



LY8

A Powerful ToR Switch for Datacenter and Cloud Computing



- Product Highlights**
- Optimized for IaaS datacenter, HPC and financial sectors requiring high performance, high bandwidth, low power and ultra-low latency
 - Hi port density demand in modern datacenters
 - Supports Network Automation
 - Supports Network virtualization
 - Software Defined Network support by OpenFlow and Open API
 - Supports ONIE Installer

Overview

The XenOpt LY8 is a high performance and low latency layer 2/3/4 Ethernet switch with 48 SFP+ ports and up to 6 QSFP+ port in a 1U form factor. Each 40G QSFP+ port can be independently configured as 40GbE or 4 x 10GbE for up to 72 ports of 10GbE. Built for Infrastructure-as-a-service (IaaS) datacentre deployment, high performance computing clusters, and financial applications, the very high port density and high performance as well as ultra-low latency characteristic makes XenOpt LY8 ideal for demanding workloads and provides the best TCO.

Automation

Accompanied by the application of cloud computing, big data and parallel calculation, datacentres network devices continue to grow fast and make network automation a critical factor. Supporting auto installation and integration with orchestration tools like Chef and Puppet, XenOpt LY8 helps for easy deployment of mass data centre IaaS build-up.

Virtualization

Network virtualization is becoming an important topic for datacentres. XenOpt LY8 provides hardware-based VXLAN feature to support virtual machine mobility. Not limited by 4K VLANs, VXLAN helps for the network scaling out across L3 subnets and can support up to 16.7M possible virtual networks.

SDN

Software Defined Network has emerged as a new approach to support open, vendor-agnostic, and programmable networks. XenOpt LY8 provides OpenFlow and Open API with Python script support as SDN solution to fulfil the modern datacentre trend.

High Availability

- The XenOpt LY8 is designed for high availability from both hardware and software perspectives. The key features include:
- 1+1 hot-swappable power supplies,
 - 2+1 hot-swappable fans,
 - Out-of-band management support,
 - Multi-chassis LAG for preventing the risks of single point failure,
 - Up to 32 paths ECMP routing for load balancing and redundancy.

LY8 specifications

Physical ports

- 48 1/10GbE SFP+ ports
- 4 40GbE QSFP+ ports
- Dual 40GbE QSFP+ ports (rear panel)
- 1 RJ-45 out-of-band management port (10/100/1000)1
- 1 RJ-45 console port
- 1 USB 2.0 port

Performance

- Switching capacity: 1.44Tbps
- Forwarding rate: 1071Mpps
- Memory: 2GB with ECC
- CPU: Freescale P2020
- Storage: 8GB Micro SD
- MAC: UFT

L2 features

- STP(802.1D)/RSTP(802.1w)/MSTP(802.1s)
- Tagged-based/Port-based/Mac-based/IP -subnet VLANs (up to 4093)
- QinQ
- VTP v1/v2
- Storm control (Broadcast, Unknown multicast, Unknown unicast)
- IGMP snooping v1/v2/v3 with v1/v2 querier and immediate leave support
- Link Aggregation: 802.3ad and Cisco EtherChannel Liked (load balance support)
- Multi-chassis LAG (MLAG)
- Link state
- Port backup
- Error-Disable Recovery

QoS

- Priority queues per port: 8
- Scheduling for priority queue: WRR, Strict and hybrid (WRR+Strict)
- COS: 802.1p, IP Precedence, & DSCP
- DiffServ
- iSCSI optimization
- Auto VoIP

Security

- Static and dynamic port security (MAC-based)
- 802.1x: port-based, MAC-based, auto VLAN assignment, guest VLAN, unauthenticated VLAN
- ACL: L2/L3/L4
- IPv6 ACL: L3/L4
- RADIUS & TACACS+
- HTTPS and SSL

- SSH 1.5/v2.0
- local authentication
- remote authentication via RADIUS & TACACS+
- AAA
- Denial of Service control
- Management IP filtering (SNMP/WEB/Telnet/SSH)
- MAC filtering
- IP Source Guard
- Dynamic ARP inspection (DAI)
- DHCP snooping
- Control Plane Policing (CoPP)

