

Overview

HPE Altoline 6920 Switch Series

Models

HPE Altoline 6920 48XG 6QSFP+ x86 ONIE AC Front-to-Back Switch	JL167A
HPE Altoline 6920 48XG 6QSFP+ x86 ONIE AC Back-to-Front Switch	JL168A

Key features

- High 10GbE port density and low latency for demanding applications.
- ONIE boot loader for choice of network OS and easy installation.
- OCP-certified, Open-networking and disaggregated solution for customer choice.
- VXLAN for efficient network virtualization overlay solutions.
- x86 CPU controller, redundant fans and power supplies for data center deployments.

Product overview

The HPE Altoline 6920 Switch Series are top-of-rack (TOR) or spine switches for high-performance data centers. In a compact 1RU form factor, these switches provides line-rate L2 and L3 switching across up to 48 x SFP+ ports, with 6 x 40GbE QSFP+ uplink connections.

The HPE Altoline 6920 Switch Series can be deployed as a TOR switch supporting 10GbE server connections, or as a spine switch, supporting 10GbE interconnects.

The HPE Altoline 6920 Switch Series a bare-metal switches 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 HPE Altoline 6920 Switch Series enables scaling of the server edge with 10GbE server connection, with 40GbE uplinks, to new heights with high density delivered in a 1RU design.
- **High-performance switching**
cut-through and nonblocking architecture delivers low latency (600 - 720 nanosecond for 40GbE) 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

Overview

- **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 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 267W of AC power

Warranty and support

- **3-year Warranty**
See <http://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 <http://www.hpe.com/networking/support>; for details on the software releases available with your product purchase, refer to <http://www.hpe.com/networking/warrantysummary>

Configuration

Build To Order:

BTO is a standalone unit with no integration. BTO products ship standalone are not part of a CTO or Rack-Shippable solution.

Router Chassis

HPE Altoline 6920 48XG 6QSFP+ x86 ONIE AC Front-to-Back Switch

- 48 SFP/SFP+ 1/10GbE ports (min=0 \ max=48 SFP/SFP+ Transceivers)
- 6 QSFP+ 40GbE ports (min=0 \ max=6 QSFP+ Transceivers)
- 1U - Height

JL167A

See Configuration

NOTE: 1, 2, 3, 4, 5

PDU Cable NA/MEX/TW/JP

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

JL167A#B2B

PDU Cable NA/MEX/TW/JP

- C15 PDU Jumper Cord (ROW)

JL167A#B2C

High Volt Switch/Router to Wall Power Cord

- NEMA L6-20P Cord (NA/MEX/JP/TW)

JL167A#B2E

HPE Altoline 6920 48XG 6QSFP+ x86 ONIE AC Back-to-Front Switch

- 48 SFP/SFP+ 1/10GbE ports (min=0 \ max=48 SFP/SFP+ Transceivers)
- 6 QSFP+ 40GbE ports (min=0 \ max=6 QSFP+ Transceivers)
- 1U - Height

JL168A

See Configuration

NOTE: 1, 2, 3, 4, 5

PDU Cable NA/MEX/TW/JP

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

JL168A#B2B

PDU Cable NA/MEX/TW/JP

- C15 PDU Jumper Cord (ROW)

JL168A#B2C

High Volt Switch/Router to Wall Power Cord

- NEMA L6-20P Cord (NA/MEX/JP/TW)

JL168A#B2E

Configuration Rules:

Note 1 Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) or #B2E. (See Localization Menu)

Note 2 The following QSFP+ Transceivers install into this Switch:
HPE X140 40G QSFP+ LC LR4 SM 10km 1310nm Transceiver

JG661A

Configuration

HPE X140 40G QSFP+ MPO SR4 Transceiver	JG325B
HPE X140 40G QSFP+ MPO MM 850nm CSR4 300m Transceiver	JG709A
HPE X140 40G QSFP+ LC BiDi 100m MM XCVR	JL251A
HPE FlexNetwork X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable	JG326A
HPE FlexNetwork X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable	JG327A
HPE FlexNetwork X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable	JG328A

Note 3 The following SFP/SFP+ Transceivers install into this Switch

HPE X120 1G SFP RJ45 T Transceiver	JD089B
HPE X120 1G SFP LC SX Transceiver	JD118B
HPE X120 1G SFP LC LX Transceiver	JD119B
HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LR Transceiver	JD094B
HPE X130 10G SFP+ LC LH 80km Transceiver	JG915A
HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HPE FlexNetwork X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HPE FlexNetwork X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C

Note 4 (Watson Only) - use pre-release Life Cycle Filter.

