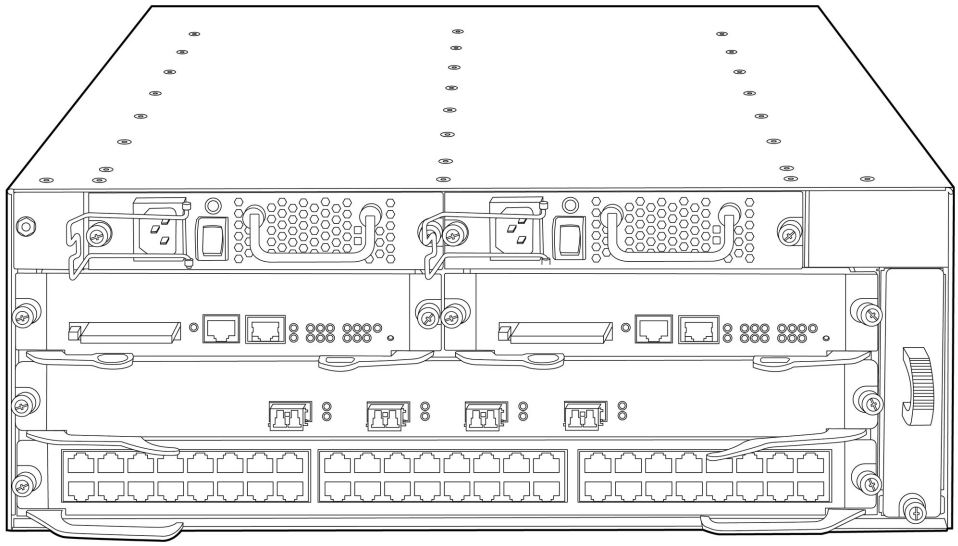
Overview

Product overview

The HP 7500 Switch Series comprises modular, multilayer chassis switches that meet the evolving needs of integrated services networks and can be deployed in multiple network environments, including the enterprise LAN core, aggregation layer, and wiring closet edge. The series switches offer 40 GbE connectivity and cost-effective, wire-speed 10-Gigabit Ethernet ports to safeguard the throughput and bandwidth needed for your mission-critical data and high-speed communications. A passive backplane, support for load sharing, and redundant management and fabrics help the series provide high availability. Moreover, these switches deliver wire-speed Layer 2 and Layer 3 routing services for the most demanding applications with hardware-based IPv4 and IPv6 support.



HP 7502 Switch Chassis

Key features

- Versatile, high-performance modular switches
- Enterprise LAN core, aggregation, and edge
- Extensive switching and routing, IPv6, MPLS
- Advanced functionality with service modules
- Robust network and service virtualization

Features and benefits

Quality of Service (QoS)

- **IEEE 802.1p prioritization**: delivers data to devices based on the priority and type of traffic
- **Class of Service** (CoS): sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ
- **Bandwidth shaping**:
  - **Port-based rate limiting**: provides per-port ingress-/egress-enforced increased bandwidth
  - **Classifier-based rate limiting**: uses an access control list (ACL) to enforce increased bandwidth for ingress traffic on each port

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  - **Reduced bandwidth**: provides per-port, per-queue egress-based reduced bandwidth
- **Weighted random early detection (WRED)/random early detection (RED)**: delivers congestion avoidance capabilities through the use of queue management algorithms
- **Powerful QoS feature**: supports the following congestion actions: strict priority (SP) queuing, weighted round robin (WRR), weighted fair queuing (WFQ), and WRED
- **Traffic policing**: supports Committed Access Rate (CAR) and line rate

Intrusion detection/prevention system (IDS/IPS)

- **Deep packet inspection**: module supports deep packet inspection and examines the packet payload as well as the frame and packet headers; packets are dropped if attacks or intrusions are detected using signature-based or protocol anomaly-based detection
- **Signature-based detection**: detects attacks that have known attack patterns; IPS maintains a signature database that contains the pattern definitions for known attacks that can be automatically updated using a subscription service
- **Protocol anomaly-based detection**: detects attacks that use anomalies in application protocol payloads
- **Severity-based action policies**: involve action taken against attacks based on their severity; available actions are "allow," "block," and "terminate connection" to provide appropriate mitigation
- **Signature update service**: provides regular updates to the signature database, helping to ensure that the latest available signatures are installed

Virtual private network (VPN)

- **IPSec**: provides secure tunneling over an untrusted network such as the Internet or a wireless network; offers data confidentiality, authenticity, and integrity between two network endpoints
- **Generic Routing Encapsulation** (GRE): transports Layer 2 connectivity over a Layer 3 path in a secured way; enables the segregation of traffic from site to site
- **Manual or automatic Internet Key Exchange** (IKE): provides both manual or automatic key exchange required for the algorithms used in encryption or authentication; auto-IKE allows automated management of the public key exchange, providing the highest levels of encryption

Management

- **Management interface control**: provides management access through a modem port and terminal interface, as well as in-band and out-of-band Ethernet ports; provides access through terminal interface, telnet, or secure shell (SSH)
- **Industry-standard CLI with a hierarchical structure**: reduces training time and expenses, and increases productivity in multivendor installations
- **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
- **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
- **Web management**: embedded HTML management tool with secure access (SSHv2)
- **sFlow** (RFC 3176): provides scalable ASIC-based wirespeed network monitoring and accounting with no impact on network performance; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes
- **Remote monitoring** (RMON): uses standard SNMP to monitor essential network functions; supports events, alarm, history, and statistics group plus a private alarm extension group
- **FTP, TFTP, and SFTP support**: offers different mechanisms for configuration updates; FTP allows bidirectional transfers over a TCP/IP network; trivial FTP (TFTP) is a simpler method using User Datagram Protocol (UDP); Secure File Transfer Protocol (SFTP) runs over an SSH tunnel to provide additional security
- **Debug and sampler utility**: supports ping and traceroute for both IPv4 and IPv6

Overview

- **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
- **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
- **IEEE 802.1AB Link Layer Discovery Protocol** (LLDP): advertises and receives management information from adjacent devices on a network, facilitating easy mapping by network management applications
- **Dual flash images**: provide independent primary and secondary operating system files for backup while upgrading
- **Multiple configuration files**: can be stored to the flash image

Connectivity

- **High-density port connectivity**: up to 10 interface module slots; up to 40 40-GbE ports, 84 10GbE ports, 480 Fiber Gigabit ports, or 480 PoE-enabled ports per HP 7500 series system
- **Jumbo frames**: up to 9216 bytes allow high-performance backups and disaster-recovery systems
- **Loopback**: supports internal loopback testing for maintenance purposes and an increase in availability; loopback detection protects against incorrect cabling or network configurations and can be enabled on a per-port or per-VLAN basis for added flexibility
- **Ethernet operations, administration and maintenance (OAM):** detects data link layer problems that occurred in the "last mile" using the IEEE 802.3ah OAM standard; monitors the status of the link between two devices
- **Flexible port selection**: includes 100/1000BASE-X auto speed selection, 10/100/1000BASE-T auto speed detection, plus auto duplex and MDI/MDI-X
- **Monitor link**: collects statistics on performance and errors on physical links, increasing system availability
- **IEEE 802.3af Power over Ethernet** (PoE): provides up to 15.4 W per port to IEEE 802.3af-compliant PoE-powered devices such as IP phones, wireless access points, and security cameras
- **Dual-personality functionality**: includes four 10/100/1000 ports or SFP slots for optional fiber connectivity such as Gigabit-SX, -LX, and -LH, or 100-FX
- **Packet storm protection**: protects against unknown broadcast, unknown multicast, or unicast storms with user-defined thresholds
- **Flow control**: provides back pressure using standard IEEE 802.3x, reducing congestion in heavy traffic situations
- **IEEE 802.3at Power over Ethernet** (PoE+) **support**: provides up to 30 watts of power at the power sourcing equipment (PSE)

Performance

- **High-speed fully distributed architecture**:
  - 2.4 Tbps backplane supports maximum 1152 Gbps switching capacity, providing enhanced performance and future expansion capability; with dual fabrics, the switch delivers up to 714 Mpps throughput
  - All switching and routing is performed in the I/O modules
  - Meets current and future demand of an enterprise's bandwidth-intensive applications
- **Scalable system design**: backplane is designed for bandwidth increases; provides investment protection to support future technologies and higher-speed connectivity
- **Flexible chassis selection**: enables customers to tailor their product selection to their budgets, with a choice of six chassis, ranging from a 10-slot to a 2-slot chassis

Resiliency and high availability

- **Redundant/Load-sharing fabrics, management, fan assemblies, and power supplies**: increase total performance and power available while providing hitless, stateful failover
- **All modules are hot-swappable**: allows replacement of modules without any impact on other modules

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- **Dual internal power supply**: provides high reliability
- **Separate data and control paths**: keep control separated from services and keep service processing isolated; increase security and performance
- **Passive design system**: backplane has no active components for increased system reliability
- **IEEE 802.3ad Link Aggregation Control Protocol** (LACP): supports up to 128 trunks, each with 8 links per trunk; supports static or dynamic groups and user-selectable hashing algorithm
- **Intelligent Resilient Framework** (IRF): creates virtual resilient switching fabrics, where two or more switches perform as a single L2 switch and L3 router; switches do not have to be co-located and can be part of a disaster-recovery system; servers or switches can be attached using standard LACP for automatic load balancing and high availability; can eliminate the need for complex protocols like Spanning Tree Protocol, Equal-Cost Multipath (ECMP), or VRRP, thereby simplifying network operation simplifies network operation by eliminating the complexity of Spanning Tree Protocol, Equal-Cost Multipath (ECMP), or VRRP
- **IRF capability**: provides single IP address management for a resilient virtual switching fabric of up to four switches
- **Rapid Ring Protection Protocol** (RRPP): provides standard sub-100 ms recovery for ring Ethernet-based topology
- **Virtual Router Redundancy Protocol** (VRRP): allows a group of routers to dynamically back each other up to create highly available routed environments
- **Hitless patch upgrades**: allow patches and new service features to be installed without restarting the equipment, increasing network uptime and facilitating maintenance
- **Graceful restart**: features 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)
- **Ultrafast protocol convergence with standards-based failure detection**—Bidirectional Forwarding Detection (BFD) enables link connectivity monitoring and reduces network convergence time for RIP, OSPF, BGP, IS-IS, VRRP, MPLS, and IRF
- **Smart link**: allows 50 ms failover between links
- **IP/LDP FRR**: nodes are configured with backup ports, routes, and LSPs; local implementation requires no cooperation of adjacent devices, simplifying the deployment; solves the traditional convergence faults in IP forwarding and MPLS forwarding, protecting the links, nodes, and paths without establishing respective backup LSPs for them; realizes restoration within 50 ms, with the restoration time independent of the number of routes and fast link switchovers, without route convergence

Layer 2 switching

- **VLAN**: supports up to 4,096 ports or IEEE 802.1Q-based VLANs; also supports MAC-based VLANs, protocol-based VLANs, and IP-subnet-based VLANs for added flexibility
- **Port isolation**: increases security by isolating ports within a VLAN while still allowing them to communicate with other VLANs
- **Bridge Protocol Data Unit** (BPDU) **tunneling**: transmits Spanning Tree Protocol BPDUs transparently, allowing correct tree calculations across service providers, WANs, or MANs
- **GARP VLAN Registration Protocol**: allows automatic learning and dynamic assignment of VLANs
- **Port mirroring**: duplicates port traffic (ingress and egress) to a local or remote monitoring port; supports four mirroring groups, with an unlimited number of ports per group
- **Spanning Tree Protocol (STP)**
  fully supports standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- **Internet Group Management Protocol** (IGMP) and Multicast Listener Discovery (MLD) protocol snooping: effectively control and manage the flooding of multicast packets in a Layer 2 network
- **Device Link Detection Protocol** (DLDP): monitors link connectivity and shuts down ports at both ends if unidirectional traffic is detected, preventing loops in STP-based networks
- **IEEE 802.1ad QinQ and Selective QinQ**: increase the scalability of an Ethernet network by providing a hierarchical structure; connect multiple LANs on a high-speed campus or metro network
- **Super VLAN**: RFC 3069 standard, also called VLAN aggregation, is used to save IP address space
- **Per-VLAN Spanning Tree Plus** (PVST+): allows each VLAN to build a separate spanning tree to improve link bandwidth usage in

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network environments where multiple VLANs exist

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
- **Dynamic Host Configuration Protocol** (DHCP): simplifies the management of large IP networks and supports client and server; DHCP Relay enables DHCP operation across subnets
- **Domain Name System** (DNS): provides a distributed database that translates domain names and IP addresses, which simplifies network design; supports client and server

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)**
  delivers faster convergence; uses this link-state routing Interior Gateway Protocol (IGP), which supports ECMP, NSSA, and MD5 authentication for increased security and graceful restart for faster failure recovery
- **Intermediate system to intermediate system** (IS-IS): uses a path vector Interior Gateway Protocol (IGP), 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)
- **Border Gateway Protocol 4** (BGP-4): delivers an implementation of the Exterior Gateway Protocol (EGP) utilizing path vectors; uses TCP for enhanced reliability for the route discovery process; reduces bandwidth consumption by advertising only incremental updates; supports extensive policies for increased flexibility; scales to very large networks
- **Policy-based routing**: makes routing decisions based on policies set by the network administrator
- **IP performance optimization**: is a set of tools to improve the performance of IPv4 networks; includes directed broadcasts, customization of TCP parameters, support of ICNP error packets, and extensive display capabilities
- **Unicast Reverse Path Forwarding** (uRPF): is defined by RFC 3704 and limits erroneous or malicious traffic
- **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
- **IS-IS for IPv6**: extends IS-IS to support IPv6 addressing
- **BGP+**: extends BGP-4 to support Multiprotocol BGP (MBGP), including support for IPv6 addressing
- **IPv6 tunneling**: 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; is an important element for the transition from IPv4 to IPv6
- **Multiprotocol Label Switching** (MPLS): 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, thus reducing complexity and increasing 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

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- **Virtual Private LAN Service** (VPLS): establishes point-to-multipoint Layer 2 VPNs across a provider network
- **Service loopback**: allows any module to take advantage of higher-featured modules, including OAA modules, by redirecting traffic; reduces investment and enables higher bandwidth and load sharing; supports IPv6, IPv6 multicast, tunneling, and MPLS

Security

- **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
- **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 that provides additional security
- **Switch management logon security**: helps secure switch CLI logon by optionally requiring either RADIUS or TACACS+ authentication
- **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
- **Dynamic Host Configuration Protocol** (DHCP) **snooping**: ensures DHCP clients receive IP addresses from authorized DHCP servers and maintains a list of DHCP entries for trusted ports; prevents users from receiving fake IP addresses and reduces ARP attacks, improving security
- **IP source guard**: filters packets on a per-port basis to prevent illegal packets from being forwarded
- **ARP attack protection**: protects from attacks using a large number of ARP requests with a host-specific, user-selectable threshold
- **Port security**: allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **IEEE 802.1X support**
  provides port-based user authentication with support for Extensible Authentication Protocol (EAP) MD5, TLS, TTLS, and PEAP with choice of AES, TKIP, and static or dynamic WEP encryption for protecting wireless traffic between authenticated clients and the access point
- **Media access control** (MAC) **authentication**: provides simple authentication based on a user's MAC address; supports local or RADIUS-based authentication
- **Multiple user authentication methods**:
  - **IEEE 802.1X**: is an industry-standard method of user authentication using an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server
  - **Web-based authentication**: is similar to IEEE 802.1X and provides a browser-based environment to authenticate clients that do not support the IEEE 802.1X supplicant
  - **MAC-based authentication**: authenticates the client with the RADIUS server based on the client's MAC address
- **DHCP protection**: blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- **Endpoint Admission Defense** (EAD): provides security policies to users accessing a network
- **Port isolation**: secures and adds privacy, and prevents malicious attackers from obtaining user information

Convergence

- **LLDP-MED** (Media Endpoint Discovery): is a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones
- **Multicast Source Discovery Protocol** (MSDP): is used for inter-domain multicast applications, allowing multiple PIM-SM domains to interoperate
- **Internet Group Management Protocol** (IGMP):is used by IP hosts to establish and maintain multicast groups; supports IGMPv1, 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),

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Sparse Mode (PIM-SM), and Source-Specific Mode (PIM-SSM)

- **Multicast Border Gateway Protocol** (MBGP): allows multicast traffic to be forwarded across BGP networks and kept separate from unicast traffic
- **Multicast Listener Discovery** (MLD) **protocol**: is used by IP hosts to establish and maintain multicast groups; supports v1 and v2 and utilizes Any-Source Multicast (ASM) or Source-Specific Multicast (SSM) to manage IPv6 multicast networks
- **Multicast VLAN**: allows multiple VLANs to receive the same IPv4 or IPv6 multicast traffic, reducing network bandwidth demand by eliminating multiple streams to each VLAN
- **Voice VLAN**: automatically assigns VLAN and priority for IP phones, simplifying network configuration and maintenance

Integration

- **Open Application Architecture** (OAA)
  provides high-performance application-specific modules fully integrated with the switching architecture; uses the chassis high-speed backplane to access network-related data; increases performance, reduces costs, and simplifies network management
- **Load-balancing module**
  local and global server load-balancing module improves traffic distribution using powerful scheduling algorithms, including Layer 4 to 7 services; monitors the health status of servers and firewalls
- **NetStream module**: provides traffic analysis and statistics capture to allow network administrators to rapidly identify network anomalies and security threats, as well as capacity planning information; supports NetFlow v5 and v9
- **Unified wired-WLAN module**
  supports up to 1,024 access points per module; is for use with selected HP APs (see the HP 10500/7500 20G Unified Wired-WLAN Module data sheet for specifics); provides N+1, N+N, and 1+1 redundancy offering subsecond failover; provides IPv4/IPv6 and end-to-end QoS; includes flexible forwarding modes, as well as Wi-Fi Clear Connect Radio Frequency (RF) optimization and integrated IDS
- **VPN 20 Gbps firewall module**
  provides enhanced stateful packet inspection and filtering; supports flexible security zones and virtual firewall containment; advanced VPN services with 3DES and AES encryption at high performance and low latency; Web content filtering; application prioritization and optimization

