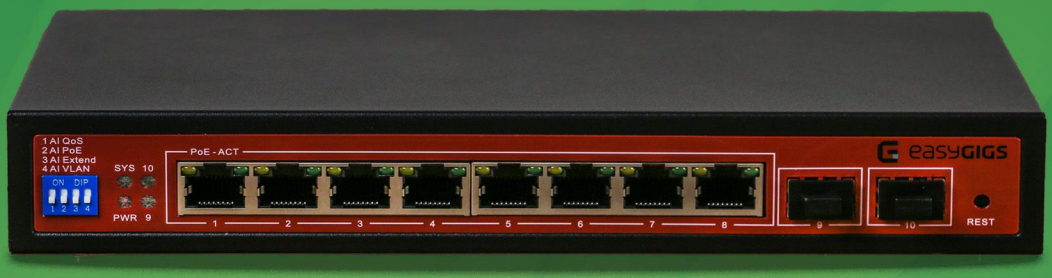
easyGIGS

Data Sheet

EG-SWU-2451-10GPS

Device Specification



8-PORT GIGABIT LAYER 2

Managed POE switch

2020

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Introduction

EG-SW-2451 series of managed Ethernet switches, is an innovative and cost effective device series suitable for the market. The 10GPS model is a device with the following specifications which makes it suitable for many use cases.

* 8 10/100/1000M adaptive RJ45 ports
* 2 Gigabit SFP ports.
* Support 4 fast working modes: AI VLAN, AI Extend, AI PoE, AI QOS.
* Support multiple management methods based on Web, SNMP, Telnet, etc.
* Supports port management, traffic control, security protection, STP, link aggregation, ACL, QoS, 802.1x and other rich Layer 2 functions.
* Support standard IEEE802.1Q VLAN, MAC VLAN, IP VLAN, voice VLAN, VLAN learning to flexibly divide VLAN.
* Support IPV6 Ping, IPv6 Tracert, IPv6 Telnet IPV6 SSH IPv6 SSL.
* Supports the definition of port PoE for power-off time. It can flexibly configure port power supply priority and port maximum output power.
* Desktop design, external power adapter, default configuration 96W power adapter.

Intelligent Control

Standard switching mode: All ports communicate freely, suitable for ordinary data transmission environment.

* AI VLAN mode: Separating 1-8 ports from each other, can effectively restrain network storm and improve network performance.
* AI Extend mode: Designed for monitoring application scenarios, 1-8 ports support 250 meters long distance power supply.
* AI PoE mode: Automatic self checking, reboot the device while find it fake dead
* AI QoS mode: Video data first, more fluent transmission
* Intelligent PoE management: Custom port PoE output power, custom PD working time, custom port priority.
* Hardware watchdog: Monitor the working status of the equipment and find abnormal quick restart.

Processing Capabilities

* Supports IEEE 802.1Q VLANs, MAC VLANs, IP VLANs, and voice VLANs. You can flexibly assign VLANs according to different requirements.
* Supports GVRP to implement dynamic VLAN distribution, registration, and attribute propagation. This reduces manual configuration and ensures correct configuration.
* Supports the VLAN VPN function. The public network access device encapsulates the outer VLAN tag for the private network packets of the user, so that the packets carry two VLAN tags across the public network.
* Support QoS, support port-based, 802.1P-based and DSCP-based three priority modes and WFQ, SP, WRR, SP+WRR four queue scheduling algorithms.
* Supports ACLs by configuring matching rules, processing operations, and time permissions to filter packets and provide flexible security access control policies.
* Supports IGMP V1/V2 multicast protocol and supports IGMP Snooping to meet the requirements of multi-terminal HD video surveillance and video conference access.
* Supports PoE management POE power limitation, POE chip status check, setting PoE port priority, and custom PoE power supply time period.
* Support hardware watchdog, the device has a suspended animation state and automatically restarts to resume normal working state.
* Support IPV6 Ping, IPv6 Tracert, IPv6 Telnet IPV6 SSH IPv6 SSL.