Note 5 The following DAC Splitter Cables install into this Switch:

HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable	JG329A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	JG330A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable	JG331A

Rack Level Integration CTO Models

CTO Switch Chassis

HPE Altoline 6920 48XG 6QSFP+ x86 ONIE AC Front-to-Back Switch

- 48 SFP+ 1/10GbE ports (min=0 \ max=48 SFP+ Transceivers)
- 6 QSFP+ 40GbE ports (min=0 \ max=6 QSFP+ Transceivers)
- 1U - Height

JL167A

See Configuration

NOTE: 1, 2, 3, 4, 5

PDU Cable NA/MEX/TW/JP

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

JL167A#B2B

PDU Cable NA/MEX/TW/JP

- C15 PDU Jumper Cord (ROW)

JL167A#B2C

High Volt Switch/Router to Wall Power Cord

JL167A#B2E

Configuration

- NEMA L6-20P Cord (NA/MEX/JP/TW)

HPE Altoline 6920 48XG 6QSFP+ x86 ONIE AC Back-to-Front Switch

JL168A

- 48 SFP+ 1/10GbE ports (min=0 \ max=48 SFP+ Transceivers)
- 6 QSFP+ 40GbE ports (min=0 \ max=6 QSFP+ Transceivers)
- 1U - Height

See Configuration

NOTE: 1, 2, 3, 4, 5

PDU Cable NA/MEX/TW/JP

JL168A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable NA/MEX/TW/JP

JL168A#B2C

- C15 PDU Jumper Cord (ROW)

High Volt Switch/Router to Wall Power Cord

JL168A#B2E

- NEMA L6-20P Cord (NA/MEX/JP/TW)

Configuration Rules:

Note 1 Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) or #B2E. (See Localization Menu)

Note 2 The following QSFP+ Transceivers install into this Switch:

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
HPE X140 40G QSFP+ LC BiDi 100m MM XCVR	JL251A
HPE FlexNetwork X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable	JG326A
HPE FlexNetwork X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable	JG327A
HPE FlexNetwork X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable	JG328A

Note 3 The following SFP/SFP+ Transceivers install into this Switch

HPE X120 1G SFP RJ45 T Transceiver	JD089B
HPE X120 1G SFP LC SX Transceiver	JD118B
HPE X120 1G SFP LC LX Transceiver	JD119B
HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LR Transceiver	JD094B
HPE X130 10G SFP+ LC LH 80km Transceiver	JG915A
HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HPE FlexNetwork X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HPE FlexNetwork X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C

Configuration

Note 4 (Watson Only) - use pre-release Life Cycle Filter.

Note 5 The following DAC Splitter Cables install into this Switch:

HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable	JG329A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	JG330A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable	JG331A

Transceivers

SFP Transceivers

HPE X120 1G SFP RJ45 T Transceiver	JD089B
HPE X120 1G SFP LC SX Transceiver	JD118B
HPE X120 1G SFP LC LX Transceiver	JD119B
HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A

SFP+ Transceivers

HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LR Transceiver	JD094B
HPE X130 10G SFP+ LC LH 80km Transceiver	JG915A
HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HPE FlexNetwork X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HPE FlexNetwork X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C

QSFP+ Transceivers

HPE X140 40G QSFP+ LC BiDi 100m MM Transceiver	JL251A
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
HPE FlexNetwork X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable	JG326A
HPE FlexNetwork X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable	JG327A
HPE FlexNetwork X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable	JG328A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable	JG329A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	JG330A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable	JG331A

Switch Enclosure Options

Rack Mount Kit

Configuration

System (std 0 // max 1) User Selection (min 0 // max 1)

HPE Altoline Gen2 Rackmount Kit

JL198A
See Configuration

NOTE: 1, 3

Configuration Rules:

Note 1	This rack mount kit is only supported on the following switches:	
	HPE Altoline 6940 32QSFP+ x86 ONIE AC Front-to-Back Switch	JL165A
	HPE Altoline 6940 32QSFP+ x86 ONIE AC Back-to-Front Switch	JL166A
	HPE Altoline 6920 48XG 6QSFP+ x86 ONIE AC Front-to-Back Switch	JL167A
	HPE Altoline 6920 48XG 6QSFP+ x86 ONIE AC Back-to-Front Switch	JL168A
	HPE Altoline 6960 32QSFP28 x86 ONIE AC Front-to-Back Switch	JL279A
	HPE Altoline 6960 32QSFP28 x86 ONIE AC Back-to-Front Switch	JL280A