Additional information

- **Green initiative support**
  provides support for RoHS and WEEE regulations
- **Low power consumption**
  is rated among the lowest in power consumption in the industry by Miercom independent tests
- **Unified HP Comware operating system with modular architecture**
  all switching, routing, and security platforms leverage the Comware OS, a common unified modular operating system; provides an easy-to-enhance-and-extend feature set without wholesale changes
- **OPEX savings**
  are delivered through the use of a common operating system that simplifies and streamlines deployment, management, and training, thereby cutting costs as well as reducing the chance for human errors associated with having to manage multiple operating systems across different platforms and network layers

Warranty and support

- **1-year Warranty 2.0**
  advance hardware replacement with 10-calendar-day delivery (available in most countries)
- **Electronic and telephone support (for Warranty 2.0)**
  limited electronic and 24x7 telephone support is available from HP for the entire warranty period; to reach our support centers, refer to www.hp.com/networking/contact-support; for details on the duration of support provided with your product purchase, refer to www.hp.com/networking/warrantysummary

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- **Software releases**
  to find software for your product, refer to www.hp.com/networking/support; for details on the software releases available with your product purchase, refer to www.hp.com/networking/warrantysummary

Configuration

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

HP 7502 Switch Chassis JD242B
- Must select min 1 Power Supply
- Must select Min 1 Fabric Module
- 4U - Height

HP 7503 Switch Chassis JD240B
- Must select min 1 Power Supply
- Must select Min 1 Fabric Module
- 10U - Height

HP 7503-S Switch Chassis w/1 Fabric Slot JD243B
- Must select min 1 Power Supply
- Must select Min 1 Fabric Module
- 4U - Height

HP 7503 Swch w/48p GT 2p 10G 384Gbps MPU JG507A
- Must select min 1 Power Supply
- 1 - JD193B - HP 384 Gbps A7500 Fab Mod w/2 XFP Ports included min=0 \ max=2 XFP Transceivers
- 1 - JD229B - HP 48p Gig-T PoE+ Ext A7500 Module included
- 4U - Height

HP 7506 Switch Chassis JD239B
- Must select min 1 Power Supply
- Must select Min 1 Fabric Module
- 13U - Height

HP 7506 Swch w/96p GT 2p 10G 384Gbps MPU JG508A
- Must select min 1 Power Supply
- 1 - JD193B - HP 384 Gbps A7500 Fab Mod w/2 XFP Ports included min=0 \ max=2 XFP Transceivers
- 1 - JD229B - HP 48p Gig-T PoE+ Ext A7500 Module included
- 13U - Height

HP 7506-V Switch Chassis JD241B
- Must select min 1 Power Supply
- Must select Min 1 Fabric Module
- 21U - Height

HP 7510 Switch Chassis JD238B
- Must select min 1 Power Supply
- Must select Min 1 Fabric Module
- 16U - Height

HP 7510 Swch w/96p GT 768Gbps MPU

Configuration

- Must select min 1 Power Supply JG509A
- 1 - JD220A - HP 384 Gbps A7500 Fab Mod w/2 XFP Ports included min=0 \ max=2 XFP Transceivers
- 1 - JD229B - HP 48p Gig-T PoE+ Ext A7500 Module included
- 16U - Height

Remarks BTO Model 1s should never receive an 0D1 and therefore can not be factory integrated into a rack.

Box Level Integration CTO Models

HP 75xx CTO Switch Solution JG707A
- SSP trigger sku

HP 7502 Switch Chassis CTO JD242B
- Must select min 1 Power Supply See Configuration Note: 2,3
- Must select Min 1 Fabric Module
- 4U - Height

HP 7503 Switch Chassis - CTO JD240B
- Must select min 1 Power Supply See Configuration Note: 3,4
- Must select Min 1 Fabric Module
- 10U - Height

HP 7503 Switch Chassis with 1 Fabric Slot - CTO JD243B
- Must select min 1 Power Supply See Configuration Note: 2,3
- Must select Min 1 Fabric Module
- 4U - Height

HP 7506 Switch Chassis - CTO JD239B
- Must select min 1 Power Supply See Configuration Note: 3,4
- Must select Min 1 Fabric Module
- 13U - Height

HP 7506 Vertical Switch Chassis - CTO JD241B
- Must select min 1 Power Supply See Configuration Note: 3,4
- Must select Min 1 Fabric Module
- 21U - Height

HP 7510 Switch Chassis - CTO JD238B
- Must select min 1 Power Supply See Configuration Note: 3,4
- Must select Min 1 Fabric Module
- 16U - Height

Configuration Rules:

Configuration

Note 2	If this Switch is selected at least one of these Power Supply with is required: (Use #0D1 if switch is CTO)	
	HP 7502 300W AC Power Supply	JD226A
	HP 7500 650W DC Power Supply	JD209A
	HP 7500 650W AC Power Supply	JD217A
Note 3	If the Switch Chassis is to be Box Level Factory Integrated (CTO), Then the #0D1 is required on the Switch Chassis and integrated to the JG707A - HP 7500 CTO Enablement. (Min 1/Max 1 Switch per SSP)	
Note 4	If this Switch is selected at least one of these Power Supplies is required: (Use #0D1 if switch is CTO)	
	HP 7500 1400W DC Power Supply	JD208A
	HP 7500 1400W AC Power Supply	JD218A
	HP 7500 2800W AC Power Supply	JD219A
	HP 7500 6000W AC Power Supply	JD227A

Rack Level Integration CTO Models

HP 7502 Switch Chassis — JD242B
- Must select min 1 Power Supply
- Must select Min 1 Fabric Module
- 4U - Height

See Configuration Note: 1, 3

HP 7503 Switch Chassis — JD240B
- Must select min 1 Power Supply
- Must select Min 1 Fabric Module
- 10U - Height

See Configuration Note: 3,4

HP 7503-S Switch Chassis w/1 Fabric Slot — JD243B
- Must select min 1 Power Supply
- Must select Min 1 Fabric Module
- 4U - Height

See Configuration Note: 1, 3

HP 7506 Switch Chassis — JD239B
- Must select min 1 Power Supply
- Must select Min 1 Fabric Module
- 13U - Height

See Configuration Note: 3,4

HP 7506-V Switch Chassis — JD241B
- Must select min 1 Power Supply
- Must select Min 1 Fabric Module
- 21U - Height

See Configuration Note: 3,4

HP 7510 Switch Chassis — JD238B
- Must select min 1 Power Supply
- Must select Min 1 Fabric Module
- 16U - Height

See Configuration Note: 3,4

Configuration

Configuration rules:

Note 1	If this Switch is selected at least one of these Power Supply with is required: (Use #0D1 if switch is CTO)	
	HP 7502 300W AC Power Supply	JD226A
	HP 7500 650W DC Power Supply	JD209A
	HP 7500 650W AC Power Supply	JD217A
Note 3	If HP CTO Switch Chassis is selected to be Rack Level Integration, Then the CTO Switch Chassis needs to integrate (with #0D1) to the BW966A and BW968A HP Universal Rack Only. (Default to the BW966A.)	
Note 4	If this Switch is selected at least one of these Power Supplies is required: (Use #0D1 if switch is CTO)	
	HP 7500 1400W DC Power Supply	JD208A
	HP 7500 1400W AC Power Supply	JD218A
	HP 7500 2800W AC Power Supply	JD219A
	HP 7500 6000W AC Power Supply	JD227A

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

Internal Power Supplies

System (std 0 // max 2) User Selection (min 1 // max 2)	See Configuration Note:3
HP 7502 300W AC Power Supply • includes 1 x c13, 300w	JD226A See Configuration Note: 1,4
PDU Cable NA/MEX/TW/JP • C15 PDU Jumper Cord (NA/MEX/TW/JP)	#B2B
PDU Cable ROW • C15 PDU Jumper Cord (ROW)	#B2C
HP 7500 650W DC Power Supply	JD209A See Configuration Note: 1
HP 7500 650W AC Power Supply • includes 1 x c13, 650w	JD217A See Configuration Note: 1,4,5
PDU Cable NA/MEX/TW/JP • C15 PDU Jumper Cord (NA/MEX/TW/JP)	#B2B

Configuration

PDU Cable ROW • C15 PDU Jumper Cord (ROW)	#B2C
HP 7500 1400W DC Power Supply	JD208A See Configuration Note: 2
HP 7500 1400W AC Power Supply • includes 1 x c19, 1400w	JD218A See Configuration Note: 2,4
PDU Cable NA/MEX/TW/JP • C15 C19 PDU Jumper Cord (NA/MEX/TW/JP)	JD218A#B2B
PDU Cable ROW • C19 PDU Jumper Cord (ROW)	JD218A#B2C
High Volt Switch to Wall Power Cord • NEMA L6-20P Cord (NA/MEX/JP/TW)	JD218A#B2E
HP 7500 2800W AC Power Supply • includes 2 x c19, 2800w	JD219A See Configuration Note: 2,4,6
High Volt Switch to Wall Power Cord • NEMA L6-20P Cord (NA/MEX/JP/TW)	#B2E
HP 7500 6000W AC Power Supply • includes 4 x c19, 6000w	JD227A See Configuration Note: 2,4,6
PDU Cable NA/MEX/TW/JP • C15 C19 PDU Jumper Cord (NA/MEX/TW/JP)	JD227A#B2B
High Volt Switch to Wall Power Cord • NEMA L6-20P Cord (NA/MEX/JP/TW)	JD227A#B2E
High Volt Switch to Wall Power Cord • NEMA L6-20P Cord (NA/MEX/JP/TW)	#B2E

Configuration Rules:

Note 1	Only supported on the JD242x and JD243x.
Note 2	Only supported on the JD238x,JD239x,JD241x, JD240x, JG507A, JG508A, and JG509A.

Configuration

Note 3	If 2 power supplies are selected they must be the same Sku number.
Note 4	Localization required on orders without #B2B, #B2C, #B2D or #B2E options.
Note 5	If CTO Switch Chassis is ordered #0D1 (Rack Integrated), Then #B2B, or #B2C is Required on the Power Supply's. (Optional when Switch is not Factory Racked. See Drop down remark in Power Supplies section.)
Note 6	If the CTO Switch Chassis is ordered #0D1 (Rack Integrated), Then #B2D is Required on the Power Supply's. (Optional when Switch is not Factory Racked. See Drop down remark in Power Supplies section.)

Remarks:

Drop down under power supply should offer the following options and results:
Switch 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 to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO)
High Volt Power Electrical Module to Wall Power Cord - #B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)

Modules

Ethernet Modules

(Switch JD243x and JD242x) System (std 0 // max 2) User Selection (min 0 // max 2) per enclosure

(Switch JG507A) System (std 1 // max 2) User Selection (min 0 // max 1) per enclosure

(Switch JD240x) System (std 0 // max 3) User Selection (min 0 // max 3) per enclosure

(Switch JD239x and JD241x) System (std 0 // max 6) User Selection (min 0 // max 6) per enclosure

(Switch JG508A) System (std 2 // max 6) User Selection (min 0 // max 4) per enclosure

(Switch JD238x) System (std 0 // max 10) User Selection (min 0 // max 10) per enclosure

(Switch JG509A) System (std 2 // max 10) User Selection (min 0 // max 8) per enclosure

HP 7500 24-port GbE SFP Module — JD203B
- min=0 \ max=24 SFP Transceivers — See Configuration Note:1

HP 7500 12-port GbE SFP Module — JD207A
- min=0 \ max=12 SFP Transceivers — See Configuration Note:1

Configuration

HP 7500 48-port GbE SFP Enhanced Module • min=0 \ max=48 SFP Transceivers	JD221A See Configuration Note:1
HP 7500 24p GbE SFP Mod w/8 Combo Ports • min=0 \ max=24 SFP Transceivers	JD223A See Configuration Note:1
HP 7500 40p Gig-T/8p SFP PoE-ready Mod • min=0 \ max= 8 SFP Transceivers	JD228B See Configuration Note:1, 8, 14
HP 7500 24-port GbE SFP Enhanced Module • min=0 \ max=24 SFP Transceivers	JD231A See Configuration Note:1
HP 7500 24-port GbE SFP Extended Module • min=0 \ max=24 SFP Transceivers	JD234A See Configuration Note:1
HP 7500 48-port GbE SFP Extended Module • min=0 \ max=48 SFP Transceivers	JD237A See Configuration Note:1
HP 7500 48-port GbE SFP Module • min=0 \ max=48 SFP Transceivers	JD211B See Configuration Note:1
HP 7500 24-port GbE SFP SC TAA Module • min=0 \ max=24 SFP Transceivers	JC704A See Configuration Note:1, 9
HP A7500 40p Gig-T/8p SFP PoE SC TAA Mod • min=0 \ max= 8 SFP Transceivers	JC710A See Configuration Note:1, 8, 9, 14
HP A7500 16p GbE SFP/8p Combo EB TAA Mod • min=0 \ max=24 SFP Transceivers	JC715A See Configuration Note:1, 9
HP A7500 16p GbE SFP/8p Combo SD TAA Mod • min=0 \ max=24 SFP Transceivers	JC718A See Configuration Note:1, 9
HP 7500 48-port GbE SFP SD TAA Module	JC721A

Configuration

• min=0 \ max=48 SFP Transceivers	See Configuration Note:1, 9
HP A7500 20p Gig-T/4p Cmb PoE-upg SC Mod	JC669A
• min=0 \ max= 4 SFP Transceivers	See Configuration Note:1, 12
HP 7500 48-port 100BASE-FX Module	JD197B
• min=0 \ max=48 SFP 100 Transceivers	See Configuration Note:2, 7
HP 7500 8-port 10G SFP+ Module	JF290A
• min=0 \ max=8 per SFP+ Transceivers	See Configuration Note:3
HP 7500 8-port 10GbE SFP+ SC TAA Module	JC723A
• min=0 \ max=8 per SFP+ Transceivers	See Configuration Note:3, 9
HP 7500 4-port 10GbE XFP Enhanced Module	JD232A
• min=0 \ max=4 XFP	See Configuration Note:4
HP 7500 2-port 10GbE XFP Enhanced Module	JD233A
• min=0 \ max=2 XFP	See Configuration Note:4
HP 7500 8-port 10GbE XFP Extended Module	JD191A
• min=0 \ max=8 XFP Transceivers	See Configuration Note:4
HP 7500 2-port 10GbE XFP Module	JD201A
• min=0 \ max=2 XFP Transceivers	See Configuration Note:4
HP 7500 24p Gig-T / 2p 10GbE XFP Mod	JD206A
• min=0 \ max=2 XFP Transceivers	See Configuration Note:4
HP 7500 4-port 10GbE XFP Extended Module	JD235A
• min=0 \ max=4 XFP Transceivers	See Configuration Note:4
HP 7500 2-port 10GbE XFP Extended Module	JD236A
• min=0 \ max=2 XFP Transceivers	See Configuration Note:4

Configuration

HP 7500 24p GbE SFP / 2p 10GbE XFP Mod • min=0 \ max=2 XFP min=0 \ max=24 SFP Transceivers	JD205A See Configuration Note:5
HP 7500 24p GbE-SFP/2p 10GbE XFP Ext Mod • min=0 \ max=2 XFP min=0 \ max=24 SFP Transceivers	JD230A See Configuration Note:5
HP 7500 24-port Gig-T Module • No supported Transceivers	JD204B
HP 7500 48-port Gig-T Module • No supported Transceivers	JD210A See Configuration Note:8,14
HP 7500 48p Gig-T PoE+ Extended Module • Includes DIMM	JD229B
HP 7500 48p 1000BASE-T PoE+ SC Mod • No supported Transceivers	JG663A
HP 7500 48p 1000BASE-T PoE+ SC TAA Mod • No supported Transceivers	JG664A
HP 7500 Load Balancing Module • No supported Transceivers	JD252A
HP 7500 NetStream Monitoring Module • No supported Transceivers	JD254A
HP 7500 SSL VPN Module w/500-user Lic • No supported Transceivers	JD253A
HP S1200N IPS A7500 Module • No supported Transceivers	JC527A
HP 7500 48-port 10/100BASE-T Module • No supported Transceivers	JD198B See Configuration Note:7, 8,14
HP 7500 48-port Gig-T PoE-ready Module • min=0 \ max=2 SFP Transceivers	JD199B See Configuration Note:7, 8,14

Configuration

HP 7500 Advanced VPN Firewall Module	JD249A
• min=0 \ max=2 SFP Transceivers	See Configuration Note:13
HP 10500/11900/7500 20Gbps VPN FW Mod	JG372A
• min=0 \ max=2 SFP Transceivers	See Configuration Note:13
HP 7500 4-port 40GbE QSFP+ SC Module	JC792A
• min=0 \ max=4 QSFP+ Transceivers	See Configuration Note:10
HP 7500 4-port 40GbE CFP SC Module	JG373A
• min=0 \ max=4 CFP Transceivers	See Configuration Note:11
HP 10500/7500 20G Unified Wired-WLAN Mod	JG639A
• No supported Transceivers	See Configuration Note:15

Configuration Rules:

