is optional • When a switch fabric is used, I/O slot capacity is reduced to 7 SAP, or 14 HIM, or 28 MIM slots, or a combination.	
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

Standards and protocols
Applies to all products in series

BGP

- RFC 1267 Border Gateway Protocol 3 (BGP-3)
- RFC 1657 Definitions of Managed Objects for BGPv4
- RFC 1771 BGPv4
- RFC 1772 Application of the BGP
- RFC 1773 Experience with the BGP-4 Protocol
- RFC 1774 BGP-4 Protocol Analysis
- RFC 1997 BGP Communities Attribute
- RFC 1998 An Application of the BGP Community Attribute in Multi-home Routing
- RFC 2385 BGP Session Protection via TCP MD5
- RFC 2439 BGP Route Flap Damping
- RFC 2796 BGP Route Reflection
- RFC 2842 Capability Advertisement with BGP-4
- RFC 2858 BGP-4 Multi-Protocol Extensions
- RFC 2918 Route Refresh Capability

Denial of service protection

- CPU DoS Protection
- Rate Limiting by ACLs

Device management

- RFC 1155 Structure and Mgmt Information (SMIv1)
- RFC 1157 SNMPv1/v2c
- RFC 1305 NTPv3
- RFC 1901 (Community based SNMPv2)
- RFC 1901-1907 SNMPv2c, SMIv2 and Revised MIB-II
- RFC 1902 (SNMPv2)
- RFC 1908 (SNMP v1/2 Coexistence)
- RFC 1945 Hypertext Transfer Protocol -- HTTP/1.0
- RFC 2068 Hypertext Transfer Protocol -- HTTP/1.1
- RFC 2271 FrameWork
- RFC 2452 MIB for TCP6
- RFC 2454 MIB for UDP6
- RFC 2573 (SNMPv3 Applications)
- RFC 2576 (Coexistence between SNMP V1, V2, V3)
- RFC 2578-2580 SMIv2
- RFC 2579 (SMIv2 Text Conventions)
- RFC 2580 (SMIv2 Conformance)
- RFC 2819 (RMON groups Alarm, Event, History and
- Statistics only)
- RFC 2819 RMON
- RFC 3410 (Management Framework)
- RFC 3416 (SNMP Protocol Operations v2)
- RFC 3417 (SNMP Transport Mappings)
- Multiple Configuration Files
- Multiple Software Images
- SNMP v3 and RMON RFC support

Technical Specifications

- SSHv1/SSHv2 Secure Shell
- TACACS/TACACS+

General protocols

- IEIEEE 802.1ad Q-in-Q
- IEEE 802.1ag Service Layer OAM
- IEEE 802.1ah Provider Backbone Bridges
- 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 (MSTP)
- 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 802.3ag Ethernet OAM
- IEEE 802.3ah Ethernet in First Mile over Point to Point Fiber - EFMF
- 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 856 TELNET
- RFC 0857 Telnet Echo Option
- RFC 858 Telnet Suppress Go Ahead Option
- RFC 894 IP over Ethernet
- RFC 896 Congestion Control in IP/TCP Internetworks
- RFC 906 TFTP Bootstrap
- RFC 925 Multi-LAN Address Resolution
- RFC 950 Internet Standard Subnetting Procedure
- RFC 951 BOOTP
- RFC 959 File Transfer Protocol (FTP)
- RFC 1006 ISO transport services on top of the TCP: Version 3
- RFC 1027 Proxy ARP
- RFC 1034 Domain Concepts and Facilities
- RFC 1035 Domain Implementation and Specification
- RFC 1042 IP Datagrams