Note 3 If a switch is ordered and factory racked, then this rackmount must be #OD1

Technical Specifications

HPE Altoline 6920 48XG 6QSFP+ x86 ONIE AC Front-to-Back Switch (JL167A)

I/O ports and slots	48 SFP+ 1/10GbE ports (IEEE 802.3ae Type 10GBASE-ER, IEEE 802.3ae Type 10GBASE-LR, IEEE 802.3ae Type 10GBASE-SR, IEEE 802.3z Type 1000BASE-SX, IEEE 802.3z Type 1000BASE-LX) 6 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	
Power supplies	2 power supply slots 1 minimum power supply required includes: 2 x PSUs (O)	
Fan tray	5 fan tray slots Switch comes with five (5) fan trays (port to power 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)
	Weight	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	
Performance	40 Gbps Latency	> .6 μ s
	Throughput	up to 1 Bpps
	Routing/Switching capacity	1440 Gbps
	Routing table size	64000 entries (IPv4), 20000 entries (IPv6)
	MAC address table size	320000 entries
Environment	Operating temperature	32°F to 104°F (0°C to 40°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
Electrical characteristics	Frequency	50/60 Hz
	Voltage	90 - 264 VAC, rated (depending on power supply chosen)
	Maximum power rating	315 W
	Idle power	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
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	

Technical Specifications

Emissions	FCC part 15 Class A; EN 55022 Class A; VCCI	
Immunity	ESD	EN 60950
	EFT/Burst	IEC 68-2-14
Management	Command-line interface; Out-of-band management; SNMP manager; Telnet; FTP	
Services	Refer to the Hewlett Packard Enterprise sales website at: http://www.hpe.com/networking/services or 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 6920 48XG 6QSFP+ x86 ONIE AC Back-to-Front Switch (JL168A)

I/O ports and slots	48 SFP+ 1/10GbE ports (IEEE 802.3ae Type 10GBASE-ER, IEEE 802.3ae Type 10GBASE-LR, IEEE 802.3ae Type 10GBASE-SR, IEEE 802.3z Type 1000BASE-SX, IEEE 802.3z Type 1000BASE-LX) 6 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	
Power supplies	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 (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)
	Weight	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
Performance	40 Gbps Latency	> .6 μ s
	Throughput	up to 1 Bpps
	Routing/Switching capacity	1440 Gbps
	Routing table size	64000 entries (IPv4), 20000 entries (IPv6)
	MAC address table size	320000 entries
Environment	Operating temperature	32°F to 104°F (0°C to 40°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
Electrical characteristics	Frequency	50/60 Hz
	Voltage	90 - 264 VAC, rated (depending on power supply chosen)
	Maximum power rating	315 W
	Idle power	267 W
	Notes	Idle power is the actual power consumption of the device with no ports connected.

Technical Specifications

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

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
Emissions	FCC part 15 Class A; EN 55022 Class A; VCCI
Immunity	ESD EN 60950 EFT/Burst IEC 68-2-14
Management	Command-line interface; Out-of-band management; SNMP manager; Telnet; FTP
Services	Refer to the Hewlett Packard Enterprise sales website at: http://www.hpe.com/networking/services or 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.

Accessories

HPE Altoline 6920 Switch Series accessories

Transceivers

HPE FlexNetwork X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable	JG326A
HPE FlexNetwork X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable	JG327A
HPE FlexNetwork X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable	JG328A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable	JG329A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	JG330A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable	JG331A
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

Summary of Changes

Date	Version History	Action	Description of Change
15-Apr-2016	From Version 5 to 6	Changed	SKU descriptions updated (Accessories), Configuration section updated
18-Mar-2016	From Version 4 to 5	Changed	Product Number Descriptions updated Configuration section added
16-Feb-2016	From Version 3 to 4	Changed	QuickSpecs name changed from HPE Altoline 5712 Switch Series to HPE Altoline 6920 Switch Series
08-Jan-2016	From Version 2 to 3	Changed	Warranty and support updated
17-Jul-2015	From Version 1 to 2	Changed	Error fixed on Product Overview



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