Note 1	The following Transceivers install into this Module: (Use #0D1 if switch is CTO)	
	HP X170 1G SFP LC LH70 1550 Transceiver	JD109A
	HP X170 1G SFP LC LH70 1570 Transceiver	JD110A
	HP X170 1G SFP LC LH70 1590 Transceiver	JD111A
	HP X170 1G SFP LC LH70 1610 Transceiver	JD112A
	HP X170 1G SFP LC LH70 1470 Transceiver	JD113A
	HP X170 1G SFP LC LH70 1490 Transceiver	JD114A
	HP X170 1G SFP LC LH70 1510 Transceiver	JD115A
	HP X170 1G SFP LC LH70 1530 Transceiver	JD116A
	HP X120 1G SFP LC LH100 Transceiver	JD103A
	HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
	HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
	HP X125 1G SFP LC LH70 Transceiver	JD063B
	HP X120 1G SFP RJ45 T Transceiver	JD089B
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X120 1G SFP LC BX 10-U Transceiver	JD098B
	HP X120 1G SFP LC BX 10-D Transceiver	JD099B
	HP X110 100M SFP LC LH40 Transceiver	JD090A
	HP X110 100M SFP LC LH80 Transceiver	JD091A
	HP X115 100M SFP LC FX Transceiver	JD102B
	HP X110 100M SFP LC LX Transceiver	JD120B
	HP X115 100M SFP LC BX 10-U Transceiver	JD100A
	HP X115 100M SFP LC BX 10-D Transceiver	JD101A

Configuration

Note 2	The following Transceivers install into this Module: (Use #0D1 if switch is CTO)	
	HP X110 100M SFP LC LH40 Transceiver	JD090A
	HP X110 100M SFP LC LH80 Transceiver	JD091A
	HP X115 100M SFP LC FX Transceiver	JD102B
	HP X110 100M SFP LC LX Transceiver	JD120B
Note 3	The following Transceivers install into this Module: (Use #0D1or #B01 if switch is CTO)	
	HP X130 10G SFP+ LC SR Transceiver	JD092A
	HP X130 10G SFP+ LC LRM Transceiver	JD093A
	HP X130 10G SFP+ LC LR Transceiver	JD094A
	HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
	HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
	HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
	HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
	HP X240 10G SFP+ 7m Direct Attach Copper Cable	
Note 4	The following Transceivers install into this Module: (Use #0D1 if switch is CTO)	
	HP X135 10G XFP LC ER Transceiver	JD121A
	HP X130 10G XFP LC LR Single Mode 10km 1310nm Transceiver	JD108B
	HP X130 10G XFP LC SR Transceiver	JD117B
	HP X130 10G XFP LC ZR Single Mode 80km 1550nm Transceiver	JD107A
	HP X180 10G XFP LC LH 80km 1538.98nm DWDM Transceiver	JG226A
	HP X180 10G XFP LC LH 80km 1539.77nm DWDM Transceiver	JG227A
	HP X180 10G XFP LC LH 80km 1540.56nm DWDM Transceiver	JG228A
	HP X180 10G XFP LC LH 80km 1542.14nm DWDM Transceiver	JG229A
	HP X180 10G XFP LC LH 80km 1542.94nm DWDM Transceiver	JG230A
	HP X180 10G XFP LC LH 80km 1558.98nm DWDM Transceiver	JG231A
	HP X180 10G XFP LC LH 80km 1559.79nm DWDM Transceiver	JG232A
	HP X180 10G XFP LC LH 80km 1560.61nm DWDM Transceiver	JG233A
Note 5	The following Transceivers install into this Module: (Use #0D1 if switch is CTO)	
	HP X170 1G SFP LC LH70 1550 Transceiver	JD109A
	HP X170 1G SFP LC LH70 1570 Transceiver	JD110A
	HP X170 1G SFP LC LH70 1590 Transceiver	JD111A
	HP X170 1G SFP LC LH70 1610 Transceiver	JD112A
	HP X170 1G SFP LC LH70 1470 Transceiver	JD113A
	HP X170 1G SFP LC LH70 1490 Transceiver	JD114A
	HP X170 1G SFP LC LH70 1510 Transceiver	JD115A
	HP X170 1G SFP LC LH70 1530 Transceiver	JD116A
	HP X120 1G SFP LC LH100 Transceiver	JD103A
	HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
	HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
	HP X125 1G SFP LC LH70 Transceiver	JD063B
	HP X120 1G SFP RJ45 T Transceiver	JD089B

Configuration

	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X120 1G SFP LC BX 10-U Transceiver	JD098B
	HP X120 1G SFP LC BX 10-D Transceiver	JD099B
	HP X110 100M SFP LC LH40 Transceiver	JD090A
	HP X110 100M SFP LC LH80 Transceiver	JD091A
	HP X115 100M SFP LC FX Transceiver	JD102B
	HP X110 100M SFP LC LX Transceiver	JD120B
	HP X135 10G XFP LC ER Transceiver	JD121A
	HP X130 10G XFP LC LR Single Mode 10km 1310nm Transceiver	JD108B
	HP X130 10G XFP LC SR Transceiver	JD117B
	HP X130 10G XFP LC ZR Single Mode 80km 1550nm Transceiver	JD107A
Note 6	The following Transceivers install into this Module: (Use #0D1 if switch is CTO)	
	HP X170 1G SFP LC LH70 1550 Transceiver	JD109A
	HP X170 1G SFP LC LH70 1570 Transceiver	JD110A
	HP X170 1G SFP LC LH70 1590 Transceiver	JD111A
	HP X170 1G SFP LC LH70 1610 Transceiver	JD112A
	HP X170 1G SFP LC LH70 1470 Transceiver	JD113A
	HP X170 1G SFP LC LH70 1490 Transceiver	JD114A
	HP X170 1G SFP LC LH70 1510 Transceiver	JD115A
	HP X170 1G SFP LC LH70 1530 Transceiver	JD116A
	HP X120 1G SFP LC LH100 Transceiver	JD103A
	HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
	HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
	HP X125 1G SFP LC LH70 Transceiver	JD063B
	HP X120 1G SFP RJ45 T Transceiver	JD089B
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X120 1G SFP LC BX 10-U Transceiver	JD098B
	HP X120 1G SFP LC BX 10-D Transceiver	JD099B
	HP X115 100M SFP LC BX 10-U Transceiver	JD100A
	HP X115 100M SFP LC BX 10-D Transceiver	JD101A
Note 7	This Module is not supported on the JD242x and JD243x at this time.	
Note 8	The following DIMMs install into this Module: (Use #0D1 if switch is CTO)	
	HP 7500 PoE DIMM Memory Module	JD192B
	HP 7500 24-port PoE DIMM	JC671A
Note 10	The following 40G Transceivers install into this switch: (Use #0D1or #B01 if switch is CTO)	
	HP X140 40G QSFP+ LC LR4 SM 10km 1310nm Transceiver	JG661A
	HP X140 40G QSFP+ MPO SR4 Transceiver	JG325A
	HP X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable	JG326A
	HP X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable	JG327A

Configuration

	HP X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable	JG328A
	HP X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable	JG329A
	HP X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	JG330A
	HP X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable	JG331A
Note 11	The following CFP Transceivers install into this switch:	
	HP X140 40G CFP LC LR4 10km SM Transceiver	JC857A
Note 12	The following PoE DIMM installs into this Module: (Use #0D1 if switch is CTO) The JC671A - HP A7500 24-port PoE DIMM (must be installed to enable PoE on the these modules)	
Note 13	HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
	HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
	HP X125 1G SFP LC LH70 Transceiver	JD063B
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
Note 14	The following PoE DIMM installs into this Module: (Use #0D1 if switch is CTO) JD192B - HP 7500 PoE DIMM Module (must be installed to enable PoE on the these modules)	
Note 15	Maximum of this Module per Chassis: JD238B min=0\max=9 per Chassis JG509A min=0\max=7 per Chassis JD239B, JD241B min=0\max=5 per Chassis JG508A min=0\max=3 per Chassis JD240B, JD243B min=0\max=2 per Chassis JD242B, JG507A min=0\max=1 per Chassis There are no restrictions on which slots these modules may go in.	
Remark	JD253A - Additional User licenses available below in the 'Switch Enclosure Options' category. JG639A and JG645A - Additional AP licenses available below in the 'Switch Enclosure Options' category.	

Fabric Modules

System (std 0 // max 2) User Selection (min 1 // max 2) per enclosure	See Configuration Note:3, 12
JG507A, JG508A and JG509A only System (std 1 // max 2) User Selection (min 0 // max 1) per enclosure	See Configuration Note:3, 12
HP 7500 384Gbps Fab Mod w/2 XFP Ports	JD193B

Configuration

• min=0 \ max=2 XFP Transceivers	See Configuration Note:1, 4
HP 7500 384Gbps Fabric Module	JD194B
• No supported Transceivers	See Configuration Note:1
HP 7500 384Gbps Fab Mod w/12 SFP Ports	JD224A
• min=0 \ max=12 SFP Transceivers	See Configuration Note:1, 5
HP 7500 384Gbps Advanced Fabric Module	JD195A
• No supported Transceivers	See Configuration Note:1
HP 7500 384Gbps Lite Fabric Module	JF219B
• No supported Transceivers	See Configuration Note:1
HP 7500 768Gbps Fabric Module	JD220A
• No supported Transceivers	See Configuration Note:11
HP 7502 Fabric Module	JD196A
• No supported Transceivers	See Configuration Note:10
HP 7503 Fabric Module with 24 GbE Ports	JD222A
• min=0 \ max=24 SFP Transceivers	See Configuration Note:2, 5
HP A7503-S 144 Gbps Fab/MPU w 24p Gig-T	JC666A
• min=0 \ max=4 SFP Transceivers	See Configuration Note:2, 5,13

Configuration Rules:

Note 1	These Modules install to the following switches: (Use #0D1 if switch is CTO)	
	HP A7503 Switch Chassis	JD240x
	HP A7506 Switch Chassis	JD239x
	HP 7506 Switch with 2 48-port Gig-T PoE+ Modules and 384Gbps MPU with 2 XFP ports	JG508A
	HP A7506 Vertical Switch Chassis	JD241x
	HP A7510 Switch Chassis	JD238x
	HP 7510 Switch with 2 48-port Gig-T PoE+ Modules and 768Gbps MPU	JG509A
Note 2	These Modules install to the following switches only: (Use #0D1 if switch is CTO)	
	HP A7503 Switch Chassis with 1 Fabric Slot	JD243x

Configuration

	HP 7503 Switch with 48-port Gig-T PoE+ Module and 384Gbps MPU with 2 XFP ports	JG507A
Note 3	If JD243x or JG507A is selected then Max = 1.	
Note 4	The following Transceivers install into this Module: (Use #0D1 if switch is CTO)	
	HP X135 10G XFP LC ER Transceiver	JD121A
	HP X130 10G XFP LC LR Single Mode 10km 1310nm Transceiver	JD108B
	HP X130 10G XFP LC SR Transceiver	JD117B
	HP X130 10G XFP LC ZR Single Mode 80km 1550nm Transceiver	JD107A
	HP X180 10G XFP LC LH 80km 1538.98nm DWDM Transceiver	JG226A
	HP X180 10G XFP LC LH 80km 1539.77nm DWDM Transceiver	JG227A
	HP X180 10G XFP LC LH 80km 1540.56nm DWDM Transceiver	JG228A
	HP X180 10G XFP LC LH 80km 1542.14nm DWDM Transceiver	JG229A
	HP X180 10G XFP LC LH 80km 1542.94nm DWDM Transceiver	JG230A
	HP X180 10G XFP LC LH 80km 1558.98nm DWDM Transceiver	JG231A
	HP X180 10G XFP LC LH 80km 1559.79nm DWDM Transceiver	JG232A
	HP X180 10G XFP LC LH 80km 1560.61nm DWDM Transceiver	JG233A
Note 5	The following Transceivers install into this Module: (Use #0D1 if switch is CTO)	
	HP X170 1G SFP LC LH70 1550 Transceiver	JD109A
	HP X170 1G SFP LC LH70 1570 Transceiver	JD110A
	HP X170 1G SFP LC LH70 1590 Transceiver	JD111A
	HP X170 1G SFP LC LH70 1610 Transceiver	JD112A
	HP X170 1G SFP LC LH70 1470 Transceiver	JD113A
	HP X170 1G SFP LC LH70 1490 Transceiver	JD114A
	HP X170 1G SFP LC LH70 1510 Transceiver	JD115A
	HP X170 1G SFP LC LH70 1530 Transceiver	JD116A
	HP X120 1G SFP LC LH100 Transceiver	JD103A
	HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
	HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
	HP X125 1G SFP LC LH70 Transceiver	JD063B
	HP X120 1G SFP RJ45 T Transceiver	JD089B
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X120 1G SFP LC BX 10-U Transceiver	JD098B
	HP X120 1G SFP LC BX 10-D Transceiver	JD099B
	HP X110 100M SFP LC LH40 Transceiver	JD090A
	HP X110 100M SFP LC LH80 Transceiver	JD091A
	HP X115 100M SFP LC FX Transceiver	JD102B
	HP X110 100M SFP LC LX Transceiver	JD120B
	HP X115 100M SFP LC BX 10-U Transceiver	JD100A
	HP X115 100M SFP LC BX 10-D Transceiver	JD101A
Note 10	These Modules install to the following switches only: (Use #0D1 if switch is CTO)	
	HP A7502 Switch Chassis	JD242x

Configuration

Note 11	These Modules install to the following switches only: (Use #0D1 if switch is CTO)	
	HP A7510 Switch Chassis	JD238x
	HP 7510 Switch with 2 48-port Gig-T PoE+ Modules and 768Gbps MPU	JG509A
Note 12	If 2 Fabric Modules are selected they must be the same Sku number.	
Note 13	The following PoE DIMM installs into this Module: (Use #0D1 if switch is CTO) The JC671A - HP A7500 24-port PoE DIMM (must be installed to enable PoE on the these modules)	
Remarks:	For Switch A7503,A7506 and A7506-V, these modules can only be inserted into the Slot 0 and Slot 1. And for Switch A7510, this module can only be inserted into the Slot 5 and Slot 6. For Switch A7503-S, this module can only be inserted into the Slot 0.	

A7500 PoE Module

System (std 0 // max 1) User Selection (min 0 // max 1) per Ethernet or Fabric Module

HP 7500 PoE DIMM Module	JD192B See Configuration Note:1, 3, 5, 6
HP A7500 24-port PoE DIMM	JC671A See Configuration Note:2, 4, 5, 6

Cofiguration Rules:

Note 1	The JD192B is optional when you have selected the JD199B, JD198B, JD210A, JC709A, JC710A or JD228B modules.
Note 2	If this DIMM is selected at least one JD219A - HP A7500 2800W AC Power Supply is required. (Except for JD242x, and JD243x, see rule 6)
Note 3	If 1 or more of the JD192B (PoE DIMM Module) is ordered than the customer must also order 2 of JD208A, JD218A, JD219A, or JD227A in order to support PoE. (Except for JD242x, and JD243x, see rule 6)
Note 4	The JC671A is optional when you have selected the JC666A, JC669A or JC668A modules.
Note 5	This Module is not supported on JG507A at this time.
Note 6	This Module is supported on the JD242x, and JD243x only when an External DC Power Source is connected to the rear terminals. (See Installation Guide)

Transceivers

SFP+ Transceivers

HP X130 10G SFP+ LC SR Transceiver	JD092B
HP X130 10G SFP+ LC LRM Transceiver	JD093B
HP X130 10G SFP+ LC LR Transceiver	JD094B
HP X240 10G SFP+ SFP+ 0.65m Direct Attach Copper Cable	JD095C#B01
HP X240 10G SFP+ SFP+ 1.2m Direct Attach Copper Cable	JD096C#B01
HP X240 10G SFP+ SFP+ 3m Direct Attach Copper Cable	JD097C#B01
HP X240 10G SFP+ SFP+ 5m Direct Attach Copper Cable	JG081C#B01
HP X240 10G SFP+ 7m Direct Attach Copper Cable	JC784C#B01

SFP Transceivers

HP X170 1G SFP LC LH70 1550 Transceiver	JD109A
HP X170 1G SFP LC LH70 1570 Transceiver	JD110A
HP X170 1G SFP LC LH70 1590 Transceiver	JD111A
HP X170 1G SFP LC LH70 1610 Transceiver	JD112A
HP X170 1G SFP LC LH70 1470 Transceiver	JD113A
HP X170 1G SFP LC LH70 1490 Transceiver	JD114A
HP X170 1G SFP LC LH70 1510 Transceiver	JD115A
HP X170 1G SFP LC LH70 1530 Transceiver	JD116A
HP X120 1G SFP LC LH100 Transceiver	JD103A
HP X125 1G SFP LC LH40 1310nm XCVR	JD061A
HP X120 1G SFP LC LH40 1550nm XCVR	JD062A
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B
HP X110 100M SFP LC BX 10-U Transceiver	JD100A
HP X110 100M SFP LC BX 10-D Transceiver	JD101A

XFP Transceivers

HP X135 10G XFP LC ER Transceiver	JD121A
HP X130 10G XFP LC ZR 1550nm Transceiver	JD107A
HP X130 10G XFP LC SR Transceiver	JD117B

Configuration

HP X130 10G XFP LC LR 1310nm Transceiver	JD108B
HP X180 10G XFP LC 1538.98 DWDM Xcvr	JG226A
HP X180 10G XFP LC 1539.77 DWDM Xcvr	JG227A
HP X180 10G XFP LC 1540.56 DWDM Xcvr	JG228A
HP X180 10G XFP LC 1542.14 DWDM Xcvr	JG229A
HP X180 10G XFP LC 1542.94 DWDM Xcvr	JG230A
HP X180 10G XFP LC 1558.98 DWDM Xcv	JG231A
HP X180 10G XFP LC 1559.79 DWDM Xcvr	JG232A
HP X180 10G XFP LC 1560.61 DWDM Xcvr	JG233A

QSFP+ Transceivers

HP X140 40G QSFP+ LC LR4 SM XCVR	JG661A
HP X140 40G QSFP+ MPO SR4 Transceiver	JG325A
HP X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable	JG326A#B01
HP X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable	JG327A#B01
HP X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable	JG328A#B01
HP X240 QSFP+ 4x10G SFP+ 1m Direct Attach Copper Cable	JG329A#B01
HP X240 QSFP+ 4x10G SFP+ 3m Direct Attach Copper Cable	JG330A#B01
HP X240 QSFP+ 4x10G SFP+ 5m Direct Attach Copper Cable	JG331A#B01

CFP Transceivers

HP X140 40G CFP LC LR4 10km SM Transceiver	JC857A

Switch Enclosure Options

Software Licenses

HP 10500/7500 Wrd-WLAN Mod 128 AP E-LTU • (min 0 // max 7) REMARK: This license is for use with the Redundant Controllers.	JG649AAE See Configuration Note:1
HP Unified Wired-WLAN 128 AP Redundant E-LTU • (min 0 // max 7) REMARK: This license is for use with the Redundant Controllers.	JG902AAE See Configuration Note:1

Configuration Rules:

Note 1 Only supported on JG639A and JG645A.

