



DATA CENTER NETWORKING

DATA CENTER SWITCH

SN-3548XGF-6Z-1

L3, 48x10G+6x100G, dual hot pluggable PSU, hot pluggable FANS. 8GB DDR4, 8GB eMMC



HIGHLIGHTS

- 10GbE SFP+ or RJ45 Ports & 100G QSFP Uplinks
- MAC/Port based security Syslog
- Proxy ARP for IP Routing Loopback IP interface (Source Address Selection)
- VRRP IPv6 static unicast routing
- 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
- High-density switching for leaf, spine, and aggregation roles
- High-speed fiber interfaces across supported configurations
- Advanced Layer 3 routing and data-center network services
- Redundant power and field-serviceable cooling options where specified

3548XGF-6Z-1

MODEL

DATA CENTER NETWORKING

PLATFORM

CUSTOM CONFIGURATION

AVAILABLE

PRODUCT SPECIFICATIONS

SN-3548XGF-6Z-1 is a data center switch configured for L3, 48x10G+6x100G, dual hot pluggable PSU, hot pluggable FANS. 8GB DDR4, 8GB eMMC.

Product	SN-3548XGF-6Z-1
Platform	Data Center Switch
Application	L3, 48x10G+6x100G, dual hot pluggable PSU, hot pluggable FANS. 8GB DDR4, 8GB eMMC
Source specification	Corresponding technical product series datasheet

Technical Characteristics

Characteristic	Specification
Packet Buffer	Packet Buffer 6MB
Dimensions	Dimensions HxWxD 440/44/470 mm
Operating Temperature	Operating Temperature 0°C to 45°C
Operating Humidity	Operating Humidity 5% to 90% (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

Service Monitoring and Management
Switching Performance
Rack Space 1RU
Certificate CCC/CE
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

Switching Performance

Switch ASIC	Marvell Prestera 98DX8548
Ports	48 SFP+ or 48 Copper 10G + 6 QSFP 100G ports
Capacity	2.16 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), 48V(DC)
PSU Output	200W/550W (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
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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

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+	

*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, Ildploctmanaddrttable, 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

SKU	Model	Description
000076	SN-3548XGF-6Z-1	48x10+6x100 dual hot pluggable PSU, hot pluggable FANS. 8GB DDR4, 8GB eMMC
000079	SN-3548XGF-6Z-2	48x10+6x100 dual hot pluggable PSU, hot pluggable FANS. 8GB DDR4, 32GB eMMC
000084	SN-3548XGE-6Z	48x10G ETH + 6x100G QSFP28, dual hot pluggable PSU, hot pluggable FANS. 8GB DDR4, 32GB eMMC
000234	SN-3548XGF-6Z-DC	48x10+6x100 dual hot pluggable PSU, hot pluggable FANS. 8GB DDR4, 32GB eMMC

Models include a 3-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.

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Technical specifications are subject to change without notice.