



L3 GIGABIT ETHERNET SWITCH

LN-3848G-6Y/LN-3848GP-6Y

The **LN-3848G-6Y** switch is a Gigabit Ethernet access/aggregation switch with four 25G SFP uplinks. The switch is ideal as a high-performance Gigabit access/aggregation switch with 1 Gigabit downlinks, or as an enterprise core switch. This switch is also positioned as a cloud edge access/aggregation switch, connecting IOT and other devices in enterprise and SMB deployments. It is also an ideal Gigabit access/aggregation switch for SMB, enterprise, and campus networks. This switch is also positioned as a cloud edge access/aggregation switch, connecting IOT and other devices in enterprise and SMB deployments. It is also an ideal Gigabit access/aggregation switch for SMB, enterprise, and campus networks.



Product Highlights

- Stacking for 8 devices
- ITU-T G.8032 ERPS L2 Ring protection with
- Comprehensive and field-proven software features for ISPs/ Carriers, providing broadband access, IPTV services
- Full L3 features with commonly-used unicast and multicast routing protocols, redundant routing protocols, and DHCP relay and server
- Enhanced Security, IPv6, and Multicast features
- Simple management (CLI, SNMP, Web)
- Complete Private MIB to fully control and monitor the switch via customer's EMS

The **LN-3848GP-6Y** is a PoE switch that can provide up to 90 Watts to power devices such as wireless access points, VoIP phones, surveillance cameras, IoT devices etc. over Cat 5 UTP cable, eliminating the need for individual power sources. The LN-3848G-6Y/LN-3848GP-6Y is packed with features that bring high availability, comprehensive security, robust multicast control, and advance QoS to the network edge, while maintaining simple management. The switch also supports the most advance IPv6 management, IPv6 security, and IPv6 multicast control in accordance with the growth of IPv6 deployment. The switch also supports the most advance IPv6 management, IPv6 security, and IPv6 multicast control in accordance with the growth of IPv6 deployment.

HARDWARE SPECIFICATION

Function/parameter 48 RJ-45 10/100/1000BASE-T Ports + 6 SFP28 25G Uplink Ports

	Larch Name	LN-3848G-6Y	LN-3848GP-6Y
Switching Performance	Ports	48 RJ-45 10/100/1000BASE-T Ports + 6 SFP28 25G Uplink Ports	48 RJ-45 10/100/1000BASE-T Ports + 6 SFP28 25G Uplink Ports
	Capacity	396 Gbps	396 Gbps
	Forwarding Rate	295 Mpps	295 Mpps
	MAC Address Table	32 K	32 K
	Jumbo Frames	10 KB	10 KB
	Auto-negotiation, Auto-MDI/MDIX	Yes	Yes
	CPU	CPU	Dual-Core ARM - 8.2 Cortex - A55
Memory		1 GB DDR4	1 GB DDR4
Storage		SPI 32MB + 256 MB NAND Flash Memory	SPI 32MB + 256 MB NAND Flash Memory
Management Port	USB	1 x USB2.0	1 x USB2.0
	Serial Console	1 x RJ45	1 x RJ45
Stacking		2xSFP28 stacking led	2xSFP28 stacking led
Power	PSU	1x120W Open frame PSU 100-240V 50/60Hz	1x450W Open frame PSU 100-240V 50/60Hz
	Max. Power Consumption	TBD	TBD
	PoE		40x 802.3at@30W 8x 802.3bt@90W
	PoE Budget		750 W
Physical and Environmental	Dimensions	WxDxH 442/420/43.6 mm	WxDxH 442/420/43.6 mm
	Fan	2	3
	PSU	1	1
	Operating Temperature	-5 - 45°C	-5 - 45°C
	Storage Temperature	-40 - 70°C	-40 - 70°C
	Operating Humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)
	Storage Humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)
Warranty	Warranty	1 year	1 year
Approvals	Certificate	FCC Class A/CE/Safety Compliance: CB/Safety Compliance: UL	FCC Class A/CE/Safety Compliance: CB/Safety Compliance: UL

Marvell ROS SOFTWARE FEATURES

Basic Functions

- Port Speed/duplex management
- Port Auto management
- VCT Diagnostics Port features
- Jumbo Frames (FE and GE)
- LAG / LACP
- Green Ethernet
- STP/RSTP/MSTP etc.
- VLANS (Protocol / MAC / IPv4 based)
- GVRP/GARP
- Multicast/CPE(Triple Play) VLAN
- QinQ
- Flow Control 802.3x
- Back Pressure
- 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
- Time based ACL
- MAC/Port based security
- Ace priority
- 802.1x enhanced (all variants)
- 802.1x MAC/Port/Web/Time based
- Radius Authentication/Accounting/802.1x
- TACACS+ Client and Accounting
- Syslog
- DHCP Snooping
- ARP inspection
- IP Source Guard
- Secure Control Technology (protect CPU)
- DoS Attach prevention

Monitoring

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

*Optional Features for ROS

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

Multicast

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

Management

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

Power Over Ethernet

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

*IP Routing (Optional)

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

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 and
- ACL action support check via SAI
- Streaming Telemetry

- Everflow enhancement
- sFlow
- HW resource monito

QoS

- RDMA
- ECN
- PFC WD
- WRED
- COS
- Watermark

System

- NTP
- ONIE Install
- CLI
- TACACS+
- ConfigDB
- SONiC to SONiC upgrade
- Multiple Images support
- gRPC
- Sensor transceiver monitoring
- LLDP extended MIB: Ildpremtable, Ildplocporttable, Ildpremanaddrtable, Ildplocmanaddrtable, Ildplocporttable, IldpLocalSystemData
- 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

Virtualization

- L3 VxLAN
- VRF