Hewlett Packard Enterprise

HPE Altoline 6921 Switch Series

Key features

- High-density 10GbE ports and low latency for demanding applications

- Open networking and disaggregated solution for customer choice

- Choice of network operating systems, including Cumulus Networks Linux® NOS, and Pica8 NOS

- VXLAN L2 and L3 for efficient network virtualization overlay solutions

- Intel® quad-core x86 Atom CPU and Broadcom Trident II+ controller,

- Support for Big Switch Network's Big Cloud Fabric and Big Monitoring Fabric solutions

Product overview

HPE Altoline 6921 Switch Series are top-of-rack (ToR) leaf switches for high-performance cloud data centers in a compact 1RU form factor. The switches provide line-rate L2 and L3 switching across up to 48 1/10GBASE-T or 1/10GbE SFP+ ports, with 6 x 40GbE QSFP+ uplinks.

HPE Altoline 6921 Switch Series is designed to be deployed as leaf ToR switches supporting 1/10GbE server connections.

In HPE Altoline 6921 Switch Series, bare-metal switches are loaded with the Open Network Install Environment (ONIE), which supports installing and uninstalling of compatible third-party switch Network Operating System (NOS) offerings.

Features and benefits

Data center optimized

- Flexible high-port density

  HPE Altoline 6921 Switch Series enables scaling of the server edge with 1/10GbE copper or fiber server connections, with 40GbE uplinks, to new heights with high density in 1RU design.

- High-performance switching

  Cut-through and non-blocking Trident II+ ASIC delivers low latency (720 nanosecond) for very demanding cloud data center applications; the switch delivers high-performance switching capacity and wire-speed 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 L2 and L3 VTEP overlay technologies; can terminate and forward VXLAN tunnels; supports over 16 million VXLAN IDs

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

  Switch is loaded with the ONIE boot loader for NOS installation and uninstallation

- Intel x86 CPU (quad-core Atom)

  Provides high-performance support of widely available, industry-standard software and utilities

L2 switching

- VLAN support

  Provides support for 4,096 VLAN IDs

Additional information

- Low-power consumption

  SFP version maximum power: 282W, without pluggable optics and Base-T version maximum power: 348W

Warranty and support

- 1-year warranty

  See **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**; for details on the software releases available with your product purchase, refer to **hpe.com/networking/warrantysummary**

HPE Altoline 6921 Switch Series

Specifications

	HPE Altoline 6921 48SFP+ 6QSFP+ x86 ONIE AC Front-to-Back Switch (JL317A)	HPE Altoline 6921 48SFP+ 6QSFP+ x86 ONIE AC Back-to-Front Switch (JL318A)
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)	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	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	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 (front-to-back airflow)	5 fan tray slots Switch comes with five (5) fan trays (back-to-front airflow)
Physical characteristics Dimensions Weight	17.4(w) x 18.6(d) x 1.71(h) in. (44.2 x 47.24 x 4.34 cm) 18.74 lb (8.5 kg)	17.4(w) x 18.6(d) x 1.71(h) in. (44.2 x 47.24 x 4.34 cm) 18.74 lb (8.5 kg)
Memory and processor	Intel Atom C2538 quad-core x86 processor @ 2.4 GHz, 8 GB DDR3 SDRAM; Packet buffer size: 12 MB, 8 GB NAND flash ASIC: Trident II+	Intel Atom C2538 quad-core x86 processor @ 2.4 GHz, 8 GB DDR3 SDRAM; Packet buffer size: 12 MB, 8 GB NAND flash ASIC: Trident II+
Performance Latency Throughput Routing/Switching capacity Routing table size MAC address table size	720 ns Up to 1 Bpps 1440 Gbps 64000 entries (IPv4), 20000 entries (IPv6) 320000 entries	720 ns Up to 1 Bpps 1440 Gbps 64000 entries (IPv4), 20000 entries (IPv6) 320000 entries
Environment Operating temperature Operating relative humidity Non-operating/Storage temperature Airflow direction	32°F to 104°F (0°C to 40°C) 5% to 95%, noncondensing -40°F to 158°F (-40°C to 70°C) Front-to-back	32°F to 104°F (0°C to 40°C) 5% to 95%, noncondensing -40°F to 158°F (-40°C to 70°C) Back-to-front

