



HPE FLEXNETWORK 7500X 12-PORT 40G/4- PORT 100G QSFP28 SG MODULE (R8N58A)

Modular Ethernet Switches



WHAT'S NEW

- Higher bandwidth of 480 Gbps/slot and increased scalability with up to 288K MAC, up to 104K ARP and up to 256K FIB (depending on the LPU and operational mode) for enhanced switch performance.
- Multiple interface options of 1/10/40/100 GbE with higher port counts of up to 40*100G across the 3 models to meet

OVERVIEW

The HPE FlexNetwork 7500X Switch Series delivers versatile, multi-layered, high performance, modular switches for enterprise LAN edge, aggregation and core layers. It offers 1/10/40/100GbE connectivity with PoE/PoE+ models to meet both existing and future requirements. Higher switching bandwidth (480Gbps/slot) and L2/L3 routing services support mission-critical environments. Virtual Extensible LAN (VXLAN) and Ethernet VPN (BGP EVPN) offer

varying network scale demands.

- Virtual Extensible LAN (VXLAN) with Ethernet VPN (BGP EVPN) allows greater flexibility, better performance with wire speed, better scalability and enhanced security.
- Enhanced programmability for faster time to service and integration into modern tools (Puppet/Chef/Ansible) with CLI, SNMPv2/v3, full Netconf/Yang models, Rest APIs, and scripting (python).
- Comprehensive security at every layer including micro-segmentation which enables grouping of endpoints based on specific criteria.
- Enhanced Media Delivery Index (eMDI) to monitor audio-video quality and locate faults. Multicast DNS (mDNS) for endpoints to find a device/service in a local network with no preconfigured name server.

greater scalability and better utilization of available network paths. Application telemetry provides real time switch capacity and utilization. Support for IPv4/IPv6, MPLS/VPLS features provide investment protection and an easy transition from IPv4 to IPv6 networks. HPE Intelligent Resilient Fabric (IRF) enables flatter and more agile networks.

HPE Intelligent Management Center (IMC) provides a single view of the entire network. Ease of maintenance is enabled with Graceful Insertion and Removal (GIR) and In Service Software Update (ISSU).

FEATURES

Powerful Performance

The HPE FlexNetwork 7500X Switch series offers up to 480 Gbps of switching capacity per slot that is three times the switching capacity of HPE FlexNetwork 7500 Switch series at 160 Gbps per slot.

It offers up to 40x100GbE / 240x40GbE / 480x10GbE / 480x1GbE ports or a combination of these, along with PoE/PoE+ support with up to 1440W power per slot for IP phones, cameras, and future high-density Internet of Things (IoT) deployments.

Supports switching capacity of up to 9.6Tbps for enhanced performance of mission critical environments. Up to 288K MAC, up to 104K ARP, and up to 256K FIB tables allow higher scalability, depending on the LPU and operational mode chosen during first installations.

Enhanced Media Delivery Index (eMDI) monitors audio and video service quality. It locates faults by analyzing specific TCP/RTP packets of each node in an IP network in real time to solve packet loss, packet sequence errors, and jitters.

The HPE FlexNetwork 7500X Switch Series provides Flexible authentication options including 802.1X, MAC and Web Authentication and Endpoint Admission Defense, delivering greater security and policy-driven application authentication.

High Resiliency and Scalability

The HPE FlexNetwork 7500X Switch series offers high availability with redundant power modules, fan trays, hot-swappable interface modules, and power module self-protection mechanisms.

Intelligent Resilient Framework (IRF) virtualizes up to four physical switches into one for simpler, flatter, more agile and highly available networks.

Virtual Routing Redundancy Protocol (VRRP) creates redundant and highly available routed environments with groups of two routers, ensuring continuous packet forwarding in the event of a single failed router.

Graceful Insertion and Removal (GIR) minimizes service interruption by instructing affected protocols to isolate the device for maintenance/upgrade and alter to the redundant path. GIR supports: LACP, BGP, IS-IS, OSPF, and OSPFv3.

Virtual Extensible LAN (VXLAN) and Ethernet VPN (BGP EVPN) enable greater network integration flexibility, improved performance, better scalability without redesigning the underlay network, restrict attacks with enhanced security, especially in spine-leaf architectures.



Robust Quality of Service (QoS)

The HPE FlexNetwork 7500X Switch series supports operations, administration, and maintenance (OAM), Rapid Ring Protection Protocol (RRPP), multi-level QoS, MPLS and VPLS, and In-Service Software Upgrade (ISSU) for business continuity and improving manageability.

Micro-segmentation enables grouping of endpoints based on specific criteria for application of group-based policies, implemented by using PBR / QoS / PacketFilter.

No hidden costs with the license-free L2 / L3 feature set which includes IPv6, MPLS functionality and robust QoS. It also supports varying security management login, RADIUS, SSH, TACACS/TACACS+ to protect and control change management access.

Multicast DNS (mDNS) is a zero-configuration networking (zeroconf) protocol. It enables endpoint devices to automatically discover available services advertised by mDNS service providers without using preconfigured name servers such as DNS Multicast.

Advanced distributed denial of service (DDOS) protection, such as DHCP Snooping, IP Source Guard, and ARP Protection, and flexible traffic controls, such as policy-based routing, QoS, and ACLs are available to manage end-to-end application priorities.

Simplified Management

The HPE FlexNetwork 7500X Switch Series can be seamlessly managed with HPE Intelligent Management Center (IMC) to provide end-to-end network transparency with a consistent network experience.

Provides multiple management interfaces such as the console port, out-of-band management Ethernet port, and USB port. It also supports configuration and management from CLI or a general-purpose web-based manager.

Single IP address to manage the whole IRF fabric, simplifying device and topology management, improving operating efficiency, and lowering network maintenance cost.

Supports multiple access methods, including SNMPv1/v2c/v3, Telnet, SSH 2.0 and SSL to facilitate centralized discovery, monitoring, and secure management of networking devices. It also provides complete session logging to aid problem identification and resolution.

Supports entire set of programming tools from legacy CLI/SNMP to full Netconf/Yang model. Rest APIs combined with scripting (python) allow inclusion of these switches into modern toolchains (Puppet/Chef/Ansible playbooks).



Technical specifications

HPE FlexNetwork 7500X 12-port 40G/4-port 100G QSFP28 SG Module

Product Number	R8N58A
Differentiator	12-port 40G 4-port 100G QSFP28 SG module for use in select HPE FlexFabric switches.
Ports	Supports a maximum of 10 I/O module slots with 40 100 GbE ports or 240 40GbE ports or 480 10GbE ports or 480 1GbE ports or 480 Fiber Ethernet ports, or a combination depending on configuration selected
Memory and processor	Flash 4 GB, SDRAM 4 GB depending on chosen configuration
Throughput	Up to 7200 Mpps
Routing/switching capacity	Up to 9.6 Tbps depending on switch and chassis chosen
Stacking capabilities	4
Management features	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.
Input voltage	100–120/200–240VAC rated depending on power supply chosen
Heat dissipation	Up to 8163 BTU/hr depending on modules chosen
Product Dimensions (metric)	4.1 x 39.9 x 35.6 cm
Weight	3.6 kg



For additional technical information, available models and options, please reference the [QuickSpecs](#)

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Defective Media Retention is optional and allows you to retain Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

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Parts and Materials: HPE will provide HPE-supported replacement parts and materials required to maintain the covered hardware.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

Image may differ from the actual product
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