

# HPE Altoline 6900 Switch Series



## Key features

- High 10/100/1000BASE-T port density
- Open Network Install Environment (ONIE) boot loader for choice of network OS and easy installation
- Open-networking and disaggregated solution for customer choice
- Available fanless models for quiet operation
- Dual-core ARM® Cortex-A9 1 GHz

## Product overview

HPE Altoline 6900 Switch Series is a top-of-rack (TOR) switch for high-performance data centers. In a compact 1RU form factor, the switch provides line-rate Layer 2 and Layer 3 switching across up to 48 x 10/100/1000BASE-T RJ-45 ports, with 4 x 10GbE QSFP+ and 2 x 20GbE QSFP+ stacking connections.

The HPE Altoline 6900 Switch Series can be deployed as a TOR switch supporting gigabit server connections, or as a management switch, with 10GbE uplinks.

The HPE Altoline 6900 is a bare-metal switch loaded with the ONIE, which supports the installation of compatible independent switch OS offerings.

## Features and benefits

### Data center optimized

- Flexible high-port density  
HPE Altoline 6900 Switch Series enables scaling of the server edge with 1GbE server connection and 10GbE uplinks to new heights with high density delivered in a 1RU design.
- Redundant power supplies, fanless design  
1+1 internal redundant, hot-pluggable power supplies, and a fanless design (front-to-back models JL223A and JL474A, only) enhance reliability and availability

### 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
- Dual-core ARM Cortex-A9 1 GHz  
Provides high-performance, low-power consumption, as well as 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 117 W of AC power

### Warranty and support

- 1-year warranty  
See [hpe.com/networking/warrantysummary](https://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://hpe.com/networking/support), for details on the software releases available with your product purchase, refer to [hpe.com/networking/warrantysummary](https://hpe.com/networking/warrantysummary).

## HPE Altoline 6900 Switch Series Specifications

Name and SKU	HPE Altoline 6900 48G 4XG 2QSFP ARM ONIE AC Front-to-Back Switch (JL223A)	HPE Altoline 6900 48G 4XG 2QSFP ARM ONIE AC Back-to-Front Switch (JL473A)
<b>I/O ports and slots</b>	48 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; 4 SFP+ 10GbE ports (IEEE 802.3ae Type 10GBASE-LR, IEEE 802.3ae Type 10GBASE-SR) 2 QSFP+ stacking ports; 20GbE stacking ports, software dependent	48 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; 4 SFP+ 10GbE ports (IEEE 802.3ae Type 10GBASE-LR, IEEE 802.3ae Type 10GBASE-SR) 2 QSFP+ stacking ports; 20GbE stacking ports, software dependent
<b>Additional ports and slots</b>	1 Micro-USB serial console port 1 RJ-45 out-of-band management port 1 USB 2.0 Type A storage port	1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 Micro-USB to USB Type A storage port
<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 trays</b>	NA	2 fixed fans (power-to-port airflow)
<b>Physical characteristics</b>	Dimensions 17.32 (w) x 16.1 (d) x 1.72 (h) in. (44 x 40.89 x 4.37 cm) Weight (1U height) 11.86 lb (5.38 kg)	Dimensions 17.32 (w) x 16.1 (d) x 1.72 (h) in. (44 x 40.89 x 4.37 cm) Weight (1U height) 12.19 lb (5.53 kg)
<b>Memory and processor</b>	Fabric Helix4 with embedded dual-core ARM Cortex-A9 @ 1.0 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 4 MB, 8 GB flash capacity	Fabric Helix4 with embedded dual-core ARM Cortex-A9 @ 1.0 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 4 MB, 8 GB flash capacity
<b>Performance</b>	Switching capacity 128 Gbps Routing table size 12000 entries (IPv4), 6000 entries (IPv6) MAC address table size 176000 entries	Switching capacity 128 Gbps Routing table size 12000 entries (IPv4), 6000 entries (IPv6) MAC address table size 176000 entries
<b>Environment</b>	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)	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)
<b>Electrical characteristics</b>	Voltage 100—240/200 VAC, rated Maximum power rating 117 W Idle power 61W Frequency 50/60 Hz	Voltage 100—240/200 VAC, rated Maximum power rating 117 W Idle power 61W Frequency 50/60 Hz
<b>Notes</b>	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.	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.
<b>Safety</b>	IEC 60950-1, EN60950-1, UL 60950-1, CSA 22.2 No. 60950-1, CNS 14336-1	UL 60950-1, CSA 22.2 No. 60950-1
<b>EMC</b>	FCC Part 15 Class A, ICES-003 Class A, EN55032 Class A, EN 55024, CNS 13438 Class A, VCCI Class A	FCC Part 15 Class A, ICES-003 Class A
<b>Management</b>	Command-line interface; out-of-band management (RJ-45 Ethernet); out-of-band management (serial RS-232C or micro USB)	Command-line interface; out-of-band management (RJ-45 Ethernet); out-of-band management (serial RS-232C or micro USB)
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://hpe.com/networking/services">hpe.com/networking/services</a> 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 <a href="http://hpe.com/networking/services">hpe.com/networking/services</a> 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.



