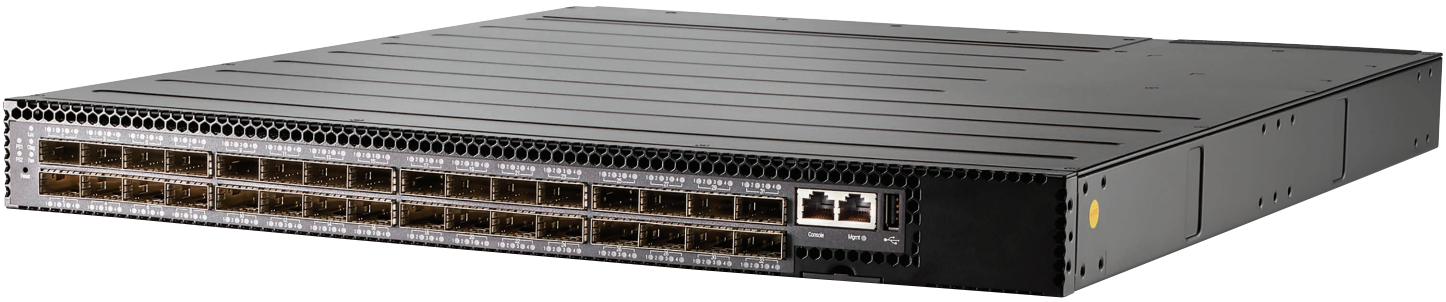
Hewlett Packard Enterprise

Data sheet

HPE Altoline 6960 Switch Series



Key features

- High 100GbE port density and low latency for demanding applications
- Open Network Install Environment (ONIE) boot loader for choice of network OS and easy installation
- Open-networking and disaggregated solution for customer choice
- VXLAN for efficient network virtualization overlay solutions
- x86 CPU, 100GbE, and redundant fans and power supplies for data center deployments

Product overview

- HPE Altoline 6960 Switch Series are top-of-rack (ToR) or spine switches for high-performance data centers. In a compact 1RU form factor, the switch provides line-rate L2 and L3 switching across up to 32 x QSFP28 ports, supporting 25GbE server connections as a ToR switch, or 100GbE spine interconnects as a spine switch.
- The 32 fixed QSFP28 ports support up to 32 x 100GbE connections.
- HPE Altoline 6960 Switch Series are bare-metal switches loaded with ONIE, which supports the installation of compatible independent switch OS offerings.

Features and benefits

Data center optimized

- **Flexible high-port density**
  HPE Altoline 6960 Switch Series enables scaling of the server edge with 100GbE spine and ToR deployments to new heights with high-density 32-port solutions delivered in a 1RU design. Up to 32 100GbE QSFP28 ports can also be configured as four 25GbE ports by using a 100GbE-to-25GbE splitter cable providing up to 128 25GbE ports
- **High-performance switching**
  Cut-through and nonblocking architecture delivers low latency (600–720 nanosecond for 100GbE) for very demanding enterprise applications; the switch delivers high-performance switching capacity and wire-speed packet forwarding

- **Hot/cold aisle support**
  Models available with front-to-back (port-to-power) or back-to-front (power-to-port) airflow
- **Redundant fans and power supplies**
  1+1 internal redundant and hot-pluggable power supplies and N+1 redundant fan trays enhance reliability and availability
- **VXLAN hardware support**
  Supports VXLAN VTEP overlay technologies

Manageability

- **Out-of-band interface**
  Isolates management traffic from user data plane traffic for complete isolation and total reachability, no matter what happens in the data plane
- **ONIE bootloader**
  Switch is loaded with ONIE software installer
- **Intel® x86 CPU**
  Provides high-performance support of widely available, industry-standard software and utilities

Layer 2 switching

- VLAN support
- Provides support for 4,096 VLAN IDs

Additional information

- Low-power consumption
- Typical operation uses just 267 W of AC power

Warranty and support

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

	HPE Altoline 6960 32QSFP28 x86 ONIE AC Front-to-Back Switch (JL279A)	HPE Altoline 6960 32QSFP28 x86 ONIE AC Back-to-Front Switch (JL280A)
I/O ports and slots	32 QSFP28 100GbE ports	32 QSFP28 100GbE ports
Additional ports and slots	1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 USB 2.0	1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 USB 2.0
Power supplies	2 power supply slots 1 minimum power supply required includes: 2 x PSUs	2 power supply slots 1 minimum power supply required includes: 2 x PSUs
Fan tray	5 fan tray slots Switch comes with five (5) fan trays (port to power airflow)	5 fan tray slots Switch comes with five (5) fan trays (power to port airflow)
Physical characteristics		
Dimensions	17.26(w) x 20.28(d) x 1.73(h) in. (43.84 x 51.50 x 4.4 cm)	17.26(w) x 20.28(d) x 1.73(h) in. (43.84 x 51.50 x 4.4 cm)
Weight	18.52 lb (8.4 kg)	18.52 lb (8.4 kg)
Memory and processor	Intel Rangeley C2538 4-core @ 2.4 GHz, 8 GB DDR3 SDRAM; Storage: mSATA: 32 GB; Packet buffer size: 12 MB, 8 GB NAND flash	Intel Rangeley C2538 4-core @ 2.4 GHz, 8 GB DDR3 SDRAM; Storage: mSATA: 32 GB; Packet buffer size: 12 MB, 8 GB NAND flash
Performance		
Routing/Switching capacity	3.2 Tbps	3.2 Tbps
MAC address table size	8000 entries	8000 entries
Environment		
Operating temperature	32°F to 113°F (0°C to 45°C)	32°F to 104°F (0°C to 40°C)
Operating relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Altitude	Up to 10,000 ft (3 km)	Up to 10,000 ft (3 km)
Acoustic	Power: 62 dB	Power: 62 dB
Electrical characteristics		
Frequency	50/60 Hz	50/60 Hz
Voltage	90–264 VAC, rated (depending on power supply chosen)	90–264 VAC, rated (depending on power supply chosen)
Maximum power rating	315 W	315 W
Idle power	267 W Idle power is the actual power consumption of the device with no ports connected.	267 W Idle power is the actual power consumption of the device with no ports connected.
Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded, 100% traffic, all ports plugged in, and all modules populated. PSU Efficiency: Up to 93% for AC PSUs	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded, 100% traffic, all ports plugged in, and all modules populated. PSU Efficiency: Up to 93% for AC PSUs
Safety	cUL Certified; EN 60950; EN 55022 Class A; VCCI Class A; RoHS Compliance; FCC Class A: Regulations for Radio Frequency Devices for Electromagnetic Compliance; UL	cUL Certified; EN 60950; EN 55022 Class A; VCCI Class A; RoHS Compliance; FCC Class A: Regulations for Radio Frequency Devices for Electromagnetic Compliance; UL

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Emissions	FCC part 15 Class A; EN 55022 Class A; VCCI	FCC part 15 Class A; EN 55022 Class A; VCCI
Immunity ESD EFT/Burst	 EN 60950 IEC 68-2-14	 EN 60950 IEC 68-2-14
Management	Command-line interface; Out-of-band management; SNMP manager; Telnet; FTP	Command-line interface; Out-of-band management; SNMP manager; Telnet; FTP
Services	Refer to the Hewlett Packard Enterprise website at **hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	Refer to the Hewlett Packard Enterprise website at **hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.

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