

# SS2GD8P2+

10 Port Gig with 8-port 10/100/1000Base T and 2 combo TP/SFP ports L2 Plus Managed PoE+ Switch

The SS2GD8P2+ is a 10 port GbE Layer 2 PoE+ Managed Switch. It supports 8 10/100/1000Mbps Twisted Pair (TP) Ethernet ports with PoE+ support and 2 combo ports that support 10/100/1000Mbps copper twisted pair or 100M/1G Fiber SFP. With a total of 8 ports available to support PoE+ this switch is compliant with IEEE 802.3af and 802.3at PoE standards providing the PoE ports the capability to supply 15.3W or 30W of power with a maximum PoE power budget of 130W. Management Flexibility is also a key with the SS2GD8P2+ with support through console port, SNMP, Command Line Interface (CLI) and a simple and easy to use Web interface that can be accessed through a browser.



## Specifications

### Performance

- Switching Capacity:
  - 20 Gbps
  - 14.88 mpps [million of packets per second 64 byte packets]

- MAC Address Table Size:
  - 8K

### Ports & Port Features

- Combo (RJ-45/SFP):
  - 2, 10/100/1000 Base-T or 100/1000m SFP
- RJ45 10/100/1000Base-T:
  - 8 (up to 30W PoE)
- Serial Console Port:
  - 1, RJ-45
- PoE Features:
  - IEEE 802.3 af/ at compliant; Endpoint with 52~56 VDC power through RJ-45 pin 1, 2, 3, 6; Auto detect powered device and consumption levels; Supports per port power consumption monitoring; Smart feature for PD on/off, PD detection, power level, PD status and power feeding priority; Supports per port power priority setting; PoE scheduling to turn power on or off.
- Port Loop-back Detection:
  - Protection against port network loops that cause system crash

- Auto-negotiation:
  - For port speed and duplex mode

- LED Status Indicators:
  - Port link activity; Port connectivity; Port transmission speed;

### L2 Features

- Flow Control:
  - IEEE 802.3x & Back-Pressure
- Spanning Tree Protocol:
  - IEEE 802.1D Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP);
- Voice VLAN:
  - Voice traffic is automatically assigned to a voice specific VLAN and treated with appropriate levels of QoS.
- VLANs:
  - Supports 4K IEEE 802.1Q VLANs; Portbased; 802.1Q tag based; Mac-based; Private VLAN Edge(PVE); Management VLAN
- Trunking:
  - LACP (IEEE 802.3ad) link Aggregation Control Protocol.
    - Up to 5 groups
    - UP to 10 ports per group

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- Generic VLAN Registration(GVRP) :
  - Protocols for automatically propagating and configuring VLANs in a bridged domain
- DHCP Relay (Layer 2):
  - Relay of DHCP traffic to DHCP servers in different VLANs. Works with DHCP Option 82
- IGMP v1/v2/v3 snooping:
  - IGMP limits bandwidth-intensive multicast traffic to only the requesters; supports 1024 multicast groups (source-specific multicasting is also supported)
- IGMP Querier:
  - IGMP querier is used to support a Layer 2 multicast domain of snooping switches in the absence of a multicast router.
- IGMP Proxy:
  - Supports IGMP Proxy
- MLD v1/v2 snooping:
  - Deliver IPv6 multicast packets only to the required receivers.
- Security**
  - Secure Shell(SSh) Protocol:
    - SSH secures Telnet traffic in or out of the switch, SSH v1 and v2 are supported.
  - Secure Sockets Layer(SSL):
    - SSL encrypts the http traffic, allowing advance secure access to the browser-based management GUI in the switch.
  - IEEE 802.1X:
    - IEEE802.1X: RADIUS authentication, authorization and accounting, MD5 hash, guest VLAN, single/multiple host mode and single/multiple sessions. Supports IGMP-RADIUS based 802.1X, Dynamic VLAN assignment
  - Layer 2 isolation Private VLAN Edge (PVE):
    - PVE (also known as protected ports) provides L2 isolation between clients in the same VLAN, supports multiple uplinks.
  - Port Security:
    - Locks MAC addresses to ports, and limits the number of learned MAC addresses.
  - IP Source Guard:
    - Prevents datagrams with spoofed addresses from being in the network.
  - RADIUS/TACACS+:
    - Supports RADIUS and TACACS+ authentication. Switch as a client.