Compact Flash cards

Configuration

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

HP X600 1G Compact Flash Card	JC684A See Configuration Note:1
HP X600 512M Compact Flash Card	JC685A See Configuration Note:1
HP X600 256M Compact Flash Card	JC686A See Configuration Note:1

Configuration Rules:

Note 1 These CF Cards are supported on the following Modules only:

HP 7502 Fabric Module	JD196A
HP 7500 384Gbps Fabric Module with 2 XFP Ports	JD193B
HP 7500 384Gbps Fabric Module	JD194B
HP 7500 768Gbps Fabric Module	JD220A
HP 7500 384Gbps Advanced Fabric Module	JD195A
HP 7500 384Gbps Lite Fabric Module	JF219B
HP 7500 384Gbps Fabric Module with 12 SFP Ports	JD224A
HP 7502 TAA-compliant Main Processing Unit	JC697A
HP 7500 384Gbps TAA-compliant Fabric / MPU with 2 10GbE XFP Ports	JC699A
HP 7500 384Gbps TAA-compliant Fabric / Main Processing Unit	JC700A
HP 7500 768Gbps TAA-compliant Fabric / Main Processing Unit	JC701A
HP 7503-S 144Gbps Fabric/MPU with PoE Upgradable 20-port Gig-T/4-port GbE Combo	JC666A
HP 9500 VPN Firewall Module	JD245A

Options for the SSL VPN Service Board Modules (JD253x)

HP 7500 SSL VPN 1000-user License • min=0\ max=10 per SSL	JD257A See Configuration Note:1
HP 7500 SSL VPN 1000-user License • min=0\ max=10 per SSL	JD257AAE See Configuration Note:1

Configuration

Configuration Rules:

Note 1 Any mixture of (JD257A) that equals 10,000 LTU's is the max per any JD253A module the maximum would be based on the module and not the entire switch.

Options for the S1200N IPS A7500 Module (JC527A)

System (std 0 // max - no limit) User Selection (min 0 // max - no limit) per S1200N IPS A7500 Module

HP A7500 S1200N 1-y Rep DV Subsc Svc	JC592A See Configuration Note:1
HP A7500 S1200N 3-y Rep DV Subsc Svc	JC593A See Configuration Note:1

Configuration Rules:

Note 1 If any DV Subsc Svc is selected #0D1, it must be integrated to one of the following modules: JC527A - HP S1200N IPS A7500 Module

Spare Fan Assembly

HP 7502 Spare Fan Assembly	JD213A
HP 7503 Spare Fan Assembly	JD212A
HP 7506 Spare Fan Assembly	JD214A
HP 7506-V Spare Fan Assembly	JD215A
HP 7510 Spare Fan Assembly	JD216A
HP 7503-S Spare Fan Assembly	JC672A

Remarks:

JD213A - This item is only used to replace the fan module of an A7502 . A host is delivered with the fan module.

JD212A - This item is only used to replace the fan module of an A7503. A host is delivered with the fan module.

JD214A - This item is only used to replace the fan module of an A7506. A host is delivered with the fan module.

Configuration

JD215A - This item is only used to replace the fan module of an A7506-V. A host is delivered with the fan module.

JD216A - This item is only used to replace the fan module of an A7510. A host is delivered with the fan module.

JC672A - This item is only used to replace the fan module of an A7503-S. A host is delivered with the fan module.

Technical Specifications

HP 7510 Switch Chassis (JD238B)

Included accessories	1 HP 7510 Spare Fan Assembly (JD216A)	
Ports	2 switch fabric slots	
	10 I/O module slots	
	Supports a maximum of 84 10-GbE ports or 480 autosensing 10/100/1000 ports or 480 SFP ports, or a combination	
Power supplies	2 power-supply slots	
	1 minimum power-supply required (ordered separately)	
Fan tray	includes: 1 x JD216A	
	1 fan tray slot	
Physical characteristics	**Dimensions**	17.17(w) x 16.54(d) x 27.87(h) in (43.6 x 42.0 x 70.8 cm) (16U height)
	Weight	211 lb (95.71 kg), Fully loaded chassis, two fabrics, two power supplies, and a full complement of typical I/O modules
Memory and processor	**Fabric**	MIPS64 @ 600 MHz, 64 MB flash, 512 MB RAM
	I/O Module	MIPS64 @ 400 MHz, 512 MB RAM
Mounting	Mounts in an EIA-standard 19 in. rack or other equipment cabinet (hardware included); horizontal surface mounting only	
Performance	**Throughput**	714 million pps
	Routing/Switching capacity	1152 Gbps
	Routing table size	256000 entries (IPv4), 8000 entries (IPv6)
	MAC address table size	512000 entries
Reliability	**Availability**	99.999%
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 95%, non-condensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, non-condensing
	Acoustic	Low-speed fan: 53.5 dB, High-speed fan: 56.7 dB
Electrical characteristics	**Description**	
	Voltage	100-120 / 200-240 VAC
	DC Voltage	-48 V / -60 V
	Current	16 / 50 A
	Power output	1400 W
	Frequency	50 / 60 Hz
	Notes	Based on a common power supply of 1400 W (AC/DC)
Safety	UL 60950-1; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11	
Emissions	VCCI Class A	

Technical Specifications

	EN 55022 Class A ICES-003 Class A ANSI C63.4 2003 AS/NZS CISPR 22 Class A EN 61000-3-2:2006 EN 61000-3-3:1995 +A1:2001+A2:2005 EMC Directive 2004/108/EC FCC (CFR 47, Part 15) Class A	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3
	EN	EN 61000-4-2:1995+A1:1998+A2:2001
	ESD	EN 61000-4-2
	Radiated	EN 61000-4-3
	EFT/Burst	EN 61000-4-4
	Surge	EN 61000-4-5
	Conducted	EN 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	EN 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	IMC - Intelligent Management Center; command-line interface; Web browser; out-of-band management (serial RS-232C); SNMP Manager; Telnet; terminal interface (serial RS-232C); modem interface; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	
Notes	For non-TAA environments, IPS/IDS functionality is provided by the HP S1200E IPS 7500 Module (JC527A). For non-TAA environments, IKE/IPSec functionality is provided by the HP 7500 VPN Firewall Module (JD249A). IRF functionality is not supported on HP 7502 and 7503-S Switch Chassis.	
Services	3-year, parts only, global next-day advance exchange (HP781E) 3-year, 4-hour onsite, 13x5 coverage for hardware (HP782E) 3-year, 4-hour onsite, 24x7 coverage for hardware (HP785E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HP788E) 3-year, 24x7 SW phone support, software updates (HP791E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR511E) Installation with minimum configuration, system-based pricing (UX032E) 4-year, 4-hour onsite, 13x5 coverage for hardware (HP783E) 4-year, 4-hour onsite, 24x7 coverage for hardware (HP786E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HP789E) 4-year, 24x7 SW phone support, software updates (HP792E) 5-year, 4-hour onsite, 13x5 coverage for hardware (HP784E) 5-year, 4-hour onsite, 24x7 coverage for hardware (HP787E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HP790E) 5-year, 24x7 SW phone support, software updates (HP793E) 3 Yr 6 hr Call-to-Repair Onsite (HP795E) 3 Yr 6 hr Call-to-Repair Onsite (HP794E) 5 Yr 6 hr Call-to-Repair Onsite (HP796E)	

1-year, 4-hour onsite, 13x5 coverage for hardware (HR509E)
1-year, 4-hour onsite, 24x7 coverage for hardware (HR510E)
1-year, 6 hour Call-To-Repair Onsite for hardware (HR513E)
1-year, 24x7 software phone support, software updates (HR512E)

Refer to the HP website at: www.hp.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 HP sales office.

HP 7506-V Switch Chassis (JD241B)

Included accessories	1 HP 7506-V Spare Fan Assembly (JD215A)	
Ports	2 switch fabric slots	
	6 I/O module slots	
	Supports a maximum of 52 10-GbE ports or 288 autosensing 10/100/1000 ports or 288 SFP ports, or a combination	
Power supplies	2 power-supply slots	
	1 minimum power-supply required (ordered separately)	
Fan tray	includes: 1 x JD215A	
	1 fan tray slot	
Physical characteristics	**Dimensions**	17.17(w) x 16.54(d) x 36.61(h) in (43.6 x 42.0 x 93.0 cm) (21U height)
	Weight	222 lb (100.7 kg), Fully loaded chassis, two fabrics, two power supplies, and a full complement of typical I/O modules
Memory and processor	**Fabric**	MIPS64 @ 600 MHz, 64 MB flash, 512 MB RAM
	I/O Module	MIPS64 @ 400 MHz, 512 MB RAM
Mounting	Mounts in an EIA-standard 19 in. rack or other equipment cabinet (hardware included); horizontal surface mounting only	
Performance	**Throughput**	488 million pps
	Routing/Switching capacity	768 Gbps
	Routing table size	256000 entries (IPv4), 8000 entries (IPv6)
	MAC address table size	512000 entries
Reliability	**Availability**	99.999%
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 95%, non-condensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, non-condensing
	Acoustic	Low-speed fan: 52.1 dB, High-speed fan: 56.2 dB
Electrical characteristics	**Description**	The H3C S7506E (HP 7506) is Certified Green in the 2009 Miercom Green Switches Industry Assessment.
	Voltage	100-120 / 200-240 VAC

Technical Specifications

	DC Voltage	-48 V / -60 V
	Current	16 / 50 A
	Power output	1400 W
	Frequency	50 / 60 Hz
	Notes	Based on a common power supply of 1400 W (AC/DC)
Safety	UL 60950-1; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11	
Emissions	VCCI Class A EN 55022 Class A ICES-003 Class A ANSI C63.4 2003 AS/NZS CISPR 22 Class A EN 61000-3-2:2006 EN 61000-3-3:1995 +A1:2001+A2:2005 EMC Directive 2004/108/EC FCC (CFR 47, Part 15) Class A	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3
	EN	EN 61000-4-2:1995+A1:1998+A2:2001
	ESD	EN 61000-4-2
	Radiated	EN 61000-4-3
	EFT/Burst	EN 61000-4-4
	Surge	EN 61000-4-5
	Conducted	EN 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	EN 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	IMC - Intelligent Management Center; command-line interface; Web browser; out-of-band management (serial RS-232C); SNMP Manager; Telnet; terminal interface (serial RS-232C); modem interface; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	
Notes	For non-TAA environments, IPS/IDS functionality is provided by the HP S1200E IPS 7500 Module (JC527A). For non-TAA environments, IKE/IPSec functionality is provided by the HP 7500 VPN Firewall Module (JD249A). IRF functionality is not supported on HP 7502 and 7503-S Switch Chassis.	
Services	3-year, parts only, global next-day advance exchange (UW999E) 3-year, 4-hour onsite, 13x5 coverage for hardware (UX001E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UX004E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UX007E) 3-year, 24x7 SW phone support, software updates (UX010E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR514E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR515E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR516E) Installation with minimum configuration, system-based pricing (UX032E)	

4-year, 4-hour onsite, 13x5 coverage for hardware (UX002E)
4-year, 4-hour onsite, 24x7 coverage for hardware (UX005E)
4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UX008E)
4-year, 24x7 SW phone support, software updates (UX011E)
5-year, 4-hour onsite, 13x5 coverage for hardware (UX003E)
5-year, 4-hour onsite, 24x7 coverage for hardware (UX006E)
5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UX009E)
5-year, 24x7 SW phone support, software updates (UX012E)
3 Yr 6 hr Call-to-Repair Onsite (UX013E)
4 Yr 6 hr Call-to-Repair Onsite (UX014E)
5 Yr 6 hr Call-to-Repair Onsite (UX015E)
1-year, 6 hour Call-To-Repair Onsite for hardware (HR518E)
1-year, 24x7 software phone support, software updates (HR517E)

Refer to the HP website at: www.hp.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 HP sales office.

HP 7506 Switch Chassis (JD239B)

Included accessories	1 HP 7506 Spare Fan Assembly (JD214A)	
Ports	2 switch fabric slots	
	6 I/O module slots	
	Supports a maximum of 52 1-GbE ports or 288 autosensing 10/100/1000 ports or 288 SFP ports, or a combination	
Power supplies	2 power-supply slots	
	1 minimum power-supply required (ordered separately)	
Fan tray	includes: 1 x JD214A	
	1 fan tray slot	
Physical characteristics	**Dimensions**	17.17(w) x 16.54(d) x 22.64(h) in (43.6 x 42.0 x 57.5 cm) (13U height)
	Weight	207 lb (93.9 kg), Fully loaded chassis, two fabrics, two power supplies, and a full complement of typical I/O modules
Memory and processor	**Fabric**	MIPS64 @ 600 MHz, 64 MB flash, 512 MB RAM
	I/O Module	MIPS64 @ 400 MHz, 512 MB RAM
Mounting	Mounts in an EIA-standard 19 in. rack or other equipment cabinet (hardware included); horizontal surface mounting only	
Performance	**Throughput**	488 million pps
	Routing/Switching capacity	768 Gbps
	Routing table size	256000 entries (IPv4), 8000 entries (IPv6)
	MAC address table size	512000 entries
Reliability	**Availability**	99.999%
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 95%, non-condensing

Technical Specifications

	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, non-condensing
	Acoustic	Low-speed fan: 53.6 dB, High-speed fan: 57.7 dB
Electrical characteristics	Achieved Miercom Certified Green Award	
	Description	The H3C S7506E (HP 7506) is Certified Green in the 2009 Miercom Green Switches Industry Assessment.
	Voltage	100-120 / 200-240 VAC
	DC Voltage	-48 V / -60 V
	Current	16 / 50 A
	Power output	1400 W
	Frequency	50 / 60 Hz
	Notes	Based on a common power supply of 1400 W (AC/DC)
Safety	UL 60950-1; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11	
Emissions	VCCI Class A EN 55022 Class A ICES-003 Class A ANSI C63.4 2003 AS/NZS CISPR 22 Class A EN 61000-3-2:2006 EN 61000-3-3:1995 +A1:2001+A2:2005 EMC Directive 2004/108/EC FCC (CFR 47, Part 15) Class A	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3
	EN	EN 61000-4-2:1995+A1:1998+A2:2001
	ESD	EN 61000-4-2
	Radiated	EN 61000-4-3
	EFT/Burst	EN 61000-4-4
	Surge	EN 61000-4-5
	Conducted	EN 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	EN 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	IMC - Intelligent Management Center; command-line interface; Web browser; out-of-band management (serial RS-232C); SNMP Manager; Telnet; terminal interface (serial RS-232C); modem interface; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	

Technical Specifications

Notes	For non-TAA environments, IPS/IDS functionality is provided by the HP S1200E IPS 7500 Module (JC527A). For non-TAA environments, IKE/IPSec functionality is provided by the HP 7500 VPN Firewall Module (JD249A). IRF functionality is not supported on HP 7502 and 7503-S Switch Chassis.
Services	3-year, parts only, global next-day advance exchange (UW999E) 3-year, 4-hour onsite, 13x5 coverage for hardware (UX001E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UX004E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UX007E) 3-year, 24x7 SW phone support, software updates (UX010E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR514E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR515E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR516E) Installation with minimum configuration, system-based pricing (UX032E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UX002E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UX005E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UX008E) 4-year, 24x7 SW phone support, software updates (UX011E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UX003E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UX006E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UX009E) 5-year, 24x7 SW phone support, software updates (UX012E) 3 Yr 6 hr Call-to-Repair Onsite (UX013E) 4 Yr 6 hr Call-to-Repair Onsite (UX014E) 5 Yr 6 hr Call-to-Repair Onsite (UX015E) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR518E) 1-year, 24x7 software phone support, software updates (HR517E) Refer to the HP website at: www.hp.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 HP sales office.

