

CAMPUS & ACCESS

CAMPUS AND ACCESS SWITCH

SN-3848MG-6Y-M

L3HCX, 48*2.5 G Ethernet+6*25G, USB, OOB, Console, MacSec



HIGHLIGHTS

- AC5X Solution with MACsec (Optional)
- Full L3 Features with Commonly-Used Unicast and Multicast Routing Protocols, Redundant Routing Protocols, and DHCP Relay and Server
- Enhanced Security and IPv6
- Ports 48x2.5GB RJ-45 Ports + 4x25G Uplink Ports +
- 2x25GSFP+ DSP Uplink Ports
- Enterprise access switching with high-speed fiber uplinks
- Advanced Layer 2 and Layer 3 network services
- Secure management, policy enforcement, and traffic control
- Flexible PoE, power, and cooling options across supported models

3848MG-6Y-M

MODEL

CAMPUS & ACCESS

PLATFORM

CUSTOM CONFIGURATION

AVAILABLE

PRODUCT SPECIFICATIONS

SN-3848MG-6Y-M is a campus and access switch configured for L3HCX, 48*2.5 G Ethernet+6*25G, USB, OOB, Console, MacSec.

Product	SN-3848MG-6Y-M
Platform	Campus and Access Switch
Application	L3HCX, 48*2.5 G Ethernet+6*25G, USB, OOB, Console, MacSec
Source specification	Corresponding technical product series datasheet

Technical Characteristics

Characteristic	Specification
MAC Address Table	MAC Address Table 32 K
Dimensions	Dimensions 442x420x43 (WxDxH)
Operating Temperature	Operating Temperature -5°C to 45°C
Operating Humidity	Operating Humidity 5% - 95% (non-condensing)

The product configuration and applicable interface, power, cooling, and software options are defined by the selected model and project requirements.

NETWORK FEATURES

Quality of Service

Traffic classification and prioritization	Strict priority and weighted scheduling
Rate limiting, traffic shaping, and policing	Policy maps and class-based traffic actions
QoS based on IP, MAC, VLAN, and protocol criteria	

Security

RADIUS and TACACS+ authentication	Port security and role-based access control
DHCP snooping and IP source protection	Access-control lists and management ACLs
DoS protection, secure copy, SSH, and SSL	

Layer 2

802.1Q VLANs, QinQ, and private VLAN services	STP, RSTP, and MSTP loop prevention
Link aggregation and LACP	Port mirroring, isolation, and loopback detection
LLDP and LLDP-MED neighbor discovery	

Layer 3

IPv4 and IPv6 dual-stack operation	Static routing and inter-VLAN routing
Policy-based routing and route maps	DHCP server, relay, and client services
OSPF and RIP capabilities on supported configurations	

Multicast

IGMP and MLD snooping	PIM multicast routing on supported configurations
Multicast VLAN registration	Traffic containment and multicast policy control

High Availability

Redundant network protocols and equal-cost multipath	Virtual router redundancy
Storm control for broadcast, multicast, and unicast traffic	Stacking or redundant chassis operation where supported

MANAGEMENT & COMPLIANCE

Management

Web-based graphical interface	Industry-standard command-line interface
SSH, Telnet, SNMP, and syslog integration	Controller-based or standalone operation where supported
USB, console, and out-of-band management options	

Monitoring and Diagnostics

System event, alarm, and operating logs	Port and traffic statistics
Temperature, power-supply, and fan monitoring where applicable	Ping, traceroute, and cable diagnostics
Digital diagnostic monitoring on supported optical interfaces	

Standards and Compliance

IEEE 802.1 and 802.3 Ethernet standards	RoHS environmental compliance
CE and FCC regulatory conformity where applicable	Energy-efficient Ethernet on supported configurations
PoE and PoE+ standards on power-enabled models	

Source-Specified Standards

Switching Performance
FCC Class A/CE/Safety
Compliance: CB/Safety
Compliance: UL
LAG / LACP Flow Control 802.3x
Quality of Service
Access Control and logging Radius Authentication/Accounting/802.1x
Ace priority DHCP Snooping