Management

- Cisco Like CLI
- SNMP v1/v2c/v3
- CLI filtering
- Telnet/SSH
- Software and configuration file download/upload: TFTP/Xmodem/FTP/SCP/SFTP
- Dual image supported
- SNMP inform*
- RMON 1, 2, 3 & 9
- BOOTP/DHCP: client/relay
- DHCP L2/L3 option 82 relay
- Event/error log: local +ash and remote server (RFC 3164) *
- Remote PING
- Traceroute
- DNS client/relay
- SNTpv4
- LLDP (802.1ab)
- CDP
- UDLD
- SPAN and RSPAN
- sFlow v5
- Auto-Installation
- DHCPv6 client*
- SNMP/HTTP/SSH over IPv6
- Telnet/DNS/RADIUS/TACACS+ support for IPv6
- Syslog/SNTP/TFTP support for IPv6
- ONIE Installer
- Cable Test
- Email Alerting

IPv4 Layer 3 features

- IP Multinetting/CIDR/31 subnets
- IP ARP
- Proxy ARP
- Local proxy ARP
- IRDP
- Static route

- Unicast Routing: OSPF, BGP with ECMP (32-way)
- Multicast Routing: IGMP v1/v2/v3, DVMRP, PIM-DM/-SM, IGMP Proxy
- VRRP
- Loopbacks
- Source IP Configuration
- Policy-based routing

IPv6 Layer 3 features

- Static route
- Unicast Routing: OSFPv3, BGP4
- Multicast Routing: MLD v1/v2, PIM-DM6/-SM6
- Tunnels
- Loopbacks

Datacenter features

- CN, ETS, PFC, DCBX
- FIP snooping
- VMware Tracer
- EVB, IEEE 802.1Qbg
- VXLAN/NVGRE
- Chef/Puppet

SDN

- Openflow v1.0/v1.2/v1.3
- Open API

Mechanical

- Dimension (HxWxD): 44x435x508 mm
- Weight : 9.13 kg/ 20.11 lbs (NET)

Environmental specifications

- Operating temperature: 0~45°C
- Operating humidity: 90% maximum relative humidity

Electrical

- Power requirement: 100~240VAC, 50/60Hz or -48~60V DC
- Power consumption: 215 Watts (tested with 10G-SR optics 100% loading 256B under 250C ambient temp.)

Safety

- UL, cUL, CB, CCC dfg

EMC

- CE, FCC,

Environmental

- Reduction of Hazardous Substances (RoHS) 6

Ordering information

Part Number	Product Description
X1LY8BZZ0ST6	Switch, 1U, 48x10G SFP+ / 4x40G QSFP+, (standard L2/L3 FW), dual PSU, Air Flow Direction Front to Back
X1LY8BZZ0ST7	Switch, 1U, 48x10G SFP+ / 4x40G QSFP+, (standard L2/L3 FW), dual PSU, Air Flow Direction Back to Front
X1LY8UZZ0007	Switch, 1U, 48x10G SFP+ / 4x40G QSFP+, (HW only), dual PSU, Air Flow Direction Back to Front
X1LY8UZZ000E	Switch, 1U, 48x10G SFP+ / 4x40G QSFP+, (HW only), dual PSU, Air Flow Direction Front to Back
X1LY8UZZ0007C	Switch, 1U, 48x10G SFP+ / 4x40G QSFP+, (Cumulus FW), dual PSU, Air Flow Direction Back to Front
X1LY8UZZ000EC	Switch, 1U, 48x10G SFP+ / 4x40G QSFP+, (Cumulus FW), dual PSU, Air Flow Direction Front to Back