Technical Specifications

- RFC 1058 RIPv1
- RFC 1071 Computing the Internet Checksum
- RFC 1091 Telnet Terminal-Type Option
- RFC 1093 NSFNET routing architecture
- RFC 1122 Host Requirements
- RFC 1141 Incremental updating of the Internet
- Checksum
- RFC 1142 OSI IS-IS Intra-domain Routing Protocol
- RFC 1144 Compressing TCP/IP headers for low-speed serial links
- RFC 1171 Point-to-Point Protocol for the transmission of multi-protocol datagrams over Point-to-Point links
- RFC 1191 Path MTU discovery
- RFC 1195 OSI ISIS for IP and Dual Environments
- RFC 1213 Management Information Base for Network Management of TCP/IP-based internets
- RFC 1253 (OSPF v2)
- RFC 1256 ICMP Router Discovery Protocol (IRDP)
- RFC 1305 NTPv3
- RFC 1315 Management Information Base for Frame Relay DTEs
- RFC 1321 The MD5 Message-Digest Algorithm
- RFC 1332 The PPP Internet Protocol Control Protocol (IPCP)
- RFC 1333 PPP Link Quality Monitoring
- RFC 1334 PPP Authentication Protocols (PAP)
- RFC 1349 Type of Service
- RFC 1350 TFTP Protocol (revision 2)
- RFC 1377 The PPP OSI Network Layer Control Protocol (OSINLCP)
- RFC 1381 SNMP MIB Extension for X.25 LAPB
- RFC 1382 SNMP MIB Extension for the X.25 Packet Layer
- RFC 1389 RIPv2 MIB Extension
- RFC 1471 The Definitions of Managed Objects for the
- Link Control Protocol of the Point-to-Point Protocol
- RFC 1472 The Definitions of Managed Objects for the Security Protocols of the Point-to-Point Protocol
- RFC 1490 Multiprotocol Interconnect over Frame Relay
- RFC 1519 CIDR
- RFC 1531 Dynamic Host Configuration Protocol
- RFC 1533 DHCP Options and BOOTP Vendor Extensions
- RFC 1534 DHCP/BOOTP Interoperation
- RFC 1541 DHCP
- RFC 1542 BOOTP Extensions
- RFC 1542 Clarifications and Extensions for the Bootstrap Protocol
- RFC 1552 The PPP Internetworking Packet Exchange Control Protocol (IPXCP)
- RFC 1577 Classical IP and ARP over ATM
- RFC 1631 NAT
- RFC 1638 PPP Bridging Control Protocol (BCP)
- RFC 1661 The Point-to-Point Protocol (PPP)
- RFC 1662 PPP in HDLC-like Framing
- RFC 1695 Definitions of Managed Objects for ATM Management Version 8.0 using SMIv2
- RFC 1700 Assigned Numbers
- RFC 1701 Generic Routing Encapsulation
- RFC 1702 Generic Routing Encapsulation over IPv4 networks
- RFC 1721 RIP-2 Analysis
- RFC 1722 RIP-2 Applicability
- RFC 1723 RIP v2
- RFC 1812 IPv4 Routing
- RFC 1829 The ESP DES-CBC Transform

