LARCH
NETWORKS

Tailor-made network hardware & software development

PRODUCT OVERVIEW

LN-3824G-8XGF-SERIES

Highlights

▶ Layer 3 Managed Gigabit Switch with 10G Scalability

▶ High-Density Performance: 208Gbps Switching Capacity

▶ Redundant 1+1 Internal AC Power Supply (Optional)

▶ Hot Swappable Fans (Optional)

▶ Hot Swappable PSUs (Optional)

▶ Comprehensive End-to-End QoS for VoIP, Video, and Multicast

▶ Advanced Security and Flexible Management for SME & ISP Networks

▶ Cost-Effective High-Speed Solution

▶ PoE+ (Optional)

▶ Marvell ROS Support

▶ SONiC OS Support

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HARDWARE SPECIFICATIONS

	1G SFP Downlinks	10G SFP+ Uplinks	RPS	Hot swap PSUs	Single PSU/W	Hot swap FANS	PoE+ Budget/W
LN-3824G-8XGF-RPS	24	8	+	-	-	-	-
LN-3824GMP-8XGF-RPS	24	8	+	-	-	-	740
LN-3824G-8XGF-HSP-HSF	24	8	-	+	-	+	-
LN-3824GMP-8XGF-HSP-HSF	24	8	-	+	-	+	740
LN-3824G-8XGF	24	8	-	-	36	-	-
LN-3824GMP-8XGF	24	8	-	-	850	-	740

Switching Performance

Switch ASIC	98DX3510/98DX3511/98DX3512
Ports	24x1G SFP + 8x10G SFP+
Capacity	208Gbit/s
Packet Buffer	24Mbit
Packet forwarding rate	309.5Mpps
MAC address table	32K
VLAN	4K
Forwarding delay	<5us
Jumbo Frame	Support 10Kbytes
MDX/MIDX	Support

Management Port

Serial Console	1
USB	1
OBB	1

Physical and Environmental

Dimensions	440x245x44mm (for model with RPS); 440x400x44mm (for model with HSP and HSF); 440x352x44mm (for model with PoE+, HSP, and HSF)
Net Weight	4 kgs (for model with RPS); 7.8 kgs (for model with HSP and HSF); 8.2kgs (for model with PoE+, HSP, and HSF)
Operating Temperature	0°C~+50°C
Operating Humidity	10%-90%RH (non-condensing)

MTBF

Certificate	>100,000 hours

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
MACsec	

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+	

Power Over Ethernet

PoE 802.3af 802.3at 60W PoE	Time Based PoE
PoE Budget with LLDP negotiation	PoE Consumption monitor
PSE/PD if HW supported	

*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

Model	Description
LN-3824G-8XGF-RPS	24x1G ETH, Uplink 4x10G SFP+, 4x10G DSP, RPS
LN-3824GMP-8XGF-RPS	24x1G ETH, Uplink 4x10G SFP+, 4x10G DSP, RPS, POE+ 740W
LN-3824G-8XGF-HSP-HSF	24x1G ETH, Uplink 4x10G SFP+, 4x10G DSP, HSP, HSF
LN-3824GMP-8XGF-HSP-HSF	24x1G ETH, Uplink 4x10G SFP+, 4x10G DSP, HSP, HSF, POE+ 740W
LN-3824G-8XGF	24x1G ETH, Uplink 4x10G SFP+, 4x10G DSP, Single PSU 36W
LN-3824GMP-8XGF	24x1G ETH, Uplink 4x10G SFP+, 4x10G DSP, Single PSU 850W (PoE Budget 740W)

Models include a 1-year HW Warranty.