- Storm control:
  - Prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm.
- ACLs:
  - Supports for up to 256 entries Drop or rate limitation based on source and destination MAC, VLAN ID or IP address, protocol, port, differentiated services code point (DSCP) / IP precedence, TCP/UDP source and destination ports, 802.1p priority Ethernet type, Internet Control Message Protocol (ICMP) packets, IGMP packets, TCP flag.
- Quality of Service**
  - Hardware Priority Queue:
    - Support 8 hardware queues
  - Scheduling:
    - Strict priority and weighted round-robin (WRR) Queue assignment based on DSCP and class of service(802.1p/CoS)
  - Classification:
    - Port based; 802.1p VLAN priority based; IPv4/IPv6 precedence/type of service(ToS) /DSCP based; Differentiated Services (DiffServ); classification and re-marking ACLs, trusted QoS.
  - Rate Limiting:
    - Ingress policer; egress shaping and rate control; per VLAN, per port and flow based.
  - IPv6 applications:
    - Web/SSL, Telnet/SSH, ping, Simple Network Time Protocol(SNTP), Trivial File Transfer Protocol(TFTP), SNMP, Syslog.

## Management

- Web GUI interface:
  - Built-in switch configuration utility for browser-based device configuration (HTTP/HTTPS). Supports configuration, system dashboard, maintenance, and monitoring.
- Dual Image:
  - Dual image provides independent primary and secondary OS files for back up while upgrading.

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- SNMP:
  - SNMP version 1, 2c and 3 with support for traps, and SNMP version 3 user-based security model (USM).
- Remote Monitoring (RMON):
  - Embedded RMON software agent supports RMON groups 1, 2, 3, 9 (history, statistics, alarms, and events) for enhanced traffic management, monitoring and analysis.
- IPv4 and IPv6 dual stack:
  - Coexistence of both protocol stacks to migration.
- Firmware upgrade:
  - Web browser upgrade(HTTP/HTTPS) and TFTP upgrade through console port.
- Port mirroring:
  - Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe. Up to N-1(N is Switch's Ports) ports can be mirrored to single destination port. A single session is supported.
- Easy-Port-Configuration:
  - Easy configuration of client QoS and Security features.
- Other management:
  - Single IP management; HTTP/HTTPS; SSH; RADIUS; DHCP Client/DHCPv6 Client; SNMP; cable diagnostics; ping; syslog; Telnet client (SSH secure support).
- S-Flow:
  - The industry standard technology for monitoring high speed switched networks. It gives complete visibility into the use of networks enabling performance optimization, accounting/billing for usage, and defense against security threats.
- UPnp:
  - The Universal Plug and Play Forum, an industry group of companies working to enable device-to-device interoperability by promoting Universal Plug and Play.

### Green Ethernet

- Link detection:
  - Compliant with IEEE802.3az Energy Efficient Ethernet Task Force. Automatically turns off power on Gigabit Ethernet RJ-45 port when detecting link down or idle of client. Active mode is resumed without loss of any packets when the switch detects the link up.
- Cable Length detection:
  - Adjusts the signal strength based on the cable length. Reduces the power consumption for cables shorter.

### General

- Jumbo frames:
  - Frame sizes up to 9KB supported on Gigabit interfaces.
- MAC Table:
  - Up to 8K MAC addresses.

### Discovery

- Link Layer Discovery Protocol (LLDP)(IEEE802.1AB) with LLDP-MED extensions:
  - Used by network devices for advertising their identities, capabilities, and neighbors on a IEEE802 local area network, principally wired Ethernet.

### Power over Ethernet(PoE)

IEEE 802.3at PoE delivered over each of the RJ-45 ports within the listed power budgets:

- IEEE 802.3at:
  - Port 1-8
- IEEE 802.3af:
  - Port 1-8
- Power Dedicated to PoE:
  - 130W

- PoE port configuration:
  - Supports per port PoE configuration function.
- PoE Scheduling:
  - Supports per port PoE scheduling to turn on/off the PoE.

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## Specifications

### Environmental (preliminary)

Dimensions(WXHXD):	• 280 x 44 x 230mm
Weight:	• 2.27Kg
Power:	• 100-240 VAC 50-60 Hz, internal, universal
Operating temperature:	• 0°C - 40°C
Storage temperature:	• -20°C - 70°C
Operating humidity:	• 10% to 90%, relative, noncondensing

### Warranty and Support

**Warranty:** Limited lifetime Warranty for as long as the original customer/end user owns the product, or 5 years after product discontinuance, whichever occurs first (excluding power supplies and fans), Power supplies and fans carry a limited 1 year warranty.

**Support:** Free technical support (phone/email); Software support; Premium incident support.

### Package Contents

- Switch
- Power cord
- Console Cable
- CD-ROM with user manual documentation(PDF) included
- QIG (Quick Install Guide)

### Minimum Requirements

- Web browser: Mozilla Firefox v2.5 or later, Microsoft IE v6 or later.
- Category 5 Ethernet network cable.
- TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in network.
- Optional Accessories
  - Rack mounting is available with the optional SS2GD8IP-RB Rackmount Kit.