Technical Specifications

- RFC 1877 PPP Internet Protocol Control Protocol Extensions for Name Server Addresses
- RFC 1944 Benchmarking Methodology for Network Interconnect Devices
- RFC 1945 Hypertext Transfer Protocol -- HTTP/1.0
- RFC 1973 PPP in Frame Relay
- RFC 1974 PPP Stac LZS Compression Protocol
- RFC 1981 Path MTU Discovery for IP version 6
- RFC 1990 The PPP Multilink Protocol (MP)
- RFC 1994 PPP Challenge Handshake Authentication Protocol (CHAP)
- RFC 2082 RIP-2 MD5 Authentication
- RFC 2091 Trigger RIP
- RFC 2104 HMAC: Keyed-Hashing for Message
- Authentication
- RFC 2131 DHCP
- RFC 2132 DHCP Options and BOOTP Vendor Extensions
- RFC 2138 Remote Authentication Dial In User Service (RADIUS)
- RFC 2205 Resource ReSerVation Protocol (RSVP) - Version 1 Functional Specification
- RFC 2209 Resource ReSerVation Protocol (RSVP) -- Version 1 Message Processing Rules
- RFC 2236 IGMP Snooping
- RFC 2246 The TLS Protocol Version 1.0
- RFC 2252 Lightweight Directory Access Protocol (v3): Attribute Syntax Definitions
- RFC 2280 Routing Policy Specification Language (RPSL)
- RFC 2283 MBGP
- RFC 2284 EAP over LAN
- RFC 2338 VRRP
- RFC 2364 PPP Over AAL5
- RFC 2374 An Aggregatable Global Unicast Address Format
- RFC 2451 The ESP CBC-Mode Cipher Algorithms
- RFC 2453 RIPv2
- RFC 2510 Internet X.509 Public Key Infrastructure
- Certificate Management Protocols
- RFC 2511 Internet X.509 Certificate Request Message Format
- RFC 2516 A Method for Transmitting PPP Over Ethernet (PPPoE)
- RFC 2529 Transmission of IPv6 over IPv4 Domains without Explicit Tunnels
- RFC 2581 TCP Congestion Control
- RFC 2616 HTTP Compatibility v1.1
- RFC 2622 Routing Policy Specification Language (RPSL)
- RFC 2644 Directed Broadcast Control
- RFC 2661 L2TP
- RFC 2663 NAT Terminology and Considerations
- RFC 2684 Multiprotocol Encapsulation over ATM Adaptation Layer 5
- RFC 2694 DNS extensions to Network Address
- Translators (DNS_ALG)
- RFC 2702 Requirements for Traffic Engineering Over MPLS
- RFC 2716 PPP EAP TLS Authentication Protocol
- RFC 2747 RSVP Cryptographic Authentication
- RFC 2763 Dynamic Name-to-System ID mapping
- RFC 2765 Stateless IP/ICMP Translation Algorithm (SIIT)
- RFC 2766 Network Address Translation - Protocol
- Translation (NAT-PT)
- RFC 2767 Dual Stacks IPv4 & IPv6
- RFC 2784 Generic Routing Encapsulation (GRE)
- RFC 2787 Definitions of Managed Objects for VRRP
- RFC 2865 Remote Authentication Dial In User Service (RADIUS)

Technical Specifications

- RFC 2866 RADIUS Accounting
- RFC 2868 RADIUS Attributes for Tunnel Protocol Support
- RFC 2869 RADIUS Extensions
- RFC 2878 PPP Bridging Control Protocol (BCP)
- RFC 2961 RSVP Refresh Overhead Reduction Extensions
- RFC 2966 Domain-wide Prefix Distribution with
- Two-Level IS-IS
- RFC 2973 IS-IS Mesh Groups
- RFC 2976 The SIP INFO Method
- RFC 3022 Traditional IP Network Address Translator (Traditional NAT)
- RFC 3027 Protocol Complications with the IP Network Address Translator
- RFC 3031 Multiprotocol Label Switching Architecture
- RFC 3032 MPLS Label Stack Encoding
- RFC 3036 LDP Specification
- RFC 3046 DHCP Relay Agent Information Option
- RFC 3063 MPLS Loop Prevention Mechanism
- RFC 3065 Support AS confederation
- RFC 3137 OSPF Stub Router Advertisement
- RFC 3209 RSVP-TE Extensions to RSVP for LSP Tunnels
- RFC 3210 Applicability Statement for Extensions to RSVP for LSP-Tunnels
- RFC 3212 Constraint-Based LSP setup using LDP (CR-LDP)
- RFC 3214 LSP Modification Using CR-LDP
- RFC 3215 LDP State Machine
- RFC 3246 Expedited Forwarding PHB
- RFC 3268 Advanced Encryption Standard (AES)
- Ciphersuites for Transport Layer Security (TLS)
- RFC 3277 IS-IS Transient Blackhole Avoidance
- RFC 3279 Algorithms and Identifiers for the Internet
- X.509 Public Key Infrastructure Certificate and
- Certificate Revocation List (CRL) Profile
- RFC 3280 Internet X.509 Public Key Infrastructure
- Certificate and Certificate Revocation List (CRL) Profile
- RFC 3392 Support BGP capabilities advertisement
- RFC 3410 Applicability Statements for SNMP
- RFC 3416 Protocol Operations for SNMP
- RFC 3417 Transport Mappings for the Simple Network
- Management Protocol (SNMP)
- RFC 3479 Fault Tolerance for the Label Distribution
- Protocol (LDP)
- RFC 3487 Graceful Restart Mechanism for LDP
- RFC 3509 OSPF ABR Behavior
- RFC 3526 More Modular Exponential (MODP)
- Diffie-Hellman groups for Internet Key Exchange (IKE)
- RFC 3564 Requirements for Support of Differentiated
- Services-aware MPLS Traffic Engineering
- RFC 3567 Intermediate System to Intermediate System
- (IS-IS) Cryptographic Authentication
- RFC 3602 The AES-CBC Cipher Algorithm and Its Use with IPsec
- RFC 3619 Ethernet Automatic Protection Switching (EAPS)
- RFC 3623 Graceful OSPF Restart
- RFC 3704 Unicast Reverse Path Forwarding (URPF)
- RFC 3706 A Traffic-Based Method of Detecting Dead Internet Key Exchange (IKE) Peers
- RFC 3768 Virtual Router Redundancy Protocol (VRRP)