Security Mechanism

* Supports IP address, MAC address, and port ternary binding to filter packets.
* Supports ARP protection, and protects against ARP spoofing and ARP flood attacks, such as gateway spoofing and man-in-the-middle attacks.
* Support IP source protection to prevent illegal address spoofing including MAC spoofing, IP spoofing, and MAC/IP spoofing.
* Supports DoS protection and supports attacks such as Land Attack, Scan SYNFIN, Xmascan, and Ping Flooding.
* Supports 802.1X authentication, provides authentication functions for LAN computers, and controls the authorization status of controlled ports based on the authentication results.
* Supports port security. When the port learns the maximum number of MAC addresses, it stops learning to prevent MAC address attacks and control port network traffic.
* Support DHCP Snooping to effectively prevent private DHCP servers and ensure the legality of the DHCP server.

Reliability Protection

* Support loop protection, automatically detect switch loop status, and block loop ports.
* Supports the STP/RSTP/MSTP spanning tree protocol to eliminate Layer 2 loops and implement link backup.
* Supports spanning tree security to prevent devices in the spanning tree network from being subjected to various forms of malicious attacks.
* Supports static aggregation and dynamic aggregation, which effectively increases link bandwidth, implements load balancing, link backup, and improves link reliability.

Management

* Supports various management and maintenance methods such as Web network management, CLI command line (Console, Telnet), and SNMP (V1/V2/V3).
* Supports encryption methods such as HTTPS, SSL V3, and SSHV1/V2 for more secure management.
* Support RMON, system log, and port traffic statistics for network optimization and transformation.
* Supports cable detection, ping detection, and Tracert detection operations to easily analyze failed network nodes.
* Support LLDP to facilitate the network management system to query and judge the communication status of the link.
* Supports CPU monitoring, memory monitoring, ping detection, Tracert detection, and cable detection.

Appearance and Hardware description

Front Panel

Including indicators, RJ45 port, DIP switch, RST button, SFP port, CONSOLE port, as shown in Figure 1.1 below

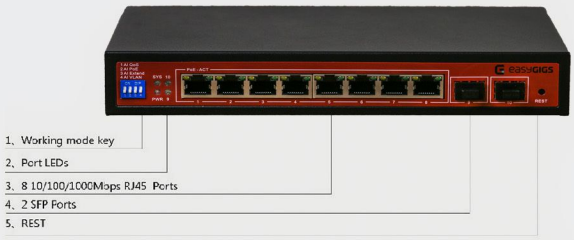

Figure 1 Front Panel

Indicators

The indicator working status is shown as the following table:

Indicators	Title	Color	Work status	Description
POWER	Power indicator	Red	Solid	Power is normal
			Off	No power, the power switch is not turned on, power supply is abnormal
POE	POE power indicator	Yellow	Solid	The corresponding RJ45 port is connected to the powered device and the power supply is normal
			Off	The corresponding RJ45 port is not connected to the powered device or the power supply is abnormal
LINK/ACT	Connection indicator	Green	Blinking	A valid link is established
			Off	An invalid link is established
SYS	System indicator	Green	Blinking	System is functioning properly
			Off	System is functioning improperly Software is damaged
9-10	SFP indicator	Green	Blinking	A valid link is established on the SFP port
			Off	An invalid link is established on the SFP port

Shortcut button

* Ai QOS: Improve video data processing capabilities and improve the monitoring of Caton and Mosaic phenomena in the network
* Ai Extend: 1-8 port rate down to 10Mbps, but the transmission distance up to 250 meters
* Ai VLAN: Isolating ports 1-8 from each other, suppress network storms effectively and improve network performance
* AI poE Detect PD, power failure and restart dead equipment

RJ45 Port

* EG-SW-2451-10GPS with 8 10/100/1000Mbps PoE port, all ports support IEEE802.3af and IEEE802.3at standard.
* When the switch mode of operation is CCTV mode, 1-8 port can support 250 meters power supply with 10Mbps speed rate