HP 7503 Switch Chassis (JD240B)

Included accessories	1 HP 7503 Spare Fan Assembly (JD212A)	
Ports	2 switch fabric slots	
	3 I/O module slots	
	Supports a maximum of 28 10GbE ports or 144 autosensing 10/100/1000 ports or 144 SFP ports or 12 40-GbE ports, or a combination	
Power supplies	2 power-supply slots	
	1 minimum power-supply required (ordered separately)	
Fan tray	includes: 1 x JD212A	
	1 fan tray slot	
Physical characteristics	**Dimensions**	17.17(w) x 16.54(d) x 17.36(h) in (43.6 x 42.0 x 44.1 cm) (10U height)
	Weight	147 lb (66.68 kg), Fully loaded chassis, two fabrics, two power supplies, and a full complement of typical I/O modules

Technical Specifications

Memory and processor	**Fabric**	MIPS64 @ 600 MHz, 64 MB flash, 512 MB RAM
	I/O Module	MIPS64 @ 400 MHz, 512 MB RAM
Mounting	Mounts in an EIA-standard 19 in. rack or other equipment cabinet (hardware included); horizontal surface mounting only	
Performance	**Throughput**	274 million pps
	Routing/Switching capacity	480 Gbps
	Routing table size	256000 entries (IPv4), 8000 entries (IPv6)
	MAC address table size	512000 entries
Reliability	**Availability**	99.999%
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 95%, non-condensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, non-condensing
	Acoustic	Low-speed fan: 51.6 dB, High-speed fan: 56.1 dB
Electrical characteristics	**Description**	The H3C S7506E (HP 7506) is Certified Green in the 2009 Miercom Green Switches Industry Assessment.
	Voltage	100-120 / 200-240 VAC
	DC Voltage	-48 V / -60 V
	Current	16 / 50 A
	Power output	1400 W
	Frequency	50 / 60 Hz
	Notes	Based on a common power supply of 1400 W (AC/DC)
Safety	UL 60950-1; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11	
Emissions	VCCI Class A EN 55022 Class A ICES-003 Class A ANSI C63.4 2003 AS/NZS CISPR 22 Class A EN 61000-3-2:2006 EN 61000-3-3:1995 +A1:2001+A2:2005 EMC Directive 2004/108/EC FCC (CFR 47, Part 15) Class A	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3
	EN	EN 61000-4-2:1995+A1:1998+A2:2001
	ESD	EN 61000-4-2
	Radiated	EN 61000-4-3
	EFT/Burst	EN 61000-4-4
	Surge	EN 61000-4-5

Technical Specifications

	Conducted	EN 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	EN 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	IMC - Intelligent Management Center; command-line interface; Web browser; out-of-band management (serial RS-232C); SNMP Manager; Telnet; terminal interface (serial RS-232C); modem interface; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	
Notes	For non-TAA environments, IPS/IDS functionality is provided by the HP S1200E IPS 7500 Module (JC527A). For non-TAA environments, IKE/IPSec functionality is provided by the HP 7500 VPN Firewall Module (JD249A). IRF functionality is not supported on HP 7502 and 7503-S Switch Chassis.	
Services	3-year, parts only, global next-day advance exchange (HP799E) 3-year, 4-hour onsite, 13x5 coverage for hardware (HP800E) 3-year, 4-hour onsite, 24x7 coverage for hardware (HP803E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HP806E) 3-year, 24x7 SW phone support, software updates (HP809E) Installation with minimum configuration, system-based pricing (UX032E) 4-year, 4-hour onsite, 13x5 coverage for hardware (HP801E) 4-year, 4-hour onsite, 24x7 coverage for hardware (HP804E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HP807E) 4-year, 24x7 SW phone support, software updates (HP810E) 5-year, 4-hour onsite, 13x5 coverage for hardware (HP802E) 5-year, 4-hour onsite, 24x7 coverage for hardware (HP805E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HP808E) 5-year, 24x7 SW phone support, software updates (HP811E) 3 Yr 6 hr Call-to-Repair Onsite (HP812E) 4 Yr 6 hr Call-to-Repair Onsite (HP813E) 5 Yr 6 hr Call-to-Repair Onsite (HP814E) 1-year, 4-hour onsite, 13x5 coverage for hardware (HR519E) 1-year, 4-hour onsite, 24x7 coverage for hardware (HR520E) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR523E) 1-year, 24x7 software phone support, software updates (HR522E) 1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR521E) Refer to the HP website at: www.hp.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 HP sales office.	

HP 7503-S Switch Chassis with 1 Fabric Slot (JD243B)

Included accessories	1 HP 7503-S Spare Fan Assembly (JC672A)

Technical Specifications

Ports	1 switch fabric slot	
	2 I/O module slots	
	Supports a maximum of 16 10GbE ports or 120 autosensing 10/100/1000 ports or 120 SFP ports or 8 40-GbE ports, or a combination	
Power supplies	2 power-supply slots	
	1 minimum power-supply required (ordered separately)	
Fan tray	includes: 1 x JC672A	
	1 fan tray slot	
Physical characteristics	**Dimensions**	17.17(w) x 16.54(d) x 6.89(h) in (43.6 x 42.0 x 17.5 cm) (4U height)
	Weight	59 lb (26.76 kg), Fully loaded chassis, one fabric, two power supplies, and a full complement of typical I/O modules
Memory and processor	**Fabric**	MIPS64 @ 400 MHz, 64 MB flash, 512 MB RAM
	I/O Module	MIPS64 @ 400 MHz, 512 MB RAM
Mounting	Mounts in an EIA-standard 19 in. rack or other equipment cabinet (hardware included); horizontal surface mounting only	
Performance	**Throughput**	107 million pps
	Routing/Switching capacity	144 Gbps
	Routing table size	256000 entries (IPv4), 8000 entries (IPv6)
	MAC address table size	512000 entries
Reliability	**Availability**	99.999%
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 95%, non-condensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, non-condensing
	Acoustic	High-speed fan: 56.7 dB
Electrical characteristics	**Description**	The H3C S7506E (HP 7506) is Certified Green in the 2009 Miercom Green Switches Industry Assessment.
	Voltage	100-120 / 200-240 VAC
	DC Voltage	-48 V / -60 V
	Current	5 / 10 A
	Power output	300 W
	Frequency	50 / 60 Hz
	Notes	Based on a common power supply of 300 W (AC/DC)
Safety	UL 60950-1; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11	
Emissions	VCCI Class A EN 55022 Class A ICES-003 Class A ANSI C63.4 2003	

Technical Specifications

	AS/NZS CISPR 22 Class A EN 61000-3-2:2006 EN 61000-3-3:1995 +A1:2001+A2:2005 EMC Directive 2004/108/EC FCC (CFR 47, Part 15) Class A	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3
	EN	EN 61000-4-2:1995+A1:1998+A2:2001
	ESD	EN 61000-4-2
	Radiated	EN 61000-4-3
	EFT/Burst	EN 61000-4-4
	Surge	EN 61000-4-5
	Conducted	EN 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	EN 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	IMC - Intelligent Management Center; command-line interface; Web browser; out-of-band management (serial RS-232C); SNMP Manager; Telnet; terminal interface (serial RS-232C); modem interface; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	
Notes	For non-TAA environments, IPS/IDS functionality is provided by the HP S1200E IPS 7500 Module (JC527A). For non-TAA environments, IKE/IPSec functionality is provided by the HP 7500 VPN Firewall Module (JD249A). IRF functionality is not supported on HP 7502 and 7503-S Switch Chassis.	
Services	3-year, parts only, global next-day advance exchange (HP799E) 3-year, 4-hour onsite, 13x5 coverage for hardware (HP800E) 3-year, 4-hour onsite, 24x7 coverage for hardware (HP803E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HP806E) 3-year, 24x7 SW phone support, software updates (HP809E) Installation with minimum configuration, system-based pricing (UX032E) 4-year, 4-hour onsite, 13x5 coverage for hardware (HP801E) 4-year, 4-hour onsite, 24x7 coverage for hardware (HP804E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HP807E) 4-year, 24x7 SW phone support, software updates (HP810E) 5-year, 4-hour onsite, 13x5 coverage for hardware (HP802E) 5-year, 4-hour onsite, 24x7 coverage for hardware (HP805E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HP808E) 5-year, 24x7 SW phone support, software updates (HP811E) 3 Yr 6 hr Call-to-Repair Onsite (HP812E) 4 Yr 6 hr Call-to-Repair Onsite (HP813E) 5 Yr 6 hr Call-to-Repair Onsite (HP814E) 1-year, 4-hour onsite, 13x5 coverage for hardware (HR519E) 1-year, 4-hour onsite, 24x7 coverage for hardware (HR520E) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR523E) 1-year, 24x7 software phone support, software updates (HR522E) 1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates	

(HR521E)

Refer to the HP website at: www.hp.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 HP sales office.

HP 7502 Switch Chassis (JD242B)		
Included accessories	1 HP 7502 Spare Fan Assembly (JD213A)	
Ports	2 MPU (for management modules) slots	
	2 I/O module slots	
	Supports a maximum of 16 10GbE ports or 96 autosensing 10/100/1000 ports or 96 SFP ports or 8 40-GbE ports, or a combination	
Power supplies	2 power-supply slots	
	1 minimum power-supply required (ordered separately)	
Fan tray	includes: 1 x JD213A	
	1 fan tray slot	
Physical characteristics	**Dimensions**	17.17(w) x 16.54(d) x 6.89(h) in (43.6 x 42.0 x 17.5 cm) (4U height)
	Weight	59 lb (26.76 kg), Fully loaded chassis, two management modules, two power supplies, and a full complement of typical I/O modules
Memory and processor	**Fabric**	MIPS64 @ 600 MHz, 64 MB flash, 512 MB RAM
	I/O Module	MIPS64 @ 400 MHz, 512 MB RAM
Mounting	Mounts in an EIA-standard 19 in. rack or other equipment cabinet (hardware included); horizontal surface mounting only	
Performance	**Throughput**	143 million pps
	Routing/Switching capacity	192 Gbps
	Routing table size	256000 entries (IPv4), 8000 entries (IPv6)
	MAC address table size	512000 entries
Reliability	**Availability**	99.999%
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 95%, non-condensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, non-condensing
	Acoustic	Low-speed fan: 49.8 dB, High-speed fan: 56.7 dB
Electrical characteristics	**Description**	The H3C S7506E (HP 7506) is Certified Green in the 2009 Miercom Green Switches Industry Assessment.
	Voltage	100-120/200-240 VAC
	DC Voltage	-48 V/-60 V
	Current	5/10 A

Technical Specifications

	Power output	300 W
	Frequency	50/60 Hz
	Notes	Based on a common power supply 300 W (AC/DC)
Safety	UL 60950-1; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11	
Emissions	VCCI Class A EN 55022 Class A ICES-003 Class A ANSI C63.4 2003 AS/NZS CISPR 22 Class A EN 61000-3-2:2006 EN 61000-3-3:1995 +A1:2001+A2:2005 EMC Directive 2004/108/EC FCC (CFR 47, Part 15) Class A	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3
	EN	EN 61000-4-2:1995+A1:1998+A2:2001
	ESD	EN 61000-4-2
	Radiated	EN 61000-4-3
	EFT/Burst	EN 61000-4-4
	Surge	EN 61000-4-5
	Conducted	EN 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	EN 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	IMC - Intelligent Management Center; command-line interface; Web browser; out-of-band management (serial RS-232C); SNMP Manager; Telnet; terminal interface (serial RS-232C); modem interface; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	
Notes	For non-TAA environments, IPS/IDS functionality is provided by the HP S1200E IPS 7500 Module (JC527A). For non-TAA environments, IKE/IPSec functionality is provided by the HP 7500 VPN Firewall Module (JD249A). IRF functionality is not supported on HP 7502 and 7503-S Switch Chassis.	
Services	3-year, parts only, global next-day advance exchange (HP799E) 3-year, 4-hour onsite, 13x5 coverage for hardware (HP800E) 3-year, 4-hour onsite, 24x7 coverage for hardware (HP803E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HP806E) 3-year, 24x7 SW phone support, software updates (HP809E) Installation with minimum configuration, system-based pricing (UX032E) 4-year, 4-hour onsite, 13x5 coverage for hardware (HP801E) 4-year, 4-hour onsite, 24x7 coverage for hardware (HP804E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HP807E) 4-year, 24x7 SW phone support, software updates (HP810E) 5-year, 4-hour onsite, 13x5 coverage for hardware (HP802E) 5-year, 4-hour onsite, 24x7 coverage for hardware (HP805E)	

5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HP808E)
5-year, 24x7 SW phone support, software updates (HP811E)
3 Yr 6 hr Call-to-Repair Onsite (HP812E)
4 Yr 6 hr Call-to-Repair Onsite (HP813E)
5 Yr 6 hr Call-to-Repair Onsite (HP814E)
1-year, 4-hour onsite, 13x5 coverage for hardware (HR519E)
1-year, 4-hour onsite, 24x7 coverage for hardware (HR520E)
1-year, 6 hour Call-To-Repair Onsite for hardware (HR523E)
1-year, 24x7 software phone support, software updates (HR522E)
1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR521E)

Refer to the HP website at: www.hp.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 HP sales office.

HP 7503 Switch with 48-port Gig-T PoE+ Module and 384Gbps MPU with 2 XFP ports (JG507A)

Included accessories	1 HP 7503 Spare Fan Assembly (JD212A) 1 HP 7500 384Gbps Fabric Module with 2 XFP Ports (JD193B) 1 HP 7500 48-port Gig-T PoE+ Extended Module (JD229B)	
Ports	2 switch fabric slots	
	3 I/O module slots	
	Supports a maximum of 28 10GbE ports or 144 autosensing 10/100/1000 ports or 144 SFP ports, or a combination	
Power supplies	2 power-supply slots	
	1 minimum power-supply required (ordered separately)	
Fan tray	includes: 1 x JD212A	
	1 fan tray slot	
Physical characteristics	**Dimensions**	17.17(w) x 16.54(d) x 17.36(h) in (43.6 x 42.0 x 44.1 cm) (10U height)
	Weight	147 lb (66.68 kg), Fully loaded chassis, two fabrics, two power supplies, and a full complement of typical I/O modules
Memory and processor	**Fabric**	MIPS64 @ 600 MHz, 64 MB flash, 512 MB RAM
	I/O Module	MIPS64 @ 400 MHz, 512 MB RAM
Mounting	Mounts in an EIA-standard 19 in. rack or other equipment cabinet (hardware included); horizontal surface mounting only	
Performance	**Throughput**	274 million pps
	Routing/Switching capacity	480 Gbps
	Routing table size	256000 entries (IPv4), 8000 entries (IPv6)
	MAC address table size	512000 entries
Reliability	**Availability**	99.999%
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 95%, non-condensing

Technical Specifications

	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, non-condensing
	Acoustic	Low-speed fan: 51.6 dB, High-speed fan: 56.1 dB
Electrical characteristics	**Frequency**	50/60 Hz
	Description	
	Voltage	100-120/200-240 VAC
	DC Voltage	-48 to -60 VDC
	Current	16/50 A
	Power output	1400 W
	Notes	Based on a common power supply of 1400 W (AC/DC)
Safety	UL 60950-1; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11	
Emissions	VCCI Class A EN 55022 Class A ICES-003 Class A ANSI C63.4 2003 AS/NZS CISPR 22 Class A EN 61000-3-2:2006 EN 61000-3-3:1995 +A1:2001+A2:2005 EMC Directive 2004/108/EC FCC (CFR 47, Part 15) Class A	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3
	EN	EN 61000-4-2:1995+A1:1998+A2:2001
	ESD	EN 61000-4-2
	Radiated	EN 61000-4-3
	EFT/Burst	EN 61000-4-4
	Surge	EN 61000-4-5
	Conducted	EN 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	EN 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	IMC - Intelligent Management Center; command-line interface; Web browser; out-of-band management (serial RS-232C); SNMP Manager; Telnet; terminal interface (serial RS-232C); modem interface; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	
Notes	For non-TAA environments, IPS/IDS functionality is provided by the HP S1200E IPS 7500 Module (JC527A). For non-TAA environments, IKE/IPSec functionality is provided by the HP 7500 VPN Firewall Module (JD249A). IRF functionality is not supported on HP 7502 and 7503-S Switch Chassis.	

Technical Specifications

Services	Refer to the HP website at **www.hp.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 HP sales office.

HP 7506 Switch with 2 48-port Gig-T PoE+ Modules and 384Gbps MPU with 2 XFP ports (JG508A)

Included accessories	1 HP 7506 Spare Fan Assembly (JD214A) 2 HP 7500 48-port Gig-T PoE+ Extended Module (JD229B) 1 HP 7500 384Gbps Fabric Module with 2 XFP Ports (JD193B)	
Ports	2 switch fabric slots	
	6 I/O module slots	
	Supports a maximum of 52 10GbE ports or 288 autosensing 10/100/1000 ports or 288 SFP ports, or a combination	
Power supplies	2 power-supply slots	
	1 minimum power-supply required (ordered separately)	
Fan tray	includes: 1 x JD214A	
	1 fan tray slot	
Physical characteristics	**Dimensions**	17.17(w) x 16.54(d) x 22.64(h) in (43.6 x 42.0 x 57.5 cm) (13U height)
	Weight	207 lb (93.9 kg), Fully loaded chassis, two fabrics, two power supplies, and a full complement of typical I/O modules
Memory and processor	**Fabric**	MIPS64 @ 600 MHz, 64 MB flash, 512 MB RAM
	I/O Module	MIPS64 @ 400 MHz, 512 MB RAM
Mounting	Mounts in an EIA-standard 19 in. rack or other equipment cabinet (hardware included); horizontal surface mounting only	
Performance	**Throughput**	488 million pps
	Routing/Switching capacity	768 Gbps
	Routing table size	256000 entries (IPv4), 8000 entries (IPv6)
	MAC address table size	512000 entries
Reliability	**Availability**	99.999%
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 95%, non-condensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, non-condensing
	Acoustic	High-speed fan: 56.7 dB
Electrical characteristics	**Frequency**	50/60 Hz Achieved Miercom Certified Green Award
	Description	The H3C S7506E (HP 7606) is Certified Green in the 2009 Miercom Green Switches Industry Assessment.
	Voltage	100-120/200-240 VAC

Technical Specifications

	DC Voltage	-48 to -60 VDC
	Current	16/50 A
	Power output	1400 W
	Notes	Based on a common power supply of 1400 W (AC/DC
Safety	UL 60950-1; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11	
Emissions	VCCI Class A EN 55022 Class A ICES-003 Class A ANSI C63.4 2003 AS/NZS CISPR 22 Class A EN 61000-3-2:2006 EN 61000-3-3:1995 +A1:2001+A2:2005 EMC Directive 2004/108/EC FCC (CFR 47, Part 15) Class A	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3
	EN	EN 61000-4-2:1995+A1:1998+A2:2001
	ESD	EN 61000-4-2
	Radiated	EN 61000-4-3
	EFT/Burst	EN 61000-4-4
	Surge	EN 61000-4-5
	Conducted	EN 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	EN 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	IMC - Intelligent Management Center; command-line interface; Web browser; out-of-band management (serial RS-232C); SNMP Manager; Telnet; terminal interface (serial RS-232C); modem interface; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	
Notes	For non-TAA environments, IPS/IDS functionality is provided by the HP S1200E IPS 7500 Module (JC527A). For non-TAA environments, IKE/IPSec functionality is provided by the HP 7500 VPN Firewall Module (JD249A). IRF functionality is not supported on HP 7502 and 7503-S Switch Chassis.	
Services	Refer to the HP website at: **www.hp.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 HP sales office.	

