



# LY6

## A Powerful Spine/Leaf 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
  - Up to 32 40GbE QSFP+ ports for high 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 LY6 is a high performance and low latency layer 2/3/4 Ethernet switch with 32 40GbE QSFP+ ports in a 1U form factor. Built for Infrastructure-as-a-service (IaaS) datacenter 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 LY6 ideal for the 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 LY6 helps for easy deployment of mass data centre IaaS build-up.

### Virtualization

Network virtualization is becoming an important topic for datacentres. XenOpt LY6 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 LY6 provides OpenFlow and Open API with Python script support as SDN solution to fulfil the modern datacentre trend.

### High Availability

- The XenOpt LY6 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.

## LY6 specifications

### Physical ports

- 32 10/40GbE QSFP+ ports
- 1 RJ-45 out-of-band management port (10/100/1000)
- 1 RJ-45 console port
- 1 USB 2.0 port

### Performance

- Switching capacity: 2.56Tbps
- Forwarding rate: 1920Mpps
- Memory: 2GB with ECC
- CPU: Freescale P2020
- Storage: 2GB Micro SD
- MAC: UFT

### L2 features

- Flow control: IEEE 802.3x
- Switching mode: store-and-forward
- Spanning Tree Protocol (802.1D, 802.1w, & 802.1s)
- VLANs (802.1Q tagged based and port-based up to 4093)
- QinQ
- VTP v1/v2
- Storm control (Broadcast, Unknown multicast, Unknown unicast )
- IGMP snooping
- Ling Aggregation: LACP and Cisco EtherChannel Liked (load balance support)
- Multi-chassis LAG (MLAG)
- Link state
- Port backup

### QoS

- Priority queues: 8 queues
- 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 and remote authentication
- 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

- 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: client/relay
- DHCP: client/relay/option 82
- Event/error log: local flash and remote server (RFC3164)
- Remote PING
- Traceroute
- DNS: client/relay
- SNTpv4
- LLDP (802.1ab, Link

### Layer Discovery Protocol

- CDP
- UDLD
- SPAN and RSPAN
- sFlow v5
- Auto-Installation
- IPv6 management
- ONIE Installer

### Layer 3 features

- IP Multinetting/CIDR/31 subnets
- IP ARP
- Proxy ARP
- Local proxy ARP
- IRDP
- Static route
- Unicast Routing: OSPF, BGP with ECMP
- 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
- 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
- Open API

### Mechanical

- Dimension (HxWxD): 44x435x483 mm
- Weight : 9.33 kg/ 20.55 lbs (NET)

### Environmental specifications

- Operating temperature: 0~450C
- Operating humidity: 90% maximum relative humidity

### Electrical

- Power requirement: 100~240VAC, 50/60Hz
- Power consumption: 200 Watts (tested with 10G-SR optics 100% loading 256B under 250C ambient temp.)

### Safety

- UL, cUL, CB, CCC dfg

### EMC

- CE, FCC, VCCI, CCC

### Environmental

- Reduction of Hazardous Substances (RoHS) 6

**Ordering information**

Part Number	Product Description
X1LY6BZZ0ST0	Switch, 1U, 32x40G QSFP+, (standard L2/L3 FW), dual PSU, Air Flow Direction Front to Back
X1LY6BZZ0ST1	Switch, 1U, 32x40G QSFP+, (standard L2/L3 FW), dual PSU, Air Flow Direction Back to Front
X1LY6UZZ0FBCC	Switch, 1U, 32x40G QSFP+, Processor x86/RGL 8C (Cumulus FW), dual PSU, Air Flow Direction Front to Back
X1LY6UZZ0FBDC	Switch, 1U, 32x40G QSFP+, Processor x86/RGL 8C (Cumulus FW), dual PSU, Air Flow Direction Back to Front
X1LY6BZZ0ST6C	Switch, 1U, 32x40G QSFP+, Processor P2020 (Cumulus FW), dual PSU, Air Flow Direction Front to Back
X1LY6BZZ0ST7C	Switch, 1U, 32x40G QSFP+, Processor P2020 (Cumulus FW), dual PSU, Air Flow Direction Back to Front
X1LY6UZZ0FBFC	Switch, 1U, 32x40G QSFP+, Processor x86/RGL 8C (HW only), dual PSU, Air Flow Direction Front to Back
X1LY6UZZ0FBFD	Switch, 1U, 32x40G QSFP+, Processor x86/RGL 8C (HW only), dual PSU, Air Flow Direction Back to Front
X1LY6BZZ0ST6	Switch, 1U, 32x40G QSFP+, Processor P2020 (HW only), dual PSU, Air Flow Direction Front to Back
X1LY6BZZ0ST7	Switch, 1U, 32x40G QSFP+, Processor P2020 (HW only), dual PSU, Air Flow Direction Back to Front

**LY6 accessories - Transceivers**

Part Number	Product Description
XQM853-M1PY	QSFP+ SR4, 40 G, 850 nm, MPO, 100 m on OM3 (50 m on OM2, 150 m on OM4), MMF
XQM853-M3PY	QSFP+ eSR4, 40 G, 850 nm, MPO, 300 m on OM3, 400 m on OM4, MMF
XQC273-02LY	QSFP+ IR4, 40 G, CWDM 1270 - 1310 nm, LC, 2 km, SMF
XQC273-10LY	QSFP+ LR4, 40 G, CWDM 1270 -1310 nm, LC, 10 km, SMF
XQC273-30LY	QSFP+ ER4, 40 G, CWDM 1270 -1310 nm, LC, 30 km, SMF
XQS313-01PY	QSFP+ PSM IR4, 40 G, 1310 nm, MPO, 1,4 km, SMF
XQS313-10PY	QSFP+ PSM LR4, 40 G, 1310 nm, MPO, 10 km, SMF

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