LB8D

A powerful Top-of-Rack Switch for Cloud Datacenters

Product Highlight

Performance
- 16 40GbE QSFP+ ports in 1 RU
- 1.28 terabits per second
- 960 million packets per second

Robust hardware
- Redundant and hot-swappable power supply
- Out-of-band management port
- 4 fixed fans

Management
- CLI/Web/SNMP
- sFlow
- IPv6
- Auto-Installation

Layer 3 features
- RIP v1/v2
- OSPF/ECMP
- IGMP v1/v2/v3
- PIM-DM/S

IPv6 support
- RIPng
- OSPFv3
- MLD v1/v2
- PIM-DM6/SM6

Datacenter application
- CN (802.1Qau)
- ETS (802.1Qaz)
- PFC (02.1Qbb)
- DCBX (802.1Qaz)
- FIP snooping

Overview

The Xenya LB8D is a high performance and low latency layer 2/3/4 Ethernet switch with 16 40GbE QSFP+ ports in a compact rack unit size. Each 40 Gigabit Ethernet port can be independently configured as 40GbE or 4 x 10GbE for total 64 ports of 10GbE.

Simplicity

The Xenya LB8D can be managed through industry standard command-line Interface (CLI) which reduces the training and operating costs. A user friendly Web GUI is provided via a standard Web browser to manage. The Xenya LB8D also supports Simple Network Management Protocol (SNMP) both from standard MIB and private MIB for network administrator to easily configure, monitor, and manage remotely. The Auto-Installation feature implemented in the Xenya LB8D helps centralized management to simplify deployment of a truly plug-and-play experience. With the evolution from IPv4 to IPv6, the Xenya LB8D is a IPv6 integrated management device.

High Availabilityailability

The Xenya LB8D is designed for high availability from both hardware and software perspective. The key features include:
- 1+1 hot-swappable power supplies
- Out-of-band management supported
- 802.1D, 802.1w, and 802.1s supported
- Up to 8 ports per link aggregation group (LACP) and up to 64 groups
- Multi-chassis LAG (MLAG) for preventing the risks of single point failure
- Up to 32 paths ECMP routing for load balancing and redundancy
- Virtual Router Redundancy Protocol supported

High-Performance L2/L3 access deployments

With 16 QSFP+ ports in the front panel and in the compact 1U form factor, front to back or back to front airflow design, the Xenya LB8D is ideal for top-of-rack deployments in high-performance, highly demanding datacenters. The 1.28 terabits per second switching capacity and 960Mpps forwarding rate with low power consumption make the Xenya LB8D a powerful solution to aggregate high-performance servers in the datacenter.

Advanced IPv4 and IPv6 routing

The Xenya LB8D is a fully layer 2 and layer 3 routing switch that supports advanced IPv4 and IPv6 routing features such as RIP v1/v2, OSPF/ECMP, RIPng and OSPFv3. The multicast routing features for IGMP v1/v2/v3, DVMRP, PIM-DM/SM, MLD v1/v2 and PIM-DM6/SM6 are all supported in the Xenya LB8D.

Datacenter application

The Xenya LB8D is a special IEEE DCB-based switch delivering a high-performance solution to integrate server edge access. The key features include:
- Congestion Notification (CN, 802.1Qau)
- Enhanced Transmission Selection (ETS, 802.1Qaz)
- Priority-based Flow Control (PFC, 802.1Qbb)
- Datacenter Bridging Extension (DCBX, 802.1Qaz)
- FCoE Initiation Protocol (FIP) snooping

XENYA d.o.o
Celovška cesta 172,
1000 Ljubljana, SI
+386 1 5140610
http://www.xenya.si
sales@xenya.si

XENYA

LB8D specifications

Physical ports

- 16 40G QSFP+ ports in 1RU
- 1 RJ-45 out-of-band management port (10/100/1000)
- 1 RJ-45 console port

Performance

- Switching capacity: 1.28 Tbps
- Forwarding rate: 960Mpps
- Latency: 1.2 microseconds
- Memory: 2GB
- Flash: 64MB
- MAC: 128K
- Packet buffer: 9MB
- Jumbo frame: 12K

