LARCH NETWORKS

16-port Managed Datacenter Switches

Tailor-made network hardware & software development

PRODUCT OVERVIEW

LN-3516-SERIES

Highlights

- 10GbE SFP+ or RJ45 Ports & 100G QSFP Uplinks
- Non-Blocking Switching Capability
- Dual Hot Pluggable PSU
- 8GB DDR4
- Up to 32GB eMMC
- Hot Pluggable FANS
- Service Monitoring and Management
- Marvell ROS Support
- SONiC OS Support

HARDWARE SPECIFICATIONS

Switching Performance

Switch ASIC	Marvell Prestera 98DX8548
Ports	16 SFP+ or 16 Copper 10G + 6 QSFP 100G ports
Capacity	1.52 Tbps
Packet Buffer	6MB

Hardware

CPU	Marvell OcteonTX2 CN9130
Memory	8GB DDR4
SSD	8GB eMMC, Optional M.2 SATA slot

Management Port

USB	1 x USB2.0
Serial Console	1 x RJ45
Management Port	1 x RJ45 Ethernet 1GBase-T management port

Power

PSU Input	110V~240V(AC), 36V~72V(DC)
PSU Output	200W/200W (AC/DC)
Max. Power Consumption	130W

Physical and Environmental

Dimensions	HxWxD 440/44/470 mm
Rack Space	1RU
Fan	2+1, hot pluggable
PSU	1+1 hot pluggable
Operating Temperature	0°C to 45°C
Operating Humidity	5% to 90% (non-condensing)

Approvals

Certificate	CCC/CE

MARVELL ROS SOFTWARE FEATURES

Basic Functions

Port Speed/duplex management	VLANS (Protocol / MAC / IPv4 based)
Port Auto management	GVRP/GARP
VCT Diagnostics Port features	Multicast/CPE(Triple Play) VLAN
Jumbo Frames (FE and GE)	QinQ
LAG / LACP	Flow Control 802.3x
Green Ethernet	Back Pressure
STP/RSTP/MSTP etc.	Loopback and UDLD (Unidirectional link) detection
Optical Transceiver Analysis	

Quality of Service

Basic / Advanced QOS (Port/Flow)	CoS/QoS
Ingress/egress Rate Limiting/Shaping	SP/WRR Queue settings
L2/L3 CoS->Queue mapping	Per-Flow Actions

Security

Access Control and logging	Radius Authentication/Accounting/802.1x
Time based ACL	TACACS+ Client and Accounting
MAC/Port based security	Syslog
Ace priority	DHCP Snooping
802.1x enchanced (all variants)	ARP inspection
802.1x MAC/Port/Web/Time based	IP Source Guard
Secure Control Technology (protect CPU)	DoS Attach prevention

Monitoring

Mirroring SPAN/RSPAN	Environmental PS/RPS, FAN, Temperature
RMON/SMON	SFLOW v5
SNMP v1/2/3 with MIBs	Counters with History

Multicast

IGMP Snooping v1/2/3	*PIM-SM (optional)
MLD Snooping v1/2	IGMP/MLD Proxy
MLD Querier	Ports, Flows, CP
Unregistered Mcast	

MARVELL ROS SOFTWARE FEATURES

Management

OOB & serial Console support	DNS, DHCP, SNTP, LLDP-MED, UpnP
CLI/SNMP management (IPv4,IPv6) over Telnet or SSH	LLDP 802.1ab + LLDP MED
USB/SD flash storage support	WEB-GUI interface for basic management
DHCP based Self-Configuration/Update	Time based scheduled features
Multi-File Configs, Dual-Firmware	*Detailed REST compatible API (Optional)
RMON, Syslog, Radius, TACACS+	

*IP Routing (Optional)

L3 DHCP Relay	IP SLA
Proxy ARP for IP Routing	Loopback IP interface (Source Address Selection)
OSPF / RIP	Directed Broadcast
Equal Cost Multiple Path (ECMP)	UDP Relay
VRRP	IPv6 static unicast routing

*Stacking (Optional)

Optional Stacking up to 8(16) units using uplinks	Real cross-unit features, not just Management
Stand-alone and Stack-mode operation	Stack Master Election process
Firmware Version Control	Stack Backup capabilities
Unit joining or leaving the stack	Stacking Fast Failover
Stacking LAG	

*Optional Features for ROS

Ring protection	VxLAN
WEB-GUI with flexible configuration options	Radius COA
PTP	BGP

SONIC OS SOFTWARE FEATURES

Layer 2/3 Feature list

BGP / BGP MP	BGP/Neighbor-down fib-accelerate
BGP-EVPN support (type 5), (related HLD Fpmsyncd,Vxlanmgr,template)	ECMP
LAG	ACL permit/deny, IPv6 ACL
LLDP	DHCP
VLAN	CoPP
IPv6	VLUN Trunk
FRR	Priority Flow Control
Asymmetric PFC	PFC Watermark
DHCP Relay Agent	Tunnel Decap
LACP Fallback	MTU Setting
Vlan Trunk	Static Port breakout
Dynamic ACL Upgrade	MAC Aging
L3 RIF counter support	Configurable drop counters

Monitoring

SNMP	Syslog
EverFlow	OOM
TCPDump	Critical Recourse Monitor
Dtel	Mirroring
Egress mirroring	ACL action support check via SAI
Streaming Telemetry	Everflow enhancement
sFlow	HW resource monitor

QoS

RDMA	ECN
PFC WD	WRED
COS	Watermark

Virtualization

L3 VxLAN	VRF

SONIC OS SOFTWARE FEATURES

System

NTP	ONIE Install
CLI	TACACS+
ConfigDB	SONiC to SONiC upgrade
Multiple Images support	gRPC
Sensor transceiver monitoring	LLDP extended MIB: lldpremtable, lldplocporttable, lldpremmanaddrtable, lldplocmanaddrtable, lldplocporttable, lldpLocalSystemData
Warm Reboot	Incremental Config (IP, LAG, Port shut/unshut)
Routing Stack Graceful Restart	Mgmt VRF
Management Framework	Multi-DB optimization-Part 1
Sub-port support	

ORDERING INFORMATION

SKU	Model	Description
000075	LN-3516XGF-6Z	16x10+6x100, Dual Hot Pluggable PSU, Hot Pluggable FANS, 8GB DDR4, 8GB eMMC
000078	LN-3516XGF-6Z	16x10+6x100, Dual Hot Pluggable PSU, Hot Pluggable FANS, 8GB DDR4, 32GB eMMC
000082	LN-3516XGE-2Z	16x10G ETH + 2x40G QSFP, 8GB DDR4, 32GB eMMC

Models include a 3-year HW Warranty.