Technical Specifications

- RFC 3784 ISIS TE support
- RFC 3786 Extending the Number of IS-IS LSP Fragments Beyond the 256 Limit
- RFC 3811 Definitions of Textual Conventions (TCs) for Multiprotocol Label Switching (MPLS) Management
- RFC 3812 Multiprotocol Label Switching (MPLS) Traffic Engineering (TE) Management Information Base (MIB)
- RFC 3847 Restart signaling for IS-IS
- RFC 4213 Basic IPv6 Transition Mechanisms

IP multicast

- RFC 1112 IGMP
- RFC 2236 IGMPv2
- RFC 2283 Multiprotocol Extensions for BGP-4
- RFC 2362 PIM Sparse Mode
- RFC 2934 Protocol Independent Multicast MIB for IPv4
- RFC 3376 IGMPv3
- RFC 3973 PIM Dense Mode
- RFC 4601 PIM Sparse Mode

IPv6

- RFC 1350 TFTP
- RFC 1881 IPv6 Address Allocation Management
- RFC 1886 DNS Extension for IPv6
- RFC 1887 IPv6 Unicast Address Allocation Architecture
- RFC 1981 IPv6 Path MTU Discovery
- RFC 2080 RIPng for IPv6
- RFC 2292 Advanced Sockets API for IPv6
- RFC 2373 IPv6 Addressing Architecture
- RFC 2375 IPv6 Multicast Address Assignments
- RFC 2460 IPv6 Specification
- RFC 2461 IPv6 Neighbor Discovery
- RFC 2462 IPv6 Stateless Address Auto-configuration
- RFC 2463 ICMPv6
- RFC 2464 Transmission of IPv6 over Ethernet Networks
- RFC 2472 IP Version 6 over PPP
- RFC 2473 Generic Packet Tunneling in IPv6
- RFC 2475 IPv6 DiffServ Architecture
- RFC 2529 Transmission of IPv6 Packets over IPv4
- RFC 2545 Use of MP-BGP-4 for IPv6
- RFC 2553 Basic Socket Interface Extensions for IPv6
- RFC 2710 Multicast Listener Discovery (MLD) for IPv6
- RFC 2711 IPv6 Router Alert Option
- RFC 2740 OSPFv3 for IPv6
- RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers
- RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)
- RFC 3056 Connection of IPv6 Domains via IPv4 Clouds
- 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 3363 DNS support
- RFC 3484 Default Address Selection for IPv6
- RFC 3493 Basic Socket Interface Extensions for IPv6

Technical Specifications

- RFC 3513 IPv6 Addressing Architecture
- RFC 3542 Advanced Sockets API for IPv6
- RFC 3587 IPv6 Global Unicast Address Format
- RFC 3596 DNS Extension for IPv6
- RFC 3810 MLDv2 (host joins only)
- RFC 3810 MLDv2 for IPv6
- RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6
- RFC 4022 MIB for TCP
- RFC 4113 MIB for UDP
- RFC 4251 SSHv6 Architecture
- RFC 4252 SSHv6 Authentication
- RFC 4252 SSHv6 Transport Layer
- RFC 4253 SSHv6 Transport Layer
- RFC 4254 SSHv6 Connection
- RFC 4291 IP Version 6 Addressing Architecture
- RFC 4293 MIB for IP
- RFC 4419 Key Exchange for SSH
- RFC 4443 ICMPv6
- RFC 4541 IGMP & MLD Snooping Switch
- RFC 4862 IPv6 Stateless Address Auto-configuration
- RFC 5095 Deprecation of Type 0 Routing Headers in IPv6
- RFC 5340 OSPF for IPv6
- RFC 5340 OSPFv3 for IPv6
- RFC 5722 Handling of Overlapping IPv6 Fragments