DETAILED TECHNICAL SPECIFICATIONS

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HARDWARE SPECIFICATIONS

	2.5G RJ45 Downlinks	25G QSFP28 Uplinks	PoE Budget/W	Hot Swappable PSU	Hot Swappable Fans
SN-3848MG-6Y	48	6	-	-	-
SN-3848MGBPPP-6Y	48	6	1440	-	-
SN-3848MGBPPP-6Y-2AC-HSP	48	6	1900+1900	AC+AC	-
SN-3848MGBPPP-6Y-2AC-HSP-HSF	48	6	1900+1900	AC+AC	+

Switching Performance

Switch ASIC	98DX3510/ 98DX3510(M)
Ports	48x2.5GB RJ-45 Ports + 4x25G Uplink Ports + 2x25GSFP+ DSP Uplink Ports
Capacity	420 Gbps
MAC Address Table	32 K

Hardware

CPU	Dual-Core ARM - 8.2 Cortex - A55
Memory	4GB for SONiC version or 1GB for ROS version
SSD	8GB for SONiC version or 2GB for ROS version

Management Port

USB	1 x USB 2.0
Serial Console	1 x RJ45
Management Port	1 x RJ45 100/1000Base-T out-of-band
Stacking	2 x SFP28 stacking led

Power

Power supply units	100-240V 50/60Hz
Power consumption	TBD

Physical and Environmental

Dimensions	442x420x43 (WxDxH)
Operating Temperature	-5 ° C to 45 ° C
Operating Humidity	5% - 95% (non-condensing)

Approvals

	FCC Class A/CE/Safety
Certificate	Compliance: CB/Safety
	Compliance: UL

DETAILED TECHNICAL SPECIFICATIONS

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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 enhanced (all variants)	ARP inspection
802.1x MAC/Port/Web/Time based	IP Source Guard
Secure Control Technology (protect CPU)	DoS Attack 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	

DETAILED TECHNICAL SPECIFICATIONS

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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

DETAILED TECHNICAL SPECIFICATIONS

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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
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DETAILED TECHNICAL SPECIFICATIONS

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System

NTP	ONIE Install
CLI	TACACS+
ConfigDB	SONiC to SONiC upgrade
Multiple Images support	gRPC
Sensor transceiver monitoring	LLDP extended MIB: Ildpremtable, Ildploporttable, Ildpremanaddrttable, Ildplomanaddrttable, Ildploporttable, 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	

DETAILED TECHNICAL SPECIFICATIONS

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ORDERING INFORMATION

Model	Description
SN-3848MG-6Y	48x2.5G Ethernet+4x25G, 2x25G DSP
SN-3848MGBPPP-6Y	48x2.5G Ethernet+4x25G, 2x25G DSP, PoE++, 90W, 1-16 ports, 1440W
SN-3848MGBPPP-6Y-2AC-HSP	48x2.5G ETH+4x25G, 2x25G DSP, Port 1-16 Support BT 90w, 2 hot swappable PSU 2000W+2000W (PoE budget 1900W+1900W)
SN-3848MGBPPP-6Y-2AC-HSP-HSF	48x2.5G ETH+4x25G, 2x25G DSP, Port 1-16 Support BT 90w, 2 hot swappable PSU 2000W+2000W(PoE budget 1900W+1900W)

Models include a 1-year HW Warranty.

SUPPORT & CUSTOM ENGINEERING

Service Area	SIDERA Intelligent Systems Capability
Technical support	Pre-sales, deployment, configuration, and operational assistance
Product customization	Customer-specific hardware, software, interface, and mechanical modifications
Project engineering	Application review, design adaptation, validation, and implementation support
Lifecycle support	Documentation, troubleshooting, maintenance guidance, and upgrade planning

TECHNICAL SUPPORT & CUSTOM ENGINEERING

SIDERA Intelligent Systems provides comprehensive technical support and customer-specific product customization, tailored to individual operational and project requirements.

Contact
info@sidera-holding.com
+971 4 582 6754
Dubai, U.A.E.

Technical specifications are subject to change without notice.