



CAMPUS & ACCESS

CAMPUS AND ACCESS SWITCH

SN-2312GP-2XGF

L2, 12*1G ETH+ 2*10G, PoE 180W USB+OOB+Console



HIGHLIGHTS

- Seamless Stack Management: Control Up to 8 Switches as One,
- Advanced QinQ Stacking for Multi-Tenant Networks and
- Support Layer 3 (Optional)
- Supports PoE+ or PoE++ (Optional)
- The switch model with a 1G SFP uplink port does not support the stacking feature.
- Each switch has USB, OOB, and Console interfaces. In PoE-enabled devices, all 12 ports support PoE.
- 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

2312GP-2XGF

MODEL

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PLATFORM

CUSTOM CONFIGURATION

AVAILABLE

PRODUCT SPECIFICATIONS

SN-2312GP-2XGF is a campus and access switch configured for L2, 12*1G ETH+ 2*10G, PoE 180W USB+OOB+Console.

Product	SN-2312GP-2XGF
Platform	Campus and Access Switch
Application	L2, 12*1G ETH+ 2*10G, PoE 180W USB+OOB+Console
Source specification	Corresponding technical product series datasheet

Technical Characteristics

Characteristic	Specification
MTBF	MTBF 100,000h
Operating Temperature	Operating temperature -5°C (23°F) to 65°C (149°F)
Operating Humidity	Humidity 5% ~ 95% non-condensing
MAC Address Table	MAC address table Max 16k
Packet Buffer	Packet buffer size 3 MB

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

Optimized Voice VLAN with Intelligent QoS for Lag-Free VoIP
Performance
Quality of Service
Flow mirror, 802.1p Support SP+WRR
AAA (Authentication, Authorization, and Accounting) 802.1x authentication (Port Based, MAC Based, Web
IP source guard DoS prevention
Guest VLAN Auto voice VLAN
QinQ (802.1Q) Loop guard

DETAILED TECHNICAL SPECIFICATIONS

TECHNICAL DATA | 1 OF 6

HARDWARE SPECIFICATIONS

	1G RJ45 Downlinks	1G Fiber Uplinks	10G Fiber Uplinks	PoE/ W	Switching capacity/ Gbps	Forwarding rate/ Mpps
SN-2312GP-2XGF	12	-	2	180	64	47.62
SN-2312GMP-2XGF	12	-	2	400	64	47.62
SN-2312G-2XGF	12	-	2	-	64	47.62
SN-2312G-2GF	12	2	-	-	28	20.83

The switch model with a 1G SFP uplink port does not support the stacking feature.

Each switch has USB, OOB, and Console interfaces. In PoE-enabled devices, all 12 ports support PoE.

Hardware

Marvell Chipset	98DX2518
MTBF	100,000h
Case	440*250*44 (L*W*H)
Weight	PoE: 3.5KG Non PoE: 2.8KG

Environment

Operating temperature	-5 ° C (23 ° F) to 65 ° C (149 ° F)
Humidity	5% ~ 95% non-condensing

Capacity

MAC address table	Max 16k
Packet buffer size	3 MB
Active VLANs support	4096
Maximum jumbo frame size	9,216 bytes

DETAILED TECHNICAL SPECIFICATIONS

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SOFTWARE FEATURES

Quality of Service

DiffServ (Differentiated services)	Strict priority support
Priority queue	Traffic shaping/policing
ACL mapping to priority queue	WRR support
Flow mirror, 802.1p Support	SP+WRR
Flow redirection	Rate limiting (Based on per port and per queue)
Single Rate Three Color Marker (srTCM)	Class map defines traffic flow with ACLs or support for network traffic management
Two Rate Three Color Marker (trTCM)	Policy map & route MAP to define the action for a set of classified inbound traffic
QoS based on classification (Based on IP, MAC and VLAN)	

Security

RADIUS, TACACS+	Downloadable ACL
Port security	Dynamic ACL
DHCP Snooping	Role based access control
AAA (Authentication, Authorization, and Accounting)	802.1x authentication (Port Based, MAC Based, Web Based)
ACL (Based On IP, Port, Protocol, MAC, Time Based)	Management ACL
IP source guard	DoS prevention
Protected port	Secure copy (SCP)
ARP inspection (DAI & SAI)	Kerberos
SSL	