MIBs

- IEEE 8021-PAE-MIB
- IEEE 8023-LAG-MIB
- RFC 1156 (TCP/IP MIB)
- RFC 1212 Concise MIB Definitions
- RFC 1213 MIB II
- RFC 1229 Interface MIB Extensions
- RFC 1286 Bridge MIB
- RFC 1493 Bridge MIB
- RFC 1573 SNMP MIB II
- RFC 1643 Ethernet MIB
- RFC 1650 Ethernet-Like MIB
- RFC 1657 BGP-4 MIB
- RFC 1724 RIPv2 MIB
- RFC 1757 Remote Network Monitoring MIB
- RFC 1850 OSPFv2 MIB
- RFC 1907 SNMPv2 MIB
- RFC 2011 SNMPv2 MIB for IP
- RFC 2012 SNMPv2 MIB for TCP
- RFC 2013 SNMPv2 MIB for UDP
- RFC 2021 RMONv2 MIB
- RFC 2096 IP Forwarding Table MIB
- RFC 2233 Interface MIB
- RFC 2452 IPV6-TCP-MIB
- RFC 2454 IPV6-UDP-MIB
- RFC 2465 IPv6 MIB
- RFC 2466 ICMPv6 MIB

Technical Specifications

- RFC 2571 SNMP Framework MIB
- RFC 2572 SNMP-MPD MIB
- RFC 2574 SNMP USM MIB
- RFC 2618 RADIUS 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 2688 MAU-MIB
- RFC 2737 Entity MIB (Version 2)
- RFC 2787 VRRP MIB
- RFC 2819 RMON MIB
- RFC 2863 The Interfaces Group MIB
- RFC 2925 Ping MIB
- RFC 2932IP (Multicast Routing MIB)
- RFC 2933 IGMP MIB
- RFC 3273 HC-RMON MIB
- RFC 3414 SNMP-User based-SM MIB
- RFC 3415 SNMP-View based-ACM MIB
- RFC 3418 MIB for SNMPv3
- RFC 3813 MPLS LSR MIB
- RFC 3814 MPLS FTN MIB
- RFC 3815 MPLS LDP MIB
- RFC 3826 AES for SNMP's USM MIB
- RFC 4113 UDP MIB
- RFC 4133 Entity MIB (Version 3)
- RFC 4221 MPLS FTN MIB
- LLDP-EXT-DOT1-MIB
- LLDP-EXT-DOT3-MIB
- LLDP-MIB

Network management

- IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
- IEEE 802.1D (STP)
- RFC 1098 A Simple Network Management Protocol (SNMP)
- RFC 1155 Structure of Management Information
- RFC 1157 SNMPv1
- RFC 1215 SNMP Generic traps
- RFC 1757 RMON 4 groups: Stats, History, Alarms and Events
- RFC 1901 SNMPv2 Introduction
- RFC 1902 SNMPv2 Structure
- RFC 1903 SNMPv2 Textual Conventions
- RFC 1904 SNMPv2 Conformance
- RFC 1905 SNMPv2 Protocol Operations
- RFC 1906 SNMPv2 Transport Mappings
- RFC 1918 Private Internet Address Allocation
- RFC 2272 SNMPv3 Management Protocol
- RFC 2273 SNMPv3 Applications
- RFC 2274 USM for SNMPv3
- RFC 2275 VACM for SNMPv3
- RFC 2570 SNMPv3 Overview

Technical Specifications

- RFC 2571 SNMP Management Frameworks
- RFC 2572 SNMPv3 Message Processing
- RFC 2573 SNMPv3 Applications
- RFC 2574 SNMPv3 User-based Security Model (USM)
- RFC 2575 SNMPv3 View-based Access Control Model
- (VACM)
- RFC 2576 Coexistence between SNMP versions
- RFC 2578 SMIv2
- RFC 2819 Four groups of RMON: 1 (statistics), 2 (history),
- 3 (alarm) and 9 (events)
- RFC 2819 Remote Network Monitoring Management
- Information Base
- RFC 3164 BSD syslog Protocol
- RFC 3176 sFlow
- RFC 3411 SNMP Management Frameworks
- RFC 3412 SNMPv3 Message Processing
- RFC 3414 SNMPv3 User-based Security Model (USM)
- RFC 3415 SNMPv3 View-based Access Control Model VACM)
- ANSI/TIA-1057 LLDP Media Endpoint Discovery
- (LLDP-MED)
- SNMPv1/v2
- SNMPv1/v2c
- SNMPv1/v2c/v3