HP 7510 Switch with 2 48-port Gig-T PoE+ Modules and 768Gbps MPU (JG509A)

Included accessories	2 HP 7500 48-port Gig-T PoE+ Extended Module (JD229B) 1 HP 7500 768Gbps Fabric Module (JD220A) 1 HP 7510 Spare Fan Assembly (JD216A)

Technical Specifications

Ports	2 switch fabric slots	
	10 I/O module slots	
	Supports a maximum of 84 10GbE ports or 480 autosensing 10/100/1000 ports or 480 SFP ports, or a combination	
Power supplies	2 power-supply slots	
	1 minimum power-supply required (ordered separately)	
Fan tray	includes: 1 x JD216A	
	1 fan tray slot	
Physical characteristics	**Dimensions**	17.17(w) x 16.54(d) x 27.87(h) in (43.6 x 42.0 x 70.8 cm) (16U height)
	Weight	211 lb (95.71 kg), Fully loaded chassis, two fabrics, two power supplies, and a full complement of typical I/O modules
Memory and processor	**Fabric**	MIPS64 @ 600 MHz, 64 MB flash, 512 MB RAM
	I/O Module	MIPS64 @ 400 MHz, 512 MB RAM
Mounting	Mounts in an EIA-standard 19 in. rack or other equipment cabinet (hardware included); horizontal surface mounting only	
Performance	**Throughput**	714 million pps
	Routing/Switching capacity	1152 Gbps
	Routing table size	256000 entries (IPv4), 8000 entries (IPv6)
	MAC address table size	512000 entries
Reliability	**Availability**	99.999%
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 95%, non-condensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, non-condensing
	Acoustic	Low-speed fan: 53.5 dB, High-speed fan: 56.7 d
Electrical characteristics	**Frequency**	50/60 Hz
	Description	
	Voltage	100-120/200-240 VAC
	DC Voltage	-48 to -60 VDC
	Current	16/50 A
	Power output	1400 W
	Notes	Based on a common power supply of 1400 W (AC/DC)
Safety	UL 60950-1; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11	
Emissions	VCCI Class A EN 55022 Class A ICES-003 Class A ANSI C63.4 2003 AS/NZS CISPR 22 Class A	

Technical Specifications

	EN 61000-3-2:2006 EN 61000-3-3:1995 +A1:2001+A2:2005 EMC Directive 2004/108/EC FCC (CFR 47, Part 15) Class A	
Immunity	**Generic**	ETSI EN 300 386 V1.3.3
	EN	EN 61000-4-2:1995+A1:1998+A2:2001
	ESD	EN 61000-4-2
	Radiated	EN 61000-4-3
	EFT/Burst	EN 61000-4-4
	Surge	EN 61000-4-5
	Conducted	EN 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	EN 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	IMC - Intelligent Management Center; command-line interface; Web browser; out-of-band management (serial RS-232C); SNMP Manager; Telnet; terminal interface (serial RS-232C); modem interface; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	
Notes	For non-TAA environments, IPS/IDS functionality is provided by the HP S1200E IPS 7500 Module (JC527A). For non-TAA environments, IKE/IPSec functionality is provided by the HP 7500 VPN Firewall Module (JD249A). IRF functionality is not supported on HP 7502 and 7503-S Switch Chassis.	
Services	Refer to the HP website at: **www.hp.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 HP sales office.	

Standards and protocols (applies to all products in series)

BGP

RFC 1771 BGPv4
RFC 1772 Application of the BGP
RFC 1965 BGP4 confederations
RFC 1997 BGP Communities Attribute
RFC 1998 PPP Gandalf FZA Compression Protocol
RFC 2385 BGP Session Protection via TCP MD5
RFC 2439 BGP Route Flap Damping
RFC 2796 BGP Route Reflection
RFC 2858 BGP-4 Multi-Protocol Extensions
RFC 2918 Route Refresh Capability
RFC 3065 Autonomous System Confederations for BGP
RFC 3392 Capabilities Advertisement with BGP-4
RFC 4271 A Border Gateway Protocol 4 (BGP-4)
RFC 4272 BGP Security Vulnerabilities Analysis
RFC 4273 Definitions of Managed Objects for BGP-4
RFC 4274 BGP-4 Protocol Analysis

MIBs

RFC 1156 (TCP/IP MIB)
RFC 1157 A Simple Network Management Protocol (SNMP)
RFC 1215 A Convention for Defining Traps for use with the SNMP
RFC 1229 Interface MIB Extensions
RFC 1493 Bridge MIB
RFC 1573 SNMP MIB II
RFC 1643 Ethernet 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 2096 IP Forwarding Table MIB

RFC 4275 BGP-4 MIB Implementation Survey
RFC 4276 BGP-4 Implementation Report
RFC 4277 Experience with the BGP-4 Protocol
RFC 4360 BGP Extended Communities Attribute
RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP)
RFC 5291 Outbound Route Filtering Capability for BGP-4
RFC 5292 Address-Prefix-Based Outbound Route Filter for BGP-4

Denial of service protection
RFC 2267 Network Ingress Filtering
Automatic filtering of well-known denial-of-service packets
CPU DoS Protection
Rate Limiting by ACLs

Device management
RFC 1157 SNMPv1/v2c
RFC 1305 NTPv3
RFC 1902 (SNMPv2)
RFC 2271 FrameWork
RFC 2579 (SMIv2 Text Conventions)
RFC 2580 (SMIv2 Conformance)
RFC 2819 (RMON groups Alarm, Event, History and Statistics only)
HTTP, SSHv1, and Telnet
Multiple Configuration Files
Multiple Software Images
SSHv1/SSHv2 Secure Shell
TACACS/TACACS+
Web UI

General protocols
IEEE 802.1ad Q-in-Q
IEEE 802.1ag Service Layer OAM
IEEE 802.1p Priority
IEEE 802.1Q VLANs
IEEE 802.1s Multiple Spanning Trees
IEEE 802.1w Rapid Reconfiguration of Spanning Tree
IEEE 802.1X PAE
IEEE 802.3ab 1000BASE-T
IEEE 802.3ac (VLAN Tagging Extension)
IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3ae 10-Gigabit Ethernet
IEEE 802.3af Power over Ethernet
IEEE 802.3ah Ethernet in First Mile over Point to Point Fiber - EFMF
IEEE 802.3at
RFC 2233 Interfaces MIB
RFC 2452 IPV6-TCP-MIB
RFC 2454 IPV6-UDP-MIB
RFC 2465 IPv6 MIB
RFC 2466 ICMPv6 MIB
RFC 2571 SNMP Framework MIB
RFC 2572 SNMP-MPD MIB
RFC 2573 SNMP-Notification MIB
RFC 2573 SNMP-Target MIB
RFC 2578 Structure of Management Information Version 2 (SMIv2)
RFC 2580 Conformance Statements for SMIv2
RFC 2618 RADIUS Client MIB
RFC 2620 RADIUS Accounting MIB
RFC 2665 Ethernet-Like-MIB
RFC 2668 802.3 MAU MIB
RFC 2674 802.1p and IEEE 802.1Q Bridge MIB
RFC 2787 VRRP MIB
RFC 2819 RMON MIB
RFC 2925 Ping MIB
RFC 2933 IGMP MIB
RFC 2934 Protocol Independent Multicast MIB for IPv4
RFC 3414 SNMP-User based-SM MIB
RFC 3415 SNMP-View based-ACM MIB
RFC 3417 Simple Network Management Protocol (SNMP) over IEEE 802 Networks
RFC 3418 MIB for SNMPv3
RFC 3595 Textual Conventions for IPv6 Flow Label
RFC 3621 Power Ethernet MIB
RFC 3813 MPLS LSR MIB
RFC 3814 MPLS FTN MIB
RFC 3815 MPLS LDP MIB
RFC 3826 AES for SNMP's USM MIB
RFC 4133 Entity MIB (Version 3)
RFC 4444 Management Information Base for Intermediate System to Intermediate System (IS-IS)

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RFC 2205 Resource ReSerVation Protocol
RFC 2209 Resource ReSerVation Protocol (RSVP)
RFC 2702 Requirements for Traffic Engineering Over MPLS
RFC 2858 Multiprotocol Extensions for BGP-4
RFC 2961 RSVP Refresh Overhead Reduction Extensions
RFC 3031 Multiprotocol Label Switching Architecture
RFC 3032 MPLS Label Stack Encoding
RFC 3107 Carrying Label Information in BGP-4
RFC 3209 RSVP-TE: Extensions to RSVP for LSP

IEEE 802.3ba 40 and 100 Gigabit Ethernet Architecture
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 894 IP over Ethernet
RFC 903 RARP
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 1027 Proxy ARP
RFC 1035 Domain Implementation and Specification
RFC 1042 IP Datagrams
RFC 1058 RIPv1
RFC 1142 OSI IS-IS Intra-domain Routing Protocol
RFC 1195 OSI ISIS for IP and Dual Environments
RFC 1213 Management Information Base for Network Management of TCP/IP-based internets
RFC 1256 ICMP Router Discovery Protocol (IRDP)
RFC 1293 Inverse Address Resolution Protocol
RFC 1305 NTPv3
RFC 1350 TFTP Protocol (revision 2)
RFC 1393 Traceroute Using an IP Option
RFC 1519 CIDR
RFC 1531 Dynamic Host Configuration Protocol
RFC 1533 DHCP Options and BOOTP Vendor Extensions
RFC 1591 DNS (client only)
RFC 1624 Incremental Internet Checksum
RFC 1701 Generic Routing Encapsulation
RFC 1721 RIP-2 Analysis
RFC 1723 RIP v2
RFC 1812 IPv4 Routing
RFC 2030 Simple Network Time Protocol (SNTP) v4
RFC 2082 RIP-2 MD5 Authentication
RFC 2091 Trigger RIP
RFC 2131 DHCP
RFC 2138 Remote Authentication Dial In User Service (RADIUS)
RFC 2236 IGMP Snooping
RFC 2338 VRRP
RFC 2453 RIPv2
Tunnels
RFC 3212 Constraint-Based LSP Setup using LDP
RFC 3479 Fault Tolerance for the Label Distribution Protocol (LDP)
RFC 3487 Graceful Restart Mechanism for LDP
RFC 3564 Requirements for Support of Differentiated Service-aware MPLS Traffic Engineering
RFC 4364 BGP/MPLS IP Virtual Private Networks (VPNs)
RFC 4379 Detecting Multi-Protocol Label Switched (MPLS) Data Plane Failures
RFC 4447 Pseudowire Setup and Maintenance Using LDP
RFC 4448 Encapsulation Methods for Transport of Ethernet over MPLS Networks
RFC 4664 Framework for Layer 2 Virtual Private Networks
RFC 4665 Service Requirements for Layer 2 Provider Provisioned Virtual Private Networks
RFC 4761 Virtual Private LAN Service (VPLS) Using BGP for Auto-Discovery and Signaling
RFC 4762 Virtual Private LAN Service (VPLS) Using Label Distribution Protocol (LDP) Signaling
RFC 5036 LDP Specification

Network management

IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 1155 Structure of Management Information
RFC 1157 SNMPv1
RFC 1448 Protocol Operations for version 2 of the Simple Network Management Protocol (SNMPv2)
RFC 2211 Controlled-Load Network
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
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)

OSPF

RFC 1245 OSPF protocol analysis
RFC 1246 Experience with OSPF
RFC 1765 OSPF Database Overflow
RFC 1850 OSPFv2 Management Information Base (MIB), traps

RFC 2644 Directed Broadcast Control
RFC 2763 Dynamic Name-to-System ID mapping support
RFC 2784 Generic Routing Encapsulation (GRE)
RFC 2865 Remote Authentication Dial In User Service (RADIUS)
RFC 2966 Domain-wide Prefix Distribution with Two-Level IS-IS
RFC 2973 IS-IS Mesh Groups
RFC 3022 Traditional IP Network Address Translator (Traditional NAT)
RFC 3277 IS-IS Transient Blackhole Avoidance
RFC 3567 Intermediate System to Intermediate System (IS-IS) Cryptographic Authentication
RFC 3719 Recommendations for Interoperable Networks using Intermediate System to Intermediate System (IS-IS)
RFC 3784 ISIS TE support
RFC 3786 Extending the Number of IS-IS LSP Fragments Beyond the 256 Limit
RFC 3787 Recommendations for Interoperable IP Networks using Intermediate System to Intermediate System (IS-IS)
RFC 3847 Restart signaling for IS-IS
RFC 4251 The Secure Shell (SSH) Protocol Architecture
RFC 4486 Subcodes for BGP Cease Notification Message
RFC 4884 Extended ICMP to Support Multi-Part Messages
RFC 4941 Privacy Extensions for Stateless Address Autoconfiguration in IPv6
RFC 5130 A Policy Control Mechanism in IS-IS Using Administrative Tags

IP multicast

RFC 2236 IGMPv2
RFC 2283 Multiprotocol Extensions for BGP-4
RFC 2362 PIM Sparse Mode
RFC 3376 IGMPv3
RFC 3446 Anycast Rendezvous Point (RP) mechanism using Protocol Independent Multicast (PIM) and Multicast Source Discovery Protocol (MSDP)
RFC 3618 Multicast Source Discovery Protocol (MSDP)
RFC 3973 PIM Dense Mode
RFC 4541 Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches
RFC 4601 Draft 10 PIM Sparse Mode
RFC 2154 OSPF w/ Digital Signatures (Password, MD-5)
RFC 2328 OSPFv2
RFC 2370 OSPF Opaque LSA Option
RFC 3101 OSPF NSSA
RFC 3137 OSPF Stub Router Advertisement
RFC 3623 Graceful OSPF Restart
RFC 3630 Traffic Engineering Extensions to OSPFv2
RFC 4061 Benchmarking Basic OSPF Single Router Control Plane Convergence
RFC 4062 OSPF Benchmarking Terminology and Concepts
RFC 4063 Considerations When Using Basic OSPF Convergence Benchmarks
RFC 4222 Prioritized Treatment of Specific OSPF Version 2 Packets and Congestion Avoidance
RFC 4577 OSPF as the Provider/Customer Edge Protocol for BGP/MPLS IP Virtual Private Networks (VPNs)
RFC 4811 OSPF Out-of-Band LSDB Resynchronization
RFC 4812 OSPF Restart Signaling
RFC 4813 OSPF Link-Local Signaling
RFC 4940 IANA Considerations for OSPF

QoS/CoS

IEEE 802.1P (CoS)
RFC 1349 Type of Service in the Internet Protocol Suite
RFC 2211 Specification of the Controlled-Load Network Element Service
RFC 2212 Guaranteed Quality of Service
RFC 2474 DSCP DiffServ
RFC 2475 DiffServ Architecture
RFC 2597 DiffServ Assured Forwarding (AF)
RFC 2598 DiffServ Expedited Forwarding (EF)

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 2104 Keyed-Hashing for Message Authentication
RFC 2408 Internet Security Association and Key Management Protocol (ISAKMP)
RFC 2409 The Internet Key Exchange (IKE)

RFC 4604 Using Internet Group Management Protocol Version 3 (IGMPv3) and Multicast Listener Discovery Protocol Version 2 (MLDv2) for Source-Specific Multicast
RFC 4605 IGMP/MLD Proxying
RFC 4607 Source-Specific Multicast for IP
RFC 4610 Anycast-RP Using Protocol Independent Multicast (PIM)
RFC 5059 Bootstrap Router (BSR) Mechanism for Protocol Independent Multicast (PIM)

IPv6
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 2081 RIPng Protocol Applicability Statement
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 2473 Generic Packet Tunneling in IPv6
RFC 2526 Reserved IPv6 Subnet Anycast Addresses
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 2740 OSPFv3 for IPv6
RFC 2767 Dual stacks IPv46 & IPv6
RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers
RFC 3056 Connection of IPv6 Domains via IPv4 Clouds
RFC 3307 IPv6 Multicast Address Allocation
RFC 3315 DHCPv6 (client and relay)
RFC 3484 Default Address Selection for IPv6
RFC 3513 IPv6 Addressing Architecture
RFC 3736 Stateless Dynamic Host Configuration Protocol (DHCP) Service for IPv6
RFC 3810 MLDv2 for IPv6
RFC 4214 Intra-Site Automatic Tunnel Addressing Protocol (ISATAP)
RFC 4861 IPv6 Neighbor Discovery
RFC 4862 IPv6 Stateless Address Auto-configuration

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
Access Control Lists (ACLs)
Guest VLAN for 802.1x
MAC Authentication
Port Security
SSHv1/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 2917 A Core MPLS IP VPN Architecture
RFC 3947 - Negotiation of NAT-Traversal in the IKE
RFC 4302 - IP Authentication Header (AH)
RFC 4303 - IP Encapsulating Security Payload (ESP)

IPsec
RFC 1828 IP Authentication using Keyed MD5
RFC 1829 The ESP DES-CBC Transform
RFC 2085 HMAC-MD5 IP Authentication with Replay Prevention
RFC 2401 IP Security Architecture
RFC 2402 IP Authentication Header
RFC 2406 IP Encapsulating Security Payload
RFC 2410 - The NULL Encryption Algorithm and its use with IPsec
RFC 2411 IP Security Document Roadmap

Accessory Product Details

NOTE: Details are not available for all accessories. The following specifications were available at the time of publication.