SFP Port

* EG-SW-2451-10GPS provides 2 Gigabit SFP optical ports (SFP1, SFP2), can be inserted into the Gigabit SFP module

RST Button

* When the switch is powered on, press the button with the needle to release the device and enter the restarting state. When the SYS lamp restarts, the device restarts. When the switch is powered on, press and hold the button for more than 5s to release the button and enter the reset state. When SYS is re-lit, the device is reset successfully

Hardware Specifications

Table 1 Hardware Specification

Network standard	IEEE 802.3: Ethernet Media Access Control (MAC) protocol IEEE 802.3i:10BASE-T Ethernet IEEE 802.3u:100BASE-TX fast Ethernet IEEE 802.3ab:1000BASE-T gigabit Ethernet IEEE 802.3z:1000BASE-X gigabit Ethernet (fiber) IEEE 802.3ad: comply link aggregation standard IEEE 802.3x: flow control IEEE 802.1p: About the traffic priority of the second layer of Qos/Cos protocol (multicast filtering) IEEE 802.1q:VLAN Bridge operation IEEE 802.1d:STP spanning tree IEEE 802.1s:MSTP spanning tree IEEE 802.1w:RSTP spanning tree IEEE 802.3af IEEE 802.3at
Port	8 10/100/1000Mbps RJ45 port
	2 gigabit SFP fiber port
PoE	8 10/100/1000Mbps RJ45 port support PoE
	Max 96W
	Single port max 30W
LEDs	10 Link/Act LEDs
	8 POE LEDs
	1 Power LEDs 1 SYS LED
Performance	Forwarding mode: store and forward
	Switch Volume (Full-duplex) : 20Gbps
	Packet forwarding rate: 14.88Mpps
	8K MAC address table
Input	DC:48-56V
Dimension(L×W×H)	225mm×120mm×35mm
Safety Regulations	CE/ROHS/FCC/CCC Warning: This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.

Software Specifications

Table 2 Software Specification

Shortcut function	AI VLAN
	AI Exnted(1-8 port 250meters PoE distance)
	AI QOS (Video priority)
	AI PoE
VLAN	Support 4K VLAN
	Support 802.1Q VLAN、Port VLAN、Voice VLAN
PoE	Support setting the PoE port priority
	Support setting PoE power supply period
	Support setting port power
MAC address table	Comply the IEEE 802.1d standard
	Support MAC address learning and aging automatically
	Support static, dynamic, filter address table
Safety	Based on user rating management and password protection
	Support based on the port number, IP address, MAC address restrictions on user access
	Icmp-echo、DoS protection
	Support DHCP Snooping、DHCP attack protection
	Support port security, port isolation
Access control (ACL)	Support L2(Layer 2)～L4(Layer 4) packet filtering function
	Support port mirroring, port redirection, flow rate limit, QoS re-marking
Multicast	Support IGMP v1/v2 Snooping
	Support static multicast
	Support multicast VLAN
QoS	Support 8 port queue
	Support port priority, 802.1p priority, DSCP priority
	Support SP、WRR、WFQ Priority scheduling algorithm
Spanning Tree	Support STP(IEEE 802.1d), RSTP(IEEE 802.1w) and MSTP(IEEE 802.1s) protocol
	Support loop protection, BPDU protection
Management and maintenance	Support WEB management (HTTP)
	Support CLI (Telnet、local serial port)
	Support SNMP V1/V2/V3, Compatible with public MIBS
	Support LLDP、RMON
	Support IP Source protection、DoS protection
	Support CPU monitor、memory monitoring
	Support system log
	Support cable testing
Multicast	Support IGMP v1/v2 Snooping
	Support static multicast
	Support Multicast VLAN

Ordering Information

Ordering information for this device is as follows:

Table 3 Ordering information

EG-SWU-2451 -10GPS	10 Port Managed POE Ethernet switch

Table 4 Spare part ordering

EG-SWU-2451-PC	Power Cable
EG-SWU-2451-PA	Power Adaptor: 100-240V input 48-52V output