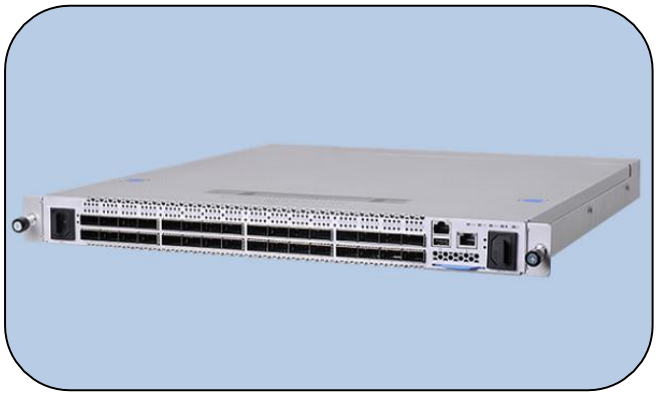
IX1/IX1B

New Generation 100 G ToR/Spine Switch for Datacenter and Cloud Computing

100 G ToR/Spine Switch for DC and Cloud Computing



Features

- ONIE Pre-loaded
- x86 CPU board Support
- ONL Ready
- BMC Built-in
- Cumulus Linux Ready

Product Overview

Data center networks face changes with hardware and meeting the requirements of the software it hosts. XenOpt cloud technology provides a series of Bare Metal Switches, the XenOpt BMS product line, that addresses these changes in the data center market. The XenOpt BMS support product speeds up to 100 G speeds on their Ethernet Switches. To meet the requirements of high performance, high availability, fast scale out, low latency performance and continuous serviceability in data center applications, XenOpt BMS product line is the best choice.

BMC (Baseboard Management Controller) embedded on the server as the core of the Intelligent Platform Management Interface (IPMI) architecture can now be implemented in the Ethernet switch. In addition to providing health monitoring of the temperature, power status, and cooling fans; BMC also aids in the deployment and management of software and hardware peripherals.

XenOpt IX1 supports 32 QSFP28 (10/40 or 25/50/100GbE speed) ports and XenOpt IX1B supports 32 QSFP28 (10/40 or 25/50/100GbE speed) ports and is equipped with BMC in a compact rack unit size. By leveraging merchant silicon chipsets, the IX1 and IX1B provide a high-performance, high-density Ethernet switch with an affordable price. With ONIE (Open Network Installation Environment) pre-loaded, the IX1 and IX1B can be used with multiple operating system that supports ONIE installers to achieve agile installation and fast response as demands change.

Physical ports

- Port configuration: 32 QSFP28 ports for 10/40 or 25/50/100 GbE
- Management port: Out-of-band-management port (RJ-45, 10/100/1000Base-T)
- Console port: 1 (RJ-45)
- USB: USB 2.0

CPU Board 1

- CPU: Intel Atom® Processors
- Memory: 8 GB DDR3/ECC
- Storage: 32 GB SSD

Performance

- MAC: Unified Forwarding Table to dynamically allocate The L2/L3 tables
- Switching capacity: 6,4 Tbps
- Maximum forwarding rate: Line Rate Performance
- Latency: < 450 ns

High Availability

- Redundant power supply: 1+1
- Hot-swappable fan tray: N+1

BMC*

- IPMI: v1.5/v2.0 compliance
- Serial over LAN
- SNMP: v1/v2/v3
- SMASH
- HTTPS
- Health status and hardware monitoring
- Event log
- PEF and PET
- Chassis management
- Watchdog and system restart

Mechanical

- Dimension (HxWxD): 44 x 440 x 508 mm
- Weight: IX1: 9,27 kg (NET)
  IX1B: 9,41 kg (NET)

Environmental Specifications

- Operating temperature: 0 – 45° C
- Operating Humidity: 90% maximum humidity

Electrical

- Power requirement: 100 – 240 VAC, 50/60 Hz
- Power consumption: 378 watts
- Safety: UL, cUL, CB
- EMC: CE, FCC, VCCI, CCC

RoHS

- Reduction of Hazardous Substances (RoHS) 6

Supported Optics and Cables

- DAC cable (QSFP+): 1 m, 3 m, and 5 m
- DAC cable (QSFP+, fan-ou): 1 m, 3 m, and 5 m
- DAC cable (QSFP28): 1 m, 3 m, and 5 m
- DAC cable (QSFP28, fan-out): 3 m
- AOC cable (QSFP+, 850 nm, MMF): 7 m, 10 m
- AOC cable (QSFP28, 850 nm, MMF): 1 m, 3 m, 5 m, and 10 m
- 40G optic (QSFP+, MPO, 850 nm, MMF): 10GBASE-SR4
- 40G optic (QSFP+, LC, 1310 nm, SMF): 10GBASE-LR4
- 100G optic (QSFP28, MPO, 850 nm, MMF): 10GBASE-SR4
- 100G optic (QSFP28, MPO, 1310 nm, SMF): 10GBASE-PSM4
- 100G optic (QSFP28, LC, 1310 nm, SMF): 10GBASE-LR4