HP 7500 48-port 100BASE-FX Module (JD197B)	**Ports**	48 SFP 100BASE-FX ports (IEEE 802.3u Type 100BASE-FX); Duplex: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.72 lb. (3.05 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 48-port 10/100BASE-T Module (JD198B)	**Ports**	48 RJ-45 autosensing 10/100 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3af PoE); Duplex: half or full	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.37 lb. (2.89 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 48-port Gig-T PoE-ready Module (JD199B)	**Ports**	48 RJ-45 autosensing 10/100/1000 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.81 lb. (3.09 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 2-port 10GbE XFP Module (JD201A)	**Ports**	2 XFP 10-GbE ports; Duplex: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.5 lb. (2.95 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP 7500 24-port GbE SFP Module (JD203B)	**Ports**	24 SFP 100/1000 Mbps ports	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.13 lb. (2.78 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 24-port Gig-T Module (JD204B)	**Ports**	24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6 lb. (2.72 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 24-port GbE SFP / 2-port 10GbE XFP Module (JD205A)	**Ports**	24 SFP 100/1000 Mbps ports 2 XFP 10-GbE ports; Duplex: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.5 lb. (2.95 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 12-port GbE SFP Module (JD207A)	**Ports**	12 SFP 100/1000 Mbps ports	
	Physical characteristics	Dimensions	13.98(d) x 1.18(w) x 1.57(h) in. (35.5 x 3 x 4 cm)
		Weight	5.86 lb. (2.66 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP 7500 24-port Gig-T / 2-port 10GbE XFP Module (JD206A)	**Ports**	24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 XFP 10-GbE ports; Duplex: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.44 lb. (2.92 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 48-port Gig-T Module (JD210A)	**Ports**	48 RJ-45 autosensing 10/100/1000 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.81 lb. (3.09 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 48-port GbE SFP Module (JD211B)	**Ports**	48 SFP 100/1000 Mbps ports	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.7 lb. (3.04 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 24-port GbE SFP Module with 8 Combo Ports (JD223A)	**Ports**	16 SFP 100/1000 Mbps ports 8 dual-personality ports; 1000M Combo ports (SFP or RJ-45)	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.11 lb. (2.77 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP 7500 40-port Gig-T / 8-port SFP PoE-ready Module (JD228B)	**Ports**	40 RJ-45 autosensing 10/100/1000 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 8 SFP 100/1000 Mbps ports	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.66 lb. (3.02 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 8-port 10G SFP+ Module (JF290A)	**Ports**	8 SFP+ 10-GbE ports; Duplex: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.97 lb. (3.16 kg)
	Notes	The module (JF290A) only support 10-GbE SFP+ transceiver, not support 1GbE SFP transceiver.	
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 20-port Gig-T / 4-port GbE Combo PoE-upgradable SC Module (JC669A)	**Ports**	20 RJ-45 auto-negotiating 10/100/1000 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 dual-personality ports; Each composed of a 10/100/1000Base-T Gigabit Ethernet port and an SFP port, which cannot be simultaneously used	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.17 lb. (2.8 kg)
	Services	Refer to the HP website at: www.hp.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 HP sales office.	
HP 7500 8-port 10GbE XFP Extended Module (JD191A)	**Ports**	8 XFP 10-GbE ports; Duplex: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	7.12 lb. (3.23 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP 7500 48-port Gig-T PoE+ Extended Module (JD229B)	**Ports**	48 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	7.3 lb. (3.31 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 24-port GbE SFP / 2-port 10GbE XFP Extended Module (JD230A)	**Ports**	16 SFP 1000 Mbps ports 8 dual-personality ports; 1000M Combo ports (SFP or RJ-45) 2 XFP 10-GbE ports; Duplex: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.79 lb. (3.08 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 24-port GbE SFP Extended Module (JD234A)	**Ports**	16 SFP 100/1000 Mbps ports 8 dual-personality ports; 1000M Combo ports (SFP or RJ-45)	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.64 lb. (3.01 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 4-port 10GbE XFP Extended Module (JD235A)	**Ports**	4 XFP 10-GbE ports; Duplex: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.46 lb. (2.93 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP 7500 2-port 10GbE XFP Extended Module (JD236A)	**Ports**	2 XFP 10-GbE ports; Duplex: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.46 lb. (2.93 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 48-port GbE SFP Extended Module (JD237A)	**Ports**	48 SFP 100/1000 Mbps ports	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	7.16 lb. (3.25 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 48-port GbE SFP Enhanced Module (JD221A)	**Ports**	48 SFP 100/1000 Mbps ports	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	7.16 lb. (3.25 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 24-port GbE SFP Enhanced Module (JD231A)	**Ports**	16 XFP 100/1000 Mbps ports 8 dual-personality ports; 1000M Combo ports (SFP or RJ-45)	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.7 lb. (3.04 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 24-port GbE SFP Enhanced Module (JD231A)	**Ports**	16 XFP 100/1000 Mbps ports 8 dual-personality ports; 1000M Combo ports (SFP or RJ-45)	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.7 lb. (3.04 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP 7500 2-port 10GbE XFP Enhanced Module (JD233A)	**Ports**	2 XFP 10-GbE ports; Duplex: full only	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.57(h) in. (35.5 x 37.7 x 4 cm)
		Weight	6.46 lb. (2.93 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	

HP X124 1G SFP LC LH40 1310nm Transceiver (JD061A) A small form-factor pluggable SFP Gigabit LH40 transceiver that provides a full duplex Gigabit solution up to 40km on a single-mode fiber.	**Ports**	1 LC 1000Base-LH port (no IEEE standard exists for 1550 nm optics)	
	Connectivity	Connector type	LC
		Wavelength	1310 nm
	Physical characteristics	Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	Power consumption typical	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 40km distance	
		Fiber type	Single Mode
	Services	Refer to the HP website at www.hp.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 HP sales office.	

HP X120 1G SFP LC LH40 1550nm Transceiver (JD062A) A small form-factor pluggable (SFP) Gigabit LH40 transceiver that provides a full-duplex Gigabit solution up to 40 km on a single mode fiber.	**Ports**	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics)	
	Connectivity	Connector type	LC
		Wavelength	1550 nm
	Physical characteristics	Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	Power consumption typical	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 40km distance	
		Fiber type	Single Mode

Accessory Product Details

	Services		Refer to the HP website at www.hp.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 HP sales office.

HP X125 1G SFP LC LH70 Transceiver (JD063B) A small form-factor pluggable (SFP) Gigabit LH70 transceiver that provides a full-duplex Gigabit solution up to 70km on a single-mode fiber.	**Ports**		1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics)
	Connectivity	**Connector type**	LC
		Wavelength	1550 nm
	Physical characteristics	**Dimensions**	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling		Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 70km
		Fiber type	Single Mode
	Services		Refer to the HP website at www.hp.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 HP sales office.

HP X125 1G SFP RJ45 T Transceiver (JD089B) A small form factor pluggable (SFP) Gigabit 1000Base-T transceiver that provides a full duplex Gigabit solution up to 100m on a Cat-5+ cable.	**Ports**		1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T)
	Connectivity	**Connector type**	RJ-45
	Physical characteristics	**Dimensions**	2.71(d) x 0.54(w) x 0.55(h) in. (6.88 x 1.37 x 1.4 cm)
		Full configuration weight	0.07 lb. (0.03 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling		Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 Ù differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T; Maximum distance: • 100m
	Services		Refer to the HP website at www.hp.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 HP sales office.

Accessory Product Details

HP X120 1G SFP LC BX 10-U Transceiver (JD098B) A small form-factor pluggable (SFP) Gigabit LX-BX10-U transceiver that provides a full duplex Gigabit solution up to 10km on a single mode cable.	**Ports**	1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-U); Duplex: full only	
	Connectivity	**Connector type**	LC
	Physical characteristics	**Dimensions**	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Maximum distance: • 10km	
		Fiber type	Single Mode
	Notes	TX 1310nm RX 1490nm	
	Services	Refer to the HP website at: www.hp.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 HP sales office.	

HP X120 1G SFP LC BX 10-D Transceiver (JD099B) A small form-factor pluggable (SFP) Gigabit LX-BX10-D transceiver that provides a full duplex Gigabit solution up to 10km on a single mode cable.	**Ports**	1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-D); Duplex: full only	
	Connectivity	**Connector type**	LC
	Physical characteristics	**Dimensions**	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Maximum distance: • Up to 10km	
		Fiber type	Single Mode
	Notes	TX 1490nm RX 1310nm	
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP X120 1G SFP LC LH100 Transceiver (JD103A) A small form factor pluggable (SFP) Gigabit LH100 transceiver that provides a full-duplex Gigabit solution up to 100km on a single mode fiber.	**Ports**	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics)	
	Connectivity	**Connector type**	LC
		Wavelength	1550 nm
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • Up to 100km	
		Fiber type	Single Mode
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP X120 1G SFP LC SX Transceiver (JD118B) A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550m on a Multimode fiber.	**Ports**	1 LC 1000BASE-SX port	
	Connectivity	**Connector type**	LC
		Wavelength	850 nm
	Physical characteristics	**Dimensions**	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Maximum distance: • FDDI Grade distance = 220m • OM1 = 275m • OM2 = 500m • OM3 = Not Specified by standard	
		Cable length	up to 550m
		Fiber type	Multi Mode
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP X120 1G SFP LC LX Transceiver (JD119B) A small form-factor pluggable (SFP) Gigabig LX transceiver that provides a full duplex Gigabit solution up to 550m on MMF or 10Km on SMF	**Ports**	1 SFP 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX)	
	Connectivity	**Connector type**	LC
		Wavelength	1300 nm
	Physical characteristics	**Dimensions**	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: Either single mode or multimode; Maximum distance: • 550m for Multimode • 10km for Singlemode	
		Fiber type	Both
	Services	Refer to the HP website at www.hp.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 HP sales office.	

HP 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)	**Cabling**	**Cable type**: 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m; **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. • Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um • Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. • Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. • CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. • BULK CABLE & CABLE ASSEMBLY CONFIGURATION: • Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. • Jacket Color: Aqua for OM3 multimode per TIA 598 • Boot Color: White • Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M

		added for lengths > 30 meters. • Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. • Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.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 HP sales office.
HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)	**Cabling**	**Cable type**: 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m; **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. • Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um • Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. • Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. • CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. • BULK CABLE & CABLE ASSEMBLY CONFIGURATION: • Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. • Jacket Color: Aqua for OM3 multimode per TIA 598 • Boot Color: White • Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. • Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. • Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.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 HP sales office.

Accessory Product Details

HP 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)	**Cabling**	**Cable type**: 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m; **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. ● Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um ● Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. ● Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. ● CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. ● BULK CABLE & CABLE ASSEMBLY CONFIGURATION: ● Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. ● Jacket Color: Aqua for OM3 multimode per TIA 598 ● Boot Color: White ● Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. ● Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. ● Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.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 HP sales office.

Accessory Product Details

HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)	**Cabling**	**Cable type**: 50/125 µm core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m; **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: This specification defines the detail requirements for a tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. ● Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um ● Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. ● Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. ● CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. ● BULK CABLE & CABLE ASSEMBLY CONFIGURATION: ● Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. ● Jacket Color: Aqua for OM3 multimode per TIA 598 ● Boot Color: White ● Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. ● Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. ● Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.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 HP sales office.

Accessory Product Details

HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)	**Cabling**	**Cable type**: 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m; **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. ● Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um ● Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. ● Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. ● CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. ● BULK CABLE & CABLE ASSEMBLY CONFIGURATION: ● Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. ● Jacket Color: Aqua for OM3 multimode per TIA 598 ● Boot Color: White ● Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. ● Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. ● Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.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 HP sales office.

Accessory Product Details

HP 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)	**Cabling**	**Cable type**: 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. ● Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um ● Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. ● Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. ● CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. ● BULK CABLE & CABLE ASSEMBLY CONFIGURATION: ● Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. ● Jacket Color: Aqua for OM3 multimode per TIA 598 ● Boot Color: White ● Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. ● Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. ● Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.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 HP sales office.

Accessory Product Details

HP 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)	**Cabling**	**Cable type**: 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. ● Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um ● Optical glass: Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. ● Optical glass: Bandwidth: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. ● CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber and designed to work in both the 850 and 1300 nm wavelength windows. ● BULK CABLE & CABLE ASSEMBLY CONFIGURATION: ● Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. ● Jacket Color: Aqua for OM3 multimode per TIA 598 ● Boot Color: White ● Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. ● Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. ● Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.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 HP sales office.

Accessory Product Details

HP 1 m PremierFlex OM3+ LC/LC Optical Cable (BK838A)	**Notes**	Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end. • Core Diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um • Bandwidth: 3000 MHz-km @ 850nm (Laser) • Jacket Color: Blue • Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic • Boot Color: White • Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable. • Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m • Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45
	Services	Refer to the HP website at www.hp.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 HP sales office.

HP 10500/7500 20G Unified Wired-WLAN Module (JG639A)

Ports	1 RJ-45 serial console port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	1 RJ-45 out-of-band management port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
Physical characteristics	**Dimensions**	15.71(w) x 13.98(d) x 1.57(h) in (39.9 x 35.5 x 4.0 cm) (1U height)
	Weight	7.98 lb (3.62 kg)
Memory and processor	**Processor**	Eight core @ 950 MHz, 1 GB compact flash, 2 GB DDR2 DIMM
Performance	**Switch fabric speed**	10 Gbps
	MAC address table size	24000 entries
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
Electrical characteristics	**Maximum heat dissipation**	512 BTU/hr (540.16 kJ/hr)
	Maximum power rating	150 W
	Notes	Power consumption: 118 W-150 W
Safety	UL 60950-1; CAN/CSA 22.2 No. 60950-1; IEC 60950-1; EN 60950-1; FDA 21 CFR Subchapter J	
Emissions	EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; AS/NZS CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; VCCI-3 CLASS A; VCCI-4 CLASS A; ETSI EN 300 386; FCC Part 15 (CFR 47) CLASS A	

Accessory Product Details

Immunity	**EN**	EN 55024, CISPR24 & ETSI EN 300 386
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager; Telnet; HTTPS; RMON1; FTP; in-line and out-of-band; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	
Features	For use in HP 10500 Switch Series and HP 7500 Switch Series Default supported APs: 128 Maximum supported APs: 1,024 (via the optional purchase of the 128-Access Point E-LTU) Maximum supported users: 20,000 Maximum supported users via local portal authentication: 4,000 Maximum supported users via local authentication: 1,000 Maximum supported configured SSIDs: 512 Maximum supported ACLs: 32,000 Supported MSM APs are automatically discovered, Comware firmware is loaded, and the APs can be fully managed.	
Services	Refer to the HP website at: www.hp.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 HP sales office.	