Multicast

Internet Group Management Protocol -IGMP v1/v2/v3	Multicast Listener Discovery- MLD v1/V2
IGMP snooping	MLD snooping
PIM-SM/SSM	Multicast TV VLAN
PIM-SMv6	MVR (Multicast VLAN registration)

DETAILED TECHNICAL SPECIFICATIONS

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Layer 2

Port Tagging/untagged	BPDU guard
MAC based VLANs	GVRP
Private VLAN	LLDP/LLDP MED
Subnet based VLAN	RADIUS assigned VLAN
Auto MDI/MDIX	Link aggregation (Ether Channel)
Loopback detection	Link Aggregation Control Protocol (LACP)
Port isolation	Port mirroring (Port, ACL, VLAN Based)
Root guard	Default VLAN
Guest VLAN	Auto voice VLAN
Energy Efficient Ethernet (EEE)	Green Ethernet
Link flapping detection	Flow control
STP/RSTP/MSTP	Native VLAN
QinQ (802.1Q)	Loop guard

Layer 3

IPv4 and IPv6 dual stack	IPv6 prefix list
Intra-Site Automatic Tunnel Addressing Protocol (ISATAP)	IP source guard
Policy Based Routing (PBR)	DHCP server
ARP, Gratuitous ARP	DHCP relay
DHCP Client	IPv6 NDRA (Neighbor Discovery Router Advertisement)
ICMP redirect & ICMP unreachable	Duplicate Address Detection (DAD)
IPv6 SLAAC (Stateless Address Auto configuration)	IPv6 ND
ARP-Proxy	DHCP Option 82, 66, 67

Layer 3 Routing

Static routing (IPv4, IPv6)	Inter-VLAN routing
Routing Information Protocol, version 2 (RIPv2)	OSPFv2/v3 (Open Shortest Path First)

High Availability

Stacking (Up-to 8 members)	Ring Redundancy Protocol (RRP)
Equal-Cost Multi Path (ECMP)	Virtual Router Redundancy Protocol (VRRP)
Storm control (Broadcast, Multicast, Unicast)	

DETAILED TECHNICAL SPECIFICATIONS

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Management

Local GUI	Management: RUDDER (Controller)/Standalone
Industrial standard CLI	SPAN/RSPAN
Telnet support	SSHv1/v2
Storage & File management with USB	Firmware auto install support
TFTP support	Syslog server
SNMP v1/v2c/v3	RMON (All 4 Groups 1,2,3,9)

Standard Compliance

<i>IEEE Standards Compliance</i>	
802.1AB LLDP/ LLDP-MED	802.3ae 10 gigabit Ethernet
802.1D MAC bridging	802.3at power over Ethernet Plus
802.1p Mapping to priority queue	802.3u 100Base-TX
802.1s Multiple Spanning Tree (MST)	802.3x flow contro
802.1w Rapid Reconfiguration of Spanning Tree (RSTP) 802.3z 1000Base-SX/LX	
802.1x Port-based Network Access Control (PNAC)	802.3 MAU MIB (RFC 2239)
802.3 Carrier Sense Multiple Access/Collision Detection(CSMA/CD)	802.1Q VLAN tagging
802.3ab 1000Base-T	802.3az Energy Efficient Ethernet
802.3 10Base-T	802.3af Power over Ethernet
802.3ad link aggregation (Dynamic and Static)	

Monitoring and Troubleshooting

Errdisable detection and recovery	CPU Utilization
Device temp/PSU/FAN/status display & alarm	User operation logs
Virtual cable test	Management logs, alarms
ICMPv4/v6	DDM (Digital Diagnostic Monitoring)
Traceroute	UDLD (Unidirectional Link Detection)

Packaging Content

Switch with type D power cord with rack mounting kit



DETAILED TECHNICAL SPECIFICATIONS

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CERTIFICATION & COMPLIANCES

Regulatory	Environmental
FCC	RoHS
BIS	CE
TEC	



DETAILED TECHNICAL SPECIFICATIONS

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ORDERING INFORMATION

Models	Description
SN-2312GP-2XGF	12x1G ETH+ 2x10G, PoE 180W
SN-2312GMP-2XGF	12x1G ETH+ 2x10G, PoE 400W
SN-2312G-2XGF	12x1G ETH+ 2x10G, no PoE
SN-2312G-2GF	12x1G ETH+ 2x1G, no PoE

In all configurations: USB, OOB, and Console.

All switches 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.

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Technical specifications are subject to change without notice.