OSPF

- RFC 1246 Experience with OSPF
- RFC 1253 OSPFv2 MIB
- RFC 1583 OSPFv2
- RFC 1587 OSPF NSSA
- RFC 1745 OSPF Interactions
- RFC 1765 OSPF Database Overflow
- RFC 1850 OSPFv2 Management Information Base (MIB), traps
- RFC 2154 OSPF w/ Digital Signatures (Password, MD-5)
- RFC 2178 OSPFv2
- RFC 2328 OSPFv2
- RFC 2370 OSPF Opaque LSA Option
- RFC 3101 OSPF NSSA
- RFC 3623 Graceful OSPF Restart
- RFC 5340 OSPFv3 for IPv6

QoS/CoS

- IEEE 802.1p (CoS)
- RFC 2474 DiffServ Precedence, including 8 queues/port
- RFC 2474 DiffServ precedence, with 4 queues per port
- RFC 2474 DS Field in the IPv4 and IPv6 Headers
- RFC 2474 DSCP DiffServ
- RFC 2474, with 4 queues per port
- RFC 2475 DiffServ Architecture
- RFC 2597 DiffServ Assured Forwarding (AF)
- RFC 2597 DiffServ Assured Forwarding (AF)- partial support
- RFC 2598 DiffServ Expedited Forwarding (EF)

Technical Specifications

Security

- IEEE 802.1X Port Based Network Access Control
- RFC 1321 The MD5 Message-Digest Algorithm
- RFC 1334 PPP Authentication Protocols (PAP)
- RFC 1492 TACACS+
- RFC 1994 PPP Challenge Handshake Authentication Protocol (CHAP)
- RFC 2082 RIP-2 MD5 Authentication
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Accounting
- RFC 2209 RSVP-Message Processing
- RFC 2246 Transport Layer Security (TLS)
- RFC 2408 Internet Security Association and Key Management Protocol (ISAKMP)
- RFC 2409 The Internet Key Exchange (IKE)
- RFC 2459 Internet X.509 Public Key Infrastructure Certificate and CRL Profile
- RFC 2548 Microsoft Vendor-specific RADIUS Attributes
- RFC 2716 PPP EAP TLS Authentication Protocol
- RFC 2818 HTTP Over TLS
- RFC 2865 RADIUS (client only)
- RFC 2865 RADIUS Authentication
- RFC 2866 RADIUS Accounting
- RFC 2867 RADIUS Accounting Modifications for Tunnel Protocol Support
- RFC 2868 RADIUS Attributes for Tunnel Protocol Support
- RFC 2869 RADIUS Extensions
- RFC 3567 Intermediate System (IS) to IS Cryptographic Authentication
- RFC 3576 Dynamic Authorization Extensions to RADIUS
- RFC 3579 RADIUS Support For Extensible Authentication Protocol (EAP)
- RFC 3580 IEEE 802.1X Remote Authentication Dial In User Service (RADIUS) Usage Guidelines
- Access Control Lists (ACLs)
- Guest VLAN for 802.1X
- MAC Authentication
- Port Security
- Secure Sockets Layer (SSL)
- SSHv1 Secure Shell
- SSHv1.5 Secure Shell
- SSHv1/SSHv2 Secure Shell
- SSHv2 Secure Shell

VPN

- RFC 2403 - HMAC-MD5-96
- RFC 2404 - HMAC-SHA1-96
- RFC 2405 - DES-CBC Cipher algorithm
- RFC 2407 - Domain of interpretation
- RFC 2547 BGP/MPLS VPNs
- RFC 2764 A Framework for IP Based Virtual Private Networks
- RFC 2796 BGP Route Reflection - An Alternative to Full Mesh IBGP
- RFC 2842 Capabilities Advertisement with BGP-4
- RFC 2858 Multiprotocol Extensions for BGP-4
- RFC 2917 A Core MPLS IP VPN Architecture
- RFC 2918 Route Refresh Capability for BGP-4
- RFC 3107 Carrying Label Information in BGP-4
- RFC 4302 - IP Authentication Header (AH)