Standards and protocols

General protocols
RFC 768 UDP
RFC 791 IP
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 854 TELNET
RFC 855 Telnet Option Specification
RFC 858 Telnet Suppress Go Ahead Option
RFC 894 IP over Ethernet
RFC 950 Internet Standard Subnetting Procedure
RFC 959 File Transfer Protocol (FTP)
RFC 1122 Host Requirements
RFC 1141 Incremental updating of the Internet
checksum
RFC 1144 Compressing TCP/IP headers for low-speed
serial links
RFC 1256 ICMP Router Discovery Protocol (IRDP)
RFC 1321 The MD5 Message-Digest Algorithm
RFC 1334 PPP Authentication Protocols (PAP)
RFC 1350 TFTP Protocol (revision 2)
RFC 1812 IPv4 Routing
RFC 1944 Benchmarking Methodology for Network
RFC 2461 IPv6 Neighbor Discovery
RFC 2462 IPv6 Stateless Address Auto-configuration
RFC 2463 ICMPv6
RFC 2464 Transmission of IPv6 over Ethernet Networks
RFC 2465 Management Information Base for IP Version
6: Textual Conventions and General Group(partially
support, only "IPv6 Interface Statistics table")
RFC 2466, Management Information Base for IP Version
6 - ICMPv6
RFC 2526 Reserved IPv6 Subnet Anycast Addresses
RFC 2553 Basic Socket Interface Extensions for IPv6
RFC 2563 ICMPv6
RFC 2925 Definitions of Managed Objects for Remote
Ping, Traceroute, and Lookup Operations (Ping only)
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
RFC 3513 IPv6 Addressing Architecture
RFC 3542 Advanced Sockets API for IPv6
RFC 3587 IPv6 Global Unicast Address
IEEE 802.11i Medium Access Control (MAC) Security Enhancements
IEEE 802.11n WLAN Enhancements for Higher Throughput
Note: All of the above standards are now included in IEEE 802.11-2012

Network management
RFC 1155 Structure of Management Information
RFC 1905 SNMPv2 Protocol Operations
RFC 2573 SNMPv3 Applications
RFC 2574 SNMPv3 User-based Security Model (USM)
RFC 2575 VACM for SNMP
SNMPv1/v2c

QoS/CoS
RFC 2474 DS Field in the IPv4 and IPv6 Headers
RFC 2474 DSCP DiffServ
RFC 2475 DiffServ Architecture
RFC 3168 The Addition of Explicit Congestion
Notification (ECN) to IP
WiFi MultiMedia (WMM), IEEE 802.11e

Security
IEEE 802.1X Port Based Network Access Control
RFC 3394 Advanced Encryption Standard (AES) Key Wrap

Accessory Product Details

Interconnect Devices
RFC 1994 PPP Challenge Handshake Authentication
Protocol (CHAP)
RFC 2104 HMAC: Keyed-Hashing for Message
Authentication
RFC 2246 The TLS Protocol Version 1.0
RFC 2284 EAP over LAN
RFC 2644 Directed Broadcast Control
RFC 2864 The Inverted Stack Table Extension to the
Interfaces Group MIB
RFC 2866 RADIUS Accounting
RFC 2869 RADIUS Extensions
RFC 3268 Advanced Encryption Standard (AES)
Ciphersuites for Transport Layer Security (TLS)
RFC 3619 Ethernet Automatic Protection Switching
(EAPS)

IP multicast
RFC 1112 IGMP
RFC 2236 IGMPv2
RFC 2934 Protocol Independent Multicast MIB for IPv4

IPv6
RFC 1350 TFTP
RFC 1881 IPv6 Address Allocation Management
RFC 1887 IPv6 Unicast Address Allocation Architecture
RFC 1981 IPv6 Path MTU Discovery
RFC 2292 Advanced Sockets API for IPv6
RFC 2373 IPv6 Addressing Architecture
RFC 2375 IPv6 Multicast Address Assignments
RFC 2460 IPv6 Specification
Format
RFC 3596 DNS Extension for IPv6
RFC 4193, Unique Local IPv6 Unicast Addresses
RFC 4443 ICMPv6
RFC 4541 IGMP & MLD Snooping Switch
RFC 4861 IPv6 Neighbor Discovery
RFC 4862 IPv6 Stateless Address Auto-configuration
RFC 5095 Deprecation of Type 0 Routing Headers in IPv6

MIBs
RFC 1229 Interface MIB Extensions
RFC 1643 Ethernet MIB
RFC 1757 Remote Network Monitoring MIB
RFC 2011 SNMPv2 MIB for IP
RFC 2012 SNMPv2 MIB for TCP
RFC 2013 SNMPv2 MIB for UDP
RFC 2571 SNMP Framework MIB
RFC 2572 SNMP-MPD MIB
RFC 2613 SMON MIB
RFC 2863 The Interfaces Group MIB
RFC 2932IP (Multicast Routing MIB)
RFC 2933 IGMP MIB

Mobility
IEEE 802.11a High Speed Physical Layer in the 5 GHz Band
IEEE 802.11b Higher-Speed Physical Layer Extension in the 2.4 GHz Band
IEEE 802.11d Global Harmonization
IEEE 802.11e QoS enhancements
IEEE 802.11g Further Higher Data Rate Extension in the 2.4 GHz Band
IEEE 802.11h Dynamic Frequency Selection
Algorithm
RFC 3579 RADIUS Support For Extensible Authentication Protocol (EAP)
Access Control Lists (ACLs)
Guest VLAN for 802.1x
Secure Sockets Layer (SSL)
SSHv2 Secure Shell
Web Authentication
WPA (Wi-Fi Protected Access)/WPA2

IKEv1
RFC 3748 - Extensible Authentication Protocol (EAP)

Accessory Product Details

HP 7500 Access Controller Module (JD440A)

Ports	1 RJ-45 serial console port 1 RJ-45 out-of-band management port 2 USB 1.0 12 Mbps ports	
Physical characteristics	**Dimensions**	14.45(d) x 13.39(w) x 1.6(h) in. (36.7 x 34 x 4.06 cm) (1U height)
	Weight	7.28 lb. (3.3 kg)
Memory and processor	**Processor**	Eight core @ 950 MHz, 256 MB compact flash, 1 GB DDR2 DIMM
Performance	**Switch fabric speed**	20 Gbps
	MAC address table size	24000 entries
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
Electrical characteristics	**Maximum heat dissipation**	273 BTU/hr (288.02 kJ/hr)
	Maximum power rating	80 W
Safety	UL 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; GOST; C-Tick; NOM; IEC 60950-1(with CB report)	
Emissions	EN 55022; VCCI; ICES-003; AS/NZS CISPR 22; EN 300 386; FCC Part 15; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC	
Immunity	**EN**	EN 61000-4-2:1995+A1:1998+A2:2001; EN 61000-4-3:2006; EN 61000-4-4:2004; EN 61000-4-5:2006; EN 61000-4-6: 1996 +A1:2001:A2:2007; EN 61000-4-8:2001; EN 61000-4-11:2004; EN 55024:1998+ A1:2001 + A2:2003
Management	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; SNMP Manager; Telnet; HTTPS; RMON1; FTP; in-line and out-of-band; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	
Features	A7500 ACM License system - The A7500 ACM is an access controller module for the HP A7500 series Ethernet switches. It supports 128 APs by default. After license upgrade, the access controller module can support up to 640 APs.	
Notes	Max. number of users: 20K. Max. number of users that are supported by local authentication: 1K. Max. number of SSIDs that can be configured: 512. Max. number of users that are supported by local portal authentication: 4K. Number of ACLs: 32K.	
Services	Refer to the HP website at: www.hp.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 HP sales office.	

Standards and protocols	**General protocols**	**MIBs**
	RFC 768 UDP	RFC 1229 Interface MIB Extensions
	RFC 791 IP	RFC 1643 Ethernet MIB
	RFC 792 ICMP	RFC 1757 Remote Network Monitoring MIB
	RFC 793 TCP	RFC 2011 SNMPv2 MIB for IP
	RFC 826 ARP	RFC 2012 SNMPv2 MIB for TCP
	RFC 854 TELNET	RFC 2013 SNMPv2 MIB for UDP

RFC 855 Telnet Option Specification
RFC 858 Telnet Suppress Go Ahead Option
RFC 894 IP over Ethernet
RFC 950 Internet Standard Subnetting Procedure
RFC 959 File Transfer Protocol (FTP)
RFC 1122 Host Requirements
RFC 1141 Incremental updating of the Internet checksum
RFC 1144 Compressing TCP/IP headers for low-speed serial links
RFC 1256 ICMP Router Discovery Protocol (IRDP)
RFC 1321 The MD5 Message-Digest Algorithm
RFC 1334 PPP Authentication Protocols (PAP)
RFC 1350 TFTP Protocol (revision 2)
RFC 1812 IPv4 Routing
RFC 1944 Benchmarking Methodology for Network Interconnect Devices
RFC 1994 PPP Challenge Handshake Authentication Protocol (CHAP)
RFC 2104 HMAC: Keyed-Hashing for Message Authentication
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RFC 2460 IPv6 Specification
RFC 2461 IPv6 Neighbor Discovery
RFC 2462 IPv6 Stateless Address Auto-configuration
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Secure Sockets Layer (SSL)
SSHv1.5 Secure Shell
SSHv2 Secure Shell
Web Authentication
WPA (Wi-Fi Protected Access)/WPA2

Accessory Product Details

	RFC 2463 ICMPv6 RFC 2464 Transmission of IPv6 over Ethernet Networks RFC 2526 Reserved IPv6 Subnet Anycast Addresses RFC 2563 ICMPv6 RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only) RFC 3484 Default Address Selection for IPv6 RFC 3587 IPv6 Global Unicast Address Format RFC 4443 ICMPv6 RFC 4541 IGMP & MLD Snooping Switch RFC 4861 IPv6 Neighbor Discovery RFC 4862 IPv6 Stateless Address Auto-configuration RFC 5095 Deprecation of Type 0 Routing Headers in IPv6		RFC 3748 - Extensible Authentication Protocol (EAP)
HP TippingPoint S1200N IPS A7500 Module (JC527A)	**Ports**	2 SFP 1000 Mbps ports 2 RJ-45 1000 Mbps ports 1 Compact Flash port 1 RJ-45 serial console port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T) Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	Physical characteristics	**Dimensions**	13.7(d) x 15.7(w) x 1.6(h) in. (34.8 x 39.88 x 4.06 cm)
		Weight	7.7 lb. (3.49 kg), Fully loaded
	Electrical characteristics	**Throughput**	up to 1.3 Gbps
		IPS/IDS throughput	1.3 Gbps inspected throughput
		Concurrent sessions	6,500,000
		New sessions/second	78K
	Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
		Operating relative humidity	10% to 95%, noncondensing
		Nonoperating/Storage temperature	-20°F to 45°F (-28.9°C to 7.2°C)
	Services	Refer to the HP website at: www.hp.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 HP sales office.	
	Standards and protocols	**Denial of service protection**	Automatic filtering of well-known denial-of-service packets Rate Limiting by ACLs
		IPv6	RFC 2460 IPv6 Specification

Accessory Product Details

HP 7500 384Gbps Fabric Module with 2 XFP Ports (JD193B)	**Ports**	1 RJ-45 dual-personality port; One console port, used for local or remote configuration and management 1 RJ-45 autosensing 10/100 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 1 Compact Flash port 2 XFP 10-GbE ports; Duplex: full only	
	Physical characteristics	**Dimensions**	13.98(d) x 14.84(w) x 1.77(h) in. (35.5 x 37.7 x 4.5 cm)
		Weight	7.94 lb. (3.6 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 384Gbps Fabric Module (JD194B)	**Ports**	1 RJ-45 dual-personality port; One console port, used for local or remote configuration and management 1 RJ-45 autosensing 10/100 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 1 Compact Flash port	
	Physical characteristics	**Dimensions**	13.98(d) x 14.84(w) x 1.77(h) in. (35.5 x 37.7 x 4.5 cm)
		Weight	7.94 lb. (3.6 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 384Gbps Advanced Fabric Module (JD195A)	**Ports**	1 RJ-45 dual-personality port; One console port, used for local or remote configuration and management 1 RJ-45 autosensing 10/100 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 1 Compact Flash port	
	Physical characteristics	**Dimensions**	13.98(d) x 14.84(w) x 1.77(h) in. (35.5 x 37.7 x 4.5 cm)
		Weight	7.94 lb. (3.6 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP 7500 768Gbps Fabric Module (JD220A)	**Ports**	1 RJ-45 dual-personality port; One console port, used for local or remote configuration and management 1 RJ-45 autosensing 10/100 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 1 Compact Flash port	
	Physical characteristics	**Dimensions**	13.98(d) x 14.84(w) x 1.77(h) in. (35.5 x 37.7 x 4.5 cm)
		Weight	7.85 lb. (3.56 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7500 1400W DC Power Supply (JD208A)	**Physical characteristics**	**Dimensions**	7.72(w) x 14.06(d) x 5.04(h) in (19.6 x 35.7 x 12.8 cm) (3U height)
		Weight	20.39 lb (9.25 kg)
	Electrical characteristics	**Voltage**	0~-48/-60V
		Current	0/50 A
		Idle power	168 W
		Maximum power rating	1400 W
		PoE power	140 W
		Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP 7500 1400W AC Power Supply (JD218A)	**Physical characteristics**	**Dimensions**	7.72(w) x 14.06(d) x 5.04(h) in (19.6 x 35.7 x 12.8 cm) (3U height)
		Weight	14 lb (6.35 kg)
	Electrical characteristics	**Voltage**	100-120/200-240 VAC
		Current	0/16 A
		Idle power	196 W
		Maximum power rating	1400 W
		PoE power	0 W
		Frequency	50/60 Hz
		Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. 1400W AC Power Supply uses a 16-A AC power cable
	Notes	US order needs to indicate either #ABA option (for 110V) or #B2E (for 220V). This will determine which power cord the distribution centres include with the product.	
	Services	Refer to the HP website at www.hp.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 HP sales office.	

HP 7500 6000W AC Power Supply (JD227A)	**Physical characteristics**	**Dimensions**	7.72(w) x 14.06(d) x 5.04(h) in (19.6 x 35.7 x 12.8 cm) (3U height)
		Weight	28.22 lb (12.8 kg)
	Electrical characteristics	**Voltage**	100-120/200-240 VAC
		Current	0/16 A
		Idle power	105 W
		Maximum power rating	6000 W
		PoE power	5300 W
		Frequency	50/60 Hz
		Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. 6000W AC Power Supply uses a 16-A AC power cable.

Accessory Product Details

	Notes	US order needs to indicate either #ABA option (for 110V) or #B2E (for 220V). This will determine which power cord the distribution centres include with the product.	
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7503 Fabric Module with 24 GbE Ports (JD222A)	**Ports**	1 RJ-45 dual-personality port; One console port, used for local or remote configuration and management 1 RJ-45 autosensing 10/100 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 16 SFP 100/1000 Mbps ports 8 dual-personality ports; Combo ports (RJ45 or SFP)	
	Physical characteristics	Dimensions	14.84(w) x 13.98(d) x 1.77(h) in (37.7 x 35.5 x 4.5 cm)
		Weight	6.17 lb (2.8 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7503-S 144 Gbps Fabric / Main Processing Unit with PoE-upgradable 20p Gig-T / 4p GbE Combo (JC666A)	**Ports**	1 RJ-45 serial console port; One console port, used for local or remote configuration and management of the switch through a dialup connection 1 RJ-45 autosensing 10/100 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 20 RJ-45 auto-negotiating 10/100/1000 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 dual-personality ports; each of which consists of a 10/100/1000Base-T port and an SFP port. The two ports comprising a Combo port cannot operate at the same time.	
	Physical characteristics	Dimensions	13.98(w) x 14.84(d) x 1.77(h) in (35.51 x 37.69 x 4.5 cm)
		Weight	6.31 lb (2.86 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP 7503-S 144 Gbps TAA Fabric/Main Processing Unit with 16 GbE SFP Ports and 8 GbE Combo Ports (JC698A)	**Ports**	1 RJ-45 dual-personality port; One console port, used for local or remote configuration and management 1 RJ-45 autosensing 10/100 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 16 SFP 100/1000 Mbps ports 8 dual-personality ports; Combo ports (RJ45 or SFP)	
	Physical characteristics	Dimensions	13.98(d) x 14.84(w) x 1.77(h) in. (35.5 x 37.7 x 4.5 cm)
		Weight	6.17 lb. (2.8 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	

HP 7500 650W AC Power Supply (JD217A)	**Physical characteristics**	**Dimensions**	5.51(w) x 13.78(d) x 1.57(h) in (14 x 35 x 4 cm) (1U height)
		Weight	5.34 lb (2.42 kg)
	Electrical characteristics	**Voltage**	100-120/200-240 VAC
		Current	0/10 A
		Idle power	97.5 W
		Maximum power rating	650 W
		PoE power	0 W
		Frequency	50/60 Hz
		Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. 650W AC Power Supply uses a 10-A AC power cable
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP 7500 650W DC Power Supply (JD209A)	**Physical characteristics**	**Dimensions**	5.51(w) x 13.78(d) x 1.57(h) in (14 x 35 x 4 cm) (1U height)
		Weight	4.96 lb (2.25 kg)
	Electrical characteristics	**Voltage**	0~-48/-60V
		Current	0/25 A
		Idle power	97.5 W
		Maximum power rating	650 W
		PoE power	0 W
		Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
	Services	Refer to the HP website at www.hp.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 HP sales office.	

HP 7502 300W AC Power Supply (JD226A)	**Physical characteristics**	**Dimensions**	5.51(w) x 13.78(d) x 1.57(h) in (14 x 35 x 4 cm) (1U height)
		Weight	4.17 lb (1.89 kg)
	Electrical characteristics	**Voltage**	100-120/200-240 VAC
		Current	0/5 A
		Idle power	54 W
		Maximum power rating	300 W
		PoE power	0 W
		Frequency	50/60 Hz
		Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. 300W AC Power Supply uses a 10-A AC power cable
	Services	Refer to the HP website at www.hp.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 HP sales office.	

Accessory Product Details

HP 7502 Fabric Module (JD196A)	**Ports**	1 RJ-45 dual-personality port; One console port, used for local or remote configuration and management 1 RJ-45 autosensing 10/100 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 1 Compact Flash port	
	Physical characteristics	Dimensions	7.83(w) x 13.98(d) x 1.77(h) in (19.9 x 35.5 x 4.5 cm)
		Weight	2.98 lb. (1.35 kg)
	Services	Refer to the HP website at www.hp.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 HP sales office.	
HP 7502 TAA-compliant Main Processing Unit (JC697A)	**Ports**	1 RJ-45 dual-personality port; One console port, used for local or remote configuration and management 1 RJ-45 autosensing 10/100 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 1 Compact Flash port	
	Physical characteristics	Dimensions	13.98(d) x 7.83(w) x 1.77(h) in. (35.5 x 19.9 x 4.5 cm)
		Weight	2.98 lb. (1.35 kg)
	Services	Refer to the HP website at: www.hp.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 HP sales office.	
HP 7500 4-port 40GbE QSFP+ SC Module (JC792A)	**Physical characteristics**	**Dimensions**	10.08(w) x 11.73(d) x 1.57(h) in (25.6 x 29.8 x 4 cm)
		Weight	6.88 lb (3.12 kg)
	Services	Refer to the HP website at: www.hp.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 HP sales office.	
HP 7500 4-port 40GbE CFP SC Module (JG373A)	**Physical characteristics**	**Dimensions**	16.77(w) x 11.73(d) x 1.57(h) in (42.6 x 29.8 x 4 cm)
		Weight	7.63 lb (3.46 kg))
	Services	Refer to the HP website at: www.hp.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 HP sales office.	

To learn more, visit: www.hp.com/networking