

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; for details on the duration of support provided with your product purchase, refer to hp.com/networking/warrantysummary

- Software releases

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

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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)
I/O ports and slots	32 QSFP+ 40GbE ports	32 QSFP+ 40GbE 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	17.32(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)
Memory and processor	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
Performance		
40 Gbps Latency	> .6 μ s	> .6 μ 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
Environment		
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)
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	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 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)

	HP Altoline 6712 32QSFP+ x86 ONIE AC Front-to-Back Switch (JL165A)	HP Altoline 6712 32QSFP+ x86 ONIE AC Back-to-Front Switch (JL166A)
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
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 HP website at hp.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 HP sales office.	Refer to the HP website at hp.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 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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