LY8 accessories - Transceivers

Part Number	Product Description
XSM311-02LY	SFP, multimode, 1310nm, 1Gbps, 2km, LC, with DDMI (0 ± 70OC)
XSM851-M5LY	SFP, multimode, 850nm, 1Gbps, 500m, LC, with DDMI (0 ± 70OC)
XSSdd1-ffLh	SFP, singlemode, dd = {31 - 1310nm; 55 - 1550nm}, 1Gbps, ff = {20 - 20km; 40 - 40km; 80 - 80km; C0 - 120km; G0 - 160km; I0 - 180km; K0 - 200km}, LC, h = {N - no DDMI; Y - DDMI (0 ± 70OC)}
XSBdd1-ffgh	SFP, bidirectional, dd = {27 - 1270nm; 29 - 1290nm; ... ; 61 - 1610nm}, 1Gbps, ff = {20 - 20km; 40 - 40km; 80 - 80km; C0 - 120km}, g = {L - LC, S - SC}, h = {N - no DDMI; Y - DDMI (0 ± 70OC)}
XSCdd1-ffLh	SFP, CWDM, 1Gbps, dd = {lower WL: 27 - 1270nm; ... 45 - 1450nm / upper WL: 47 - 1470nm; ... ; 61 - 1610nm}, ff = {40 - 40km; 80 - 80km; C0 - 120km; G0 - 160km; I0 - 180km; K0 - 200km}, LC, h = {N - no DDMI; Y - DDMI (0 ± 70OC)}
XSDdd1-ffLY	SFP, DWDM C-BAND, dd = {17 - 61 ITU grid channel}, 1Gbps, ff = {80 - 80km; C0 - 120km}, LC, with DDMI (0 ± 70OC)
XTM85A-M3LY	SFP+, multimode, 850nm, 10Gbps, 300m (OM3), LC, with DDMI (0 ± 70OC)
XTS31A-ffLY	SFP+, singlemode, 1310nm, 10Gbps, ff = {02 - 2km; 10 - 10km; 20 - 20km; 40 - 40km}, LC, with DDMI (0 ± 70OC)
XTS55A-ffLY	SFP+, singlemode, 1550nm, 10Gbps, ff = {40 - 40km; 80 - 80km; A0 - 100km}, LC, with DDMI (0 ± 70OC)
XTBddA-ffLY	SFP+, bidirectional, dd = {27 - 1270nm; 32 - 1330nm; }, 10Gbps, ff = {10 - 10km; 20 - 20km; 40 - 40km; 60 - 60km}, LC, with DDMI (0 ± 70OC)
XTCddA-ffLY	SFP+, CWDM, dd = {27 - 1270nm; 29 - 1290nm; ... ; 61 - 1610nm}, 10Gbps, ff = {10 - 10km; 40 - 40km; 80 - 70/80km}, LC, with DDMI (0 ± 70OC)
XTDddA-ffLY	SFP+, DWDM C-BAND, dd = {17 - 61 ITU grid channel}, 10Gbps, ff = {40 - 40km; 80 - 80km*}, LC, with DDMI (0 ± 70OC)
XTDTCA-ffLY	SFP+, DWDM C-BAND, Tunable, 10Gbps, ff = {40 - 40km; 80 - 80km}, LC, with DDMI (0 ± 70OC)
XTLTLA-ffLY	SFP+, DWDM L-BAND, Tunable, 10Gbps, ff = {40 - 40km; 80 - 80km}, LC, with DDMI (0 ± 70OC)
XQM853-M1PY	QSFP+, multimode, 850nm, 40Gbps, {100m (OM3); 150m (OM4)}, MPO, with DDMI (0 ± 70OC)
XQM853-M3PY	QSFP+, multimode, 850nm, 40Gbps, {300m (OM3); 400m (OM4)}, MPO, with DDMI (0 ± 70OC)
XQS313-02PY	QSFP+, singlemode, 1310nm, 40Gbps, 2km, MPO, with DDMI (0 ± 70OC)
XQC273-ffLY	QSFP+, CWDM, 1270/1290/1310/1330nm, 40Gbps, ff = {02 - 2km; 10 - 10km; 20 - 20km; 40 - 40km}, LC, with DDMI (0 ± 70OC)

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.

The publication of information in this data sheet does not imply freedom from patent or other protective rights of XenOpt or others. Further details are available from any XenOpt sales representative.

To find out more, please contact:



www.xenopt.com