Technical Specifications

- RFC 4303 - IP Encapsulating Security Payload (ESP)
- RFC 4305 - Cryptographic Algorithm Implementation Requirements for ESP and AH

IPsec

- RFC 1828 IP Authentication using Keyed MD5
- RFC 2401 IP Security Architecture
- RFC 2402 IP Authentication Header
- RFC 2406 IP Encapsulating Security Payload
- RFC 2407 - Domain of interpretation
- RFC 2408 - Internet Security Association and Key Management Protocol (ISAKMP)
- RFC 2409 - The Internet Key Exchange
- RFC 2410 - The NULL Encryption Algorithm and its use with IPsec
- RFC 2411 IP Security Document Roadmap
- RFC 2412 - OAKLEY
- RFC 2865 - Remote Authentication Dial In User Service (RADIUS)

IKEv1

- RFC 2865 - Remote Authentication Dial In User Service (RADIUS)
- RFC 3748 - Extensible Authentication Protocol (EAP)

QuickSpecs

HPE FlexNetwork HSR6800 Router Series

Summary of Changes

Date	Version History	Action	Description of Change
04-Apr-2022	Version 27	Changed	Standard Features and Configuration Information sections were updated.
16-Aug-2021	Version 26	Changed	Configuration Information section was updated, obsolete SKUs were deleted.
04-May-2021	Version 25	Changed	Configuration Information section was updated.
18-Jan-2021	Version 24	Changed	Overview, Standard Features and Technical Specifications sections were updated.
12-Aug-2020	Version 23	Changed	SKU added: JM050A Configuration Information section was updated. Obsolete SKUs were removed
02-Dec-2019	Version 21	Changed	Overview and Configuration Information section were updated. Obsolete SKUs were removed
04-Dec-2017	Version 21	Changed	Configuration section updated
05-Jun-2017	Version 20	Changed	SKU added: JH663A Updates made on Features and benefits and Configuration sections
06-Feb-2017	Version 19	Changed	Adding MSR #A59 option on Configuration section
01-Aug-2016	Version 18	Changed	Adding #AC3 Option on Configuration section
27-May-2016	Version 17	Changed	Document name changed to HPE FlexNetwork HSR6800 Router Series. Product description updated.
25-Mar-2016	Version 16	Changed	Overview and Features and Benefits updated
22-Jun-2015	Version 15	Changed	Throughput on Technical Specifications updated
12-Jun-2015	Version 14	Changed	Configuration menu updated
01-Jun-2015	Version 13	Changes	Models added: JG361B, JG362B, JG363B Accessories added: JH075A, JH137A, JH138A, JH139A, JH142A, JH143A Models Removed: JG361A, JG362A, JG363A Overview, Technical Specifications updated
06-Apr-2015	Version 12	Changed	SKU JG673A added to Accessories Overview and Technical Specifications and SKU descriptions were updated
18-Sep-2014	Version 11	Changed	Changes made on Product architecture, Management in the Overview section.
03-Jul-2014	Version 10	Changed	Configuration menu updated.
10-Jun-2014	Version 9	Changed	Updated the Router Enclosure Options in the Configuration Information section.
18-Feb-2014	Version 8	Changed	Updated the Configuration Information section.
17-Feb-2014	Version 7	Changed	Updated the Configuration Information section.
31-Jan-2014	Version 6	Changed	Updated the Configuration Information section.
09-Dec-2013	Version 5	Changed	Box Level Integrated CTO Models, Rack Level Integration CTO Models, Internal Power Supplies, Modules, and Transceivers were revised in Configuration.

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Summary of Changes

11-Sep-2013	Version 4	Changed	Configuration was revised.
27-May-2013	Version 3	Changed	Updated the Configuration Information.
10-Apr-2013	Version 2	Changed	Updated the Configuration section.
01-Mar-2013	Version 1	New	New QuickSpecs

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