

# 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](https://www.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](https://www.hpe.com/networking/support); for details on the software releases available with your product purchase, refer to [hpe.com/networking/warrantysummary](https://www.hpe.com/networking/warrantysummary).



**HPE Altoline 6960 32QSFP28 x86 ONIE AC Front-to-Back Switch (JL279A)**



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<b>I/O ports and slots</b>	32 QSFP28 100GbE ports	32 QSFP28 100GbE ports
<b>Additional ports and slots</b>	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
<b>Power supplies</b>	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
<b>Fan tray</b>	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)
<b>Physical characteristics</b>		
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)
<b>Memory and processor</b>	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
<b>Performance</b>		
Routing/Switching capacity	3.2 Tbps	3.2 Tbps
MAC address table size	8000 entries	8000 entries
<b>Environment</b>		
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
<b>Electrical characteristics</b>		
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	267 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, 100% traffic, all ports plugged in, and all modules populated. PSU Efficiency: Up to 93% for AC PSUs	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, 100% traffic, all ports plugged in, and all modules populated. PSU Efficiency: Up to 93% for AC PSUs
<b>Safety</b>	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

## Data sheet

### HPE Altoline 6960 32QSFP28 x86 ONIE AC Front-to-Back Switch (JL279A)

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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

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#### Services

Refer to the Hewlett Packard Enterprise website at [hpe.com/networking/services](http://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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