HPE Altoline 6921 Switch Series

Specifications (continued)

	HPE Altoline 6921 48SFP+ 6QSFP+ x86 ONIE AC Front-to-Back Switch (JL317A)	HPE Altoline 6921 48SFP+ 6QSFP+ x86 ONIE AC Back-to-Front Switch (JL318A)
Electrical characteristics		
Frequency	50/60 Hz	50/60 Hz
Voltage	90 - 264 VAC, rated	90 - 264 VAC, rated
Maximum power rating	282W	282W
Idle power	267W	267W
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
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; EN 60950-1	FCC part 15 Class A; EN 55022 Class A; VCCI; EN 60950-1
Immunity		
ESD	EN 60950	EN 60950
EFT/Burst	IEC 68-2-14	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 Hewlett Packard Enterprise website at **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.	Refer to the Hewlett Packard Enterprise website at **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.

HPE Altoline 6921 Switch Series

Specifications (continued)

	HPE Altoline 6921 48XGT 6QSFP+ x86 ONIE AC Front-to-Back Switch (JL315A)	HPE Altoline 6921 48XGT 6QSFP+ x86 ONIE AC Back-to-Front Switch (JL316A)
I/O ports and slots	48 1/10GBASE-T ports 6 QSFP+ 40GbE ports	48 1/10GBASE-T ports 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	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 (front-to-back airflow)	5 fan tray slots Switch comes with five (5) fan trays (back-to-front airflow)
Physical characteristics Dimensions Weight	 17.4(w) x 18.6(d) x 1.71(h) in. (44.2 x 47.24 x 4.34 cm) 18.74 lb (8.5 kg)	 17.4(w) x 18.6(d) x 1.71(h) in. (44.2 x 47.24 x 4.34 cm) 18.74 lb (8.5 kg)
Memory and processor	Intel Atom C2538 quad-core x86 processor @ 2.4 GHz, 8 GB DDR3 SDRAM; Packet buffer size: 12 MB, 8 GB NAND flash ASIC: Broadcom Trident II+	Intel Atom C2538 quad-core x86 processor @ 2.4 GHz, 8 GB DDR3 SDRAM; Packet buffer size: 12 MB, 8 GB NAND flash ASIC: Broadcom Trident II+
Performance Latency Throughput Routing/Switching capacity Routing table size MAC address table size	 720 ns Up to 1 Bpps 1440 Gbps 64000 entries (IPv4), 20000 entries (IPv6) 320000 entries	 720 ns Up to 1 Bpps 1440 Gbps 64000 entries (IPv4), 20000 entries (IPv6) 320000 entries
Environment Operating temperature Operating relative humidity Non-operating/Storage temperature Airflow direction	 32°F to 104°F (0°C to 40°C) 5% to 95%, noncondensing -40°F to 158°F (-40°C to 70°C) Front-to-back	 32°F to 104°F (0°C to 40°C) 5% to 95%, noncondensing -40°F to 158°F (-40°C to 70°C) Back-to-front

HPE Altoline 6921 Switch Series

Specifications (continued)

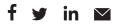|	HPE Altoline 6921 48XGT 6QSFP+ x86 ONIE AC Front-to-Back Switch (JL315A)	HPE Altoline 6921 48XGT 6QSFP+ x86 ONIE AC Back-to-Front Switch (JL316A)
Electrical characteristics		
Frequency	50/60 Hz	50/60 Hz
Voltage	90–264 VAC, rated	90–264 VAC, rated
Maximum power rating	282W	282W
Idle power	267W	267W
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
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; EN 60950-1	FCC part 15 Class A; EN 55022 Class A; VCCI; EN 60950-1
Immunity		
ESD	EN 60950	EN 60950
EFT/Burst	IEC 68-2-14	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 Hewlett Packard Enterprise website at **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.	Refer to the Hewlett Packard Enterprise website at **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.

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