QuickSpecs

Overview

HPE Altoline 6900 Switch Series

Models

HPE Altoline 6900 48G 4XG 2QSFP ARM ONIE AC Switch	JL223A

Key features

- High 10/100/1000BASE-T port density
- ONIE boot loader for choice of network OS and easy installation
- Open-networking and disaggregated solution for customer choice
- Fanless design for quiet operation
- Dual-core ARM Cortex-A9 1GHz

Product overview

The HPE Altoline 6900 switch 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 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 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 6900 Switch Series enables scaling of the server edge with 1GbE server connection, with 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 enhance reliability and availability

Manageability

Hewlett Packard Enterprise

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
- **Dual-core ARM Cortex-A9 1GHz**
  Provides high performance, low power consumption, 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 122W of AC power

Warranty and support

- **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**
- **1-year Warranty**
  see **http://www.hpe.com/networking/warrantysummary** for warranty and support information included with your product purchase.

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.

HPE Altoline 6900 48G 4XG 2QSFP ARM ONIE AC Switch   JL223A
- 48 RJ-45 10/100/1000 ports   See Configuration
- 4 SFP/SFP+ 10GbE ports (min=0 \\ max=4 SFP/SFP+ Transceivers)   **NOTE:** 1, 2, 3
- 2 QSFP+ stacking ports (min=0 \\ max=2 QSFP+ Transceivers)
  Each Switch:
- 2 Power Supplies Standard (min=2 \ max=2)
- No removable Fan Trays
- 1U - Height

PDU Cable NA/MEX/TW/JP   JL223A#B2B
- C13 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable NA/MEX/TW/JP   JL223A#B2C
- C13 PDU Jumper Cord (ROW)

High Volt Switch/Router to Wall Power Cord   JL223A#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 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 Transceiver   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
                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

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 SR Data Center Transceiver   JL437A
                HPE X130 10G SFP+ LC LR Data Center Transceiver   JL439A
                HPE X130 10G SFP+ LC LH 80km Transceiver   JG915A
                HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable   JD095C

Configuration

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

Rack Level Integration CTO Models

CTO Switch Chassis

HPE Altoline 6900 48G 4XG 2QSFP ARM ONIE AC Switch   JL223A
- 48 10/100/1000 Ports   See Configuration
- 4 SFP+ 10GbE ports   **NOTE:** 1, 2, 3
- 2 QSFP+ stacking ports
  Each Switch:
- 2 Power Supplies Standard (min=2 \ max=2)
- No removable Fan Trays
- 1U - Height

PDU Cable NA/MEX/TW/JP   JL223A#B2B
- C13 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable NA/MEX/TW/JP   JL223A#B2C
- C13 PDU Jumper Cord (ROW)

High Volt Switch/Router to Wall Power Cord   JL223A#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 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 Transceiver	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
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

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

Configuration

HPE X130 10G SFP+ LC LR Transceiver	JD094B
HPE X130 10G SFP+ LC SR Data Center Transceiver	JL437A
HPE X130 10G SFP+ LC LR Data Center Transceiver	JL439A
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

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 SR Data Center Transceiver	JL437A
HPE X130 10G SFP+ LC LR Data Center Transceiver	JL439A
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

HPE Altoline Gen3 Rackmount Kit   JL228A
                                                   See Configuration
                                                    NOTE: 2, 3

Configuration Rules:

Note 2   This rack mount kit is only supported on the following switches:

                HPE Altoline 6900 48G 4XG 2QSFP ARM ONIE AC Switch   JL223A

Note 3   If a switch ordered and factory racked, then this rackmount must be #0D1

Technical Specifications

HPE Altoline 6900 48G 4XG 2QSFP ARM ONIE AC Switch (JL223A)

I/O ports and slots	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
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 ()

Physical characteristics	**Dimensions**	17.32(w) x 16.1(d) x 1.72(h) in (44 x 40.89 x 4.37 cm) (1U height)
	Weight	11.86 lb (5.38 kg)
Memory and processor	**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
Performance	**40 Gbps Latency**	> .6 µs
	Switching capacity	128 Gbps
	Routing table size	12000 entries (IPv4), 6000 entries (IPv6)
	MAC address table size	176000 entries
Environment	**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)
Electrical characteristics	**Voltage**	100 - 240 / 200 VAC, rated
	Maximum power rating	122 W
	Idle power	92 W
	Frequency	50/60 Hz
	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.
Safety		IEC 60950-1; EN 60950-1; CSA C22.2 60950-1; 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; VCCI Class A; EN 55022 Class A; CNS 13438; UL 60950; IEC 60950-1
Management		Command-line interface; Out-of-band management (RJ-45 Ethernet); Out-of-band management (serial RS-232C or micro USB)
Services		Refer to the Hewlett Packard Enterprise website at **http://www.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.

Accessories

HPE Altoline 6900 Switch Series

Transceivers

HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LR Transceiver	JD094B
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 X120 1G SFP LC SX Transceiver	JD118B
HPE X120 1G SFP LC LX Transceiver	JD119B
HPE X120 1G SFP RJ45 T Transceiver	JD089B
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 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

Summary of Changes

Date	Version History	Action	Description of Change:
18-Apr-2017	From Version 4 to 5	Added	Transceivers added on the Configuration section: JL437A, JL439A
01-Aug-2016	From Version 3 to 4	Changed	Several updates made on Configuration section
15-Apr-2016	From Version 2 to 3	Changed	SKUs descriptions and Configuration section updated
08-Apr-2016	From Version 1 to 2	Changed	Voltage on Technical Specifications

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