

# HP Altoline 6712 Switch Series



## Key features

- High 40GbE port density and low latency for demanding applications
- 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, 40GbE, and redundant fans and power supplies for data center deployments

## Product overview

The HP Altoline 6712 Switch is a top-of-rack (ToR) or spine switch 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 QSFP ports, supporting 10GbE or 40GbE server connections as a ToR switch, or 10GbE or 40GbE spine interconnects as a spine switch.

The 32 fixed QSFP ports support up to 32 x 40GbE connections or 96 x 10GbE with 8 x 40GbE uplink connections.

The HP Altoline 6712 Switch is a bare-metal switch loaded with the Open Network Install Environment (ONIE), which supports the installation of compatible independent switch OS offerings.

## Features and benefits

### Data center optimized

- Flexible high-port density

The HP Altoline 6712 Switch Series enables scaling of the server edge with 40GbE spine and ToR deployments to new heights with high-density 32-port solutions delivered in a 1RU design. Up to 24 40GbE QSFP+ ports can also be configured as four 10GbE ports by using a 40GbE-to-10GbE splitter cable providing up to 96 10GbE ports with eight 40GbE uplinks

- High-performance switching

Cut-through and nonblocking architecture delivers low latency (600–720 nanoseconds for 40GbE) for very demanding enterprise applications; the switch delivers high-performance switching capacity and wirespeed packet forwarding

- Hot or 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 boot loader

The switch is loaded with Open Network Install Environment (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

- 3-year warranty

Advance hardware replacement with 10-calendar-day delivery (available in most countries)

- Electronic and telephone support

Limited electronic and business-hours telephone support is available from HP for the entire warranty period; to reach our support centers, refer to [hp.com/networking/contact-support](http://hp.com/networking/contact-support); for details on the duration of support provided with your product purchase, refer to [hp.com/networking/warrantysummary](http://hp.com/networking/warrantysummary)

- Software releases

To find software for your product, refer to [hp.com/networking/support](http://hp.com/networking/support); for details on the software releases available with your product purchase, refer to [hp.com/networking/warrantysummary](http://hp.com/networking/warrantysummary)

## HP Altoline 6712 Switch Series

### Specifications

	HP Altoline 6712 32QSFP+ x86 ONIE AC Front-to-Back Switch (JL165A)	HP Altoline 6712 32QSFP+ x86 ONIE AC Back-to-Front Switch (JL166A)
<b>I/O ports and slots</b>	32 QSFP+ 40GbE ports	32 QSFP+ 40GbE 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	17.32(w) x 18.5(d) x 1.72(h) in. (44.00 x 47.0 x 4.4 cm)	17.32(w) x 18.5(d) x 1.72(h) in. (44.00 x 47.0 x 4.4 cm)
Weight	18.52 lb (8.4 kg)	18.52 lb (8.4 kg)
<b>Memory and processor</b>	Intel Atom C2538 quad-core x86 processor @ 2.4 GHz, 8 GB DDR3 SDRAM; Packet buffer size: 12 MB, 16 GB SD Card	Intel Atom C2538 quad-core x86 processor @ 2.4 GHz, 8 GB DDR3 SDRAM; Packet buffer size: 12 MB, 16 GB SD Card
<b>Performance</b>		
40 Gbps Latency	> .6 $\mu$ s	> .6 $\mu$ s
Throughput	Up to 1440 Mpps	Up to 1440 Mpps
Routing/Switching capacity	2560 Gbps	2560 Gbps
Routing table size	64000 entries (IPv4), 20000 entries (IPv6)	64000 entries (IPv4), 20000 entries (IPv6)
MAC address table size	320000 entries	320000 entries
<b>Environment</b>		
Operating temperature	32°F to 104°F (0°C to 40°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)
<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
<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. 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 PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PSU Efficiency: Up to 93% for AC PSUs

**Specifications (continued)**

	<b>HP Altoline 6712 32QSFP+ x86 ONIE AC Front-to-Back Switch (JL165A)</b>	<b>HP Altoline 6712 32QSFP+ x86 ONIE AC Back-to-Front Switch (JL166A)</b>
<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
<b>Emissions</b>	FCC part 15 Class A; EN 55022 Class A; VCCI	FCC part 15 Class A; EN 55022 Class A; VCCI
<b>Immunity</b> ESD EFT/Burst	EN 60950 IEC 68-2-14	EN 60950 IEC 68-2-14
<b>Management</b>	Command-line interface; Out-of-band management; SNMP manager; Telnet; FTP	Command-line interface; Out-of-band management; SNMP manager; Telnet; FTP
<b>Services</b>	Refer to the HP website at <a href="http://hp.com/networking/services">hp.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 HP sales office.	Refer to the HP website at <a href="http://hp.com/networking/services">hp.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 HP sales office.

**HP Altoline 6712 Switch Series accessories****Transceivers**

HP X240 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable (JG326A)  
 HP X240 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable (JG327A)  
 HP X240 40G QSFP+ to 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)  
 HP X140 40G QSFP+ LC LR4 SM 10km 1310nm Transceiver (JG661A)  
 HP X140 40G QSFP+ MPO SR4 Transceiver (JG325B)  
 HP X140 40G QSFP+ MPO MM 850nm CSR4 300m Transceiver (JG709A)

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