L2 features

- Auto-negotiation for port speed and duplex
- Flow control: IEEE 802.3x
- Switching mode: store-and-forward
- Spanning Tree Protocol:
  - 802.1D, 802.1w, & 802.1s
  - Spanning Tree Fast Forwarding
  - Edge port
  - Loop guard
  - BPDU filter/guard
  - Auto Edge
  - TCN guard
  - Root guard
- VLANs
  - IEEE 802.1Q tagged based
  - Port-based (up to 4094 VLANs)
  - Private VLAN
  - GVRP/GMRP
  - 802.1v protocol VLAN
  - Voice VLAN
  - MAC-based VLAN
  - IP-subnet VLAN
  - QinQ
- VTP v1/v2
- Storm control
  - Broadcast
  - Unknown multicast
  - Unknown unicast
- IGMP snooping
  - IGMP snooping v1/v2/v3
  - IGMP v1/v2 querier
  - IGMP immediate leave
- Link Aggregation
  - 802.3ad with LACP
  - Cisco EtherChannel Like
  - Unicast/Multicast traffic balance over trunking port (dst-ip, dst-mac, src-dst-ip, src-dst-mac, src-ip, src-mac)
- 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
- Port rate limit
- Auto VoIP
- iSCSI optimization

Security

- Static and dynamic port security (MAC-based)
- 802.1x: port-based, MAC-based, auto VLAN assignment, QoS assignment, guest VLAN, unauthenticated VLAN
- ACL: L2/L3/L4
- IPv6 ACL: L3/L4
- RADIUS: authentication and accounting (up to 32 servers)
- TACACS+: authentication (up to 5 servers)
- HTTPS (AES 128-cbc, 3ES-cbc, Blowfish-cbc)
- SSH 1.5/v2.0 (AES 128-cbc, 3ES-cbc, Blowfish-cbc)
- User name and password: local authentication and remote authentication via RADIUS/TACACS+
- Denial of Service control
- Management IP filtering (SNMP/Web/Telnet/SSH) MAC filtering
- IP Source Guard
- Dynamic ARP inspection (DAI)
- DHCP snooping

Management

- Industrial command-line interface
- CLI filtering
- Telnet/SSH
- Software download/upload: TFTP/Xmodem/FTP
- Configuration download/upload: TFTP/Xmodem/FTP
- Dual image supported
- SNMP v1/v2c/v3
- RMON 1, 2, 3 & 9
- BOOTP: client/relay
- DHCP: client/relay/option 82 Auto-Installation
- Event/error log: local flash and remote server via system log (RFC3164)
- DNS: client/relay NTP/SNTP
- LLDP (802.1ab, Link Layer Discovery Protocol)
- CDP (Cisco Discovery Protocol) version 2
- Port mirroring: one to one & many to one
- sFlow (RFC 3176)
- IPv6 management:
  - IPv4/IPv6 Dual Stack
  - ICMPv6
  - ICMPv6 redirect
  - IPv6 Path MTU Discovery
  - IPv6 Neighbor Discovery
  - stateless auto-configuration
  - manual configuration
  - DHCPv6 (client)
  - SNMP/HTTP/SSH/Telnet over IPv6
  - IPv6 DNS resolver
  - IIPv6 RADIUS/TACACS+ support
  - IPv6 Syslog support
  - IPv6 SNTP & NTP
  - IPv6 TFTP
  - IPv6 Ping

Layer 3 features

- CIDR
- ARP (static: 128 & dynamic 3968)
- Proxy ARP
- Local proxy ARP
- IRDP
- IRDP
- Static route
- Unicast Routing: RIP v1/v2, OSPF
- ECMP
- Multicast Routing: IGMP v1/v2/v3, DVMRP, PIM-DM/-SM
- VRRP

IPv6 Layer 3 features

- Static route
- Unicast Routing: RIPng & OSPFv3
- Multicast Routing: MLD v1/v2, PIM-DM6/-SM6
- DHCPv6: relay & server

Datacenter features

- Congestion Notification
- Enhanced Transmission Selection
- Priority-based Flow Control
- Datacenter Bridging
- Extension FIP snooping

VM Tracer features

- VMware vSphere support
- VM Auto Discovery
- VM Adaptive Segmentation
- VM host view

Ethernet Virtual Bridge

- Ethernet Virtual Bridging (EVB, IEEE 802.1Qbg

Mechanical

- Dimension (HxWxD): 42.8x435x393.7 mm
- Weight: 7.3kg(NET)

Environmental specifications

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

Electrical

- Power consumption: 180W (full loading)

Safety

- UL 60950-1 (2nd Ed.)
- CSA C22.2 60950-1-07 (2nd Ed.)
- IEC 60950-1 (2005)
- EN 60950-1 (2006)

EMC

- FCC 47CFR, Part 15 Class A
- ICES-003 Class A
- EN 55022 Class A
- CISPR 22 Class A
- EN 55024
- EN 61000-3-2
- EN 61000-3-3
- EN 300 386

Environmental

- Reduction of Hazardous Substances (RoHS) 6

Order information

- LB8D (Front to Back)
- LB8D (Back to Front)

Warranty

- Limited lifetime warranty