* Available in IX1B

Ordering information[1]

PN	Description
Switches	
X1IX1UZZ0STI	Switch IX1, 32 100 GbE QSFP28 ports, dual PSU, Air Flow Direction Front to Back, with Rail Kit
X1IX1UZZ0STJ	Switch IX1, 32 100 GbE QSFP28 ports, dual PSU, Air Flow Direction Back to Front, with Rail Kit
X1IX1UZZ0STK	Switch IX1, 32 100 GbE QSFP28 ports, dual PSU, Air Flow Direction Front to Back, with Rail Kit, Cumulus Linux OS[2] pre-loaded
X1IX1UZZ0STL	Switch IX1, 32 100 GbE QSFP28 ports, dual PSU, Air Flow Direction Back to Front, with Rail Kit, Cumulus Linux OS[2] pre-loaded
X1IX1UZZ0STG	Switch IX1B, 32 100 GbE QSFP28 ports, dual PSU, Air Flow Direction Front to Back, with Rail Kit (BMC Built-in)
X1IX1UZZ0STH	Switch IX1B, 32 100 GbE QSFP28 ports, dual PSU, Air Flow Direction Back to Front, with Rail Kit (BMC Built-in)
Cables 40 G	
XCE-QSQSNgg	Cable, 40 Gb, Direct attach, Optic, QSFP+ to QSFP+, length: gg = {07 – 7 m; 10 – 10 m; 20 – 20 m; 50 – 50 m; C0 – 100 m}
XCE-QS4SNgg	Cable, 40 Gb, Direct attach, Optic, QSFP+ to 4 x SFP+, length: gg = {07 – 7 m; 10 – 10 m; 20 – 20 m; 50 – 50 m; C0 – 100 m}
XCD-QSQSNgg	Cable, 40 Gb, Direct attach, Copper, QSFP+ to QSFP+, gg = {01 – 1 m; 3 – 3 m; 5 – 5 m}
XCD-QS4SNgg	Cable, 40 Gb, Direct attach, Copper, QSFP+ to 4 x SFP+, gg = {01 – 1 m; 3 – 3 m; 5 – 5 m}
Cables 100 G	
XCE-Q8Q8Ngg	Cable, 100 Gb, Direct attach, Optic, QSFP28 to QSFP28, gg = {01 – 1 m; 3 – 3 m; 5 – 5 m}
XCD-Q8Q8Ngg	Cable, 100 Gb, Direct attach, Copper, QSFP28 to QSFP28, gg = {01 – 1 m; 3 – 3 m; 5 – 5 m}
Pluggables	
XQM853-ffPY	QSFP+, multi mode, 850 nm, 40 Gbps, 10GBASE-SR4, MPO, ff[3]: up to 600 m
XQS313-ffLY	QSFP+, single mode, 1310 nm, 40 Gbps, LC, 10GBASE-LR4, ff[3]: up to 40 km
XQM859-ffPY	QSFP28, multi mode, 850 nm, 100 Gbps, MPO, 10GBASE-SR4, ff[3]: up to 100 m
XQS319-ffPY	QSFP28, single mode, 1310 nm, 100 Gbps, MPO, 10GBASE-PSM4, ff[3]: up to 10 km
XQS319-ffLY	QSFP28, single mode, 1310 nm, 100 Gbps, LC, 10GBASE-LR4, ff[3]: up to 10 km
Services	
Spare PSU and fan	
X1HY9ZZZ071Y	PSU-Red, front to back, AC, 750 W
X1HY9ZZZ0720	PSU-Blue, back to front, AC, 750 W
X1HY9ZZZ0721	Fan module, front to back
X1HY9ZZZ0722	Fan module, back to front
SW&FW	ONIE installed Cumulus Linux ready

Notes:

[1] For accurate order specification please contact Xenopt reseller before placing an order. The content of this document is subject to change without notice. Xenopt does not guarantee errorless or outdated information.

[2] For accurate Cumulus FW ordering part number please refer to http://www.cumulusnetworks.com/, or contact Xenopt Reseller.

[3] Modules of different lengths are available, please contact XenOpt or its representative for more information.

Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by XenOpt before they become applicable to any particular order or contract. In accordance with the XenOpt policy of continuous improvement specifications may change without notice.

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