## HPE Altoline 6900 Switch Series Specifications (continued)

Name and SKU	HPE Altoline 6900 48G 4XG 2QSFP ARM ONIE DC Front-to-Back Switch (JL474A)	HPE Altoline 6900 48G 4XG 2QSFP ARM ONIE DC Back-to-Front Switch (JL475A)
<b>I/O ports and slots</b>	48 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; 4 SFP+ 10GbE ports (IEEE 802.3ae Type 10GBASE-LR, IEEE 802.3ae Type 10GBASE-SR) 2 QSFP+ stacking ports; 20GbE stacking ports, software dependent	48 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; 4 SFP+ 10GbE ports (IEEE 802.3ae Type 10GBASE-LR, IEEE 802.3ae Type 10GBASE-SR) 2 QSFP+ stacking ports; 20GbE stacking ports, software dependent
<b>Additional ports and slots</b>	1 Micro-USB serial console port 1 RJ-45 out-of-band management port 1 USB 2.0 Type A storage port	1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 Micro-USB to USB Type A storage port
<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 trays</b>	NA	2 fixed fans (power-to-port airflow)
<b>Physical characteristics</b>		
Dimensions	17.32 (w) x 16.1 (d) x 1.72 (h) in. (44 x 40.89 x 4.37 cm)	17.32 (w) x 16.1 (d) x 1.72 (h) in. (44 x 40.89 x 4.37 cm)
Weight	(1U height) 11.86 lb (5.38 kg)	(1U height) 12.19 lb (5.53 kg)
<b>Memory and processor</b>		
Fabric	Helix4 with embedded dual-core ARM Cortex-A9 @ 1.0 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 4 MB, 8 GB flash capacity	Helix4 with embedded dual-core ARM Cortex-A9 @ 1.0 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 4 MB, 8 GB flash capacity
<b>Performance</b>		
Switching capacity	128 Gbps	128 Gbps
Routing table size	12000 entries (IPv4), 6000 entries (IPv6)	12000 entries (IPv4), 6000 entries (IPv6)
MAC address table size	176000 entries	176000 entries
<b>Environment</b>		
Operating temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°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)
<b>Electrical characteristics</b>		
Voltage	-36—72VDC, rated	-36—72VDC, rated
Maximum power rating	117 W	117 W
Idle power	61W	61W
Frequency		
<b>Notes</b>	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.	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.
<b>Safety</b>	UL 60950-1, CSA 22.2 No. 60950-1	UL 60950-1, CSA 22.2 No. 60950-1
<b>EMC</b>	FCC Part 15 Class A, ICES-003 Class A	FCC Part 15 Class A, ICES-003 Class A
<b>Management</b>	Command-line interface; out-of-band management (RJ-45 Ethernet); out-of-band management (serial RS-232C or micro USB)	Command-line interface; out-of-band management (RJ-45 Ethernet); out-of-band management (serial RS-232C or micro USB)
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://hpe.com/networking/services">hpe.com/networking/services</a> 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 <a href="http://hpe.com/networking/services">hpe.com/networking/services</a> 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.



## HPE Altoline 6900 Switch Series accessories

### Transceivers

HPE X130 10G SFP+ LC SR Transceiver (JD092B)  
HPE X130 10G SFP+ LC LR Transceiver (JD094B)  
HPE X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable (JD095C)  
HPE X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable (JD096C)  
HPE X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (JD097C)  
HPE X120 1G SFP LC SX Transceiver (JD118B)  
HPE X120 1G SFP LC LX Transceiver (JD119B)  
HPE X120 1G SFP RJ45 T Transceiver (JD089B)  
HPE X240 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable (JG326A)  
HPE X240 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable (JG327A)  
HPE X240 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable (JG328A)  
HPE X140 40G QSFP+ LC LR4 SM 10km 1310nm Transceiver (JG661A)  
HPE X140 40G QSFP+ MPO SR4 Transceiver (JG325B)  
HPE X140 40G QSFP+ MPO MM 850nm CSR4 300m Transceiver (JG709A)

### Mounting kit

HPE Altoline Gen3 Rackmount Kit (JL228A)

Learn more at  
[hpe.com/networking](https://hpe.com/networking)



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