# L2 Managed Gigabit Switch
# GSW-4896

**H/W ver: v1.x**

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## 48-Port GbE L2 Managed Switch with 4 SFP Dual Media

### Product Overview
The LevelOne GSW-4896 combines copper and fiber connectivity into a Layer 2 Managed Gigabit network switch suitable for metro-LAN and office applications. It features QoS, VLAN, Spanning Tree, Port Trunking, SNMP/RMON and IGMP Snooping capability.

### Flexible Network Connectivity
The 48 port GSW-4896 consists of 44 10/100/1000Mbps Auto-negotiation Gigabit Ethernet TP ports and 4 1000Mbps SFP fiber ports which allow for optional SFP modules with a variety of network connection choices

### Network Management
The GSW-4896 network switch can be managed through a built-in RS-232 serial port or through an Ethernet port using CLI or the Web-based user interface. Through the SNMP agent management, the network administrator can configure and control each port's activity as well as manage the network switch to accommodate high bandwidth applications.

### Network Functions
There is a comprehensive range of network functions included with the GSW-4896. These network functions are crucial elements in managing a secured network as well as ensure network efficiency.

Network functions included are QoS (Quality of Service), Spanning Tree, VLAN, Port Trunking, Bandwidth Control, Port Security, SNMP/RMON, IGMP Snooping capability and Illegal Access Report via its intelligent software.

- **QoS:** Supports IEEE 802.1P Quality of Service with four priority queue and packet transmission schedules
- **Spanning Tree:** Supports IEEE 802.1d, IEEE 802.1w RSTP Protocol standards
- **VLAN:** Supports Q-in-Q VLAN, Port-based VLAN and IEEE802.1q Tag VLAN. Support 256 active VLANs
- **Port Trunking:** Supports static port trunking and port trunking with IEEE 802.3ad LACP
- **Bandwidth Control:** Supports ingress and egress per port bandwidth control.
- **Port Security:** Supports IEEE802.1x port-based network access control and EAP-TTLS, PEAP-TTLS, MD5 network authentication
- **SNMP/RMON:** SNMP agent and RMON MIB. It supports RMON (Remote Network Monitoring) MIB-2 (RFC 1213), Bridge MIB (RFC 1493), RMON MIB (RFC 1757)-statistics Group 1,2,3,9, VLAN MIB (802.1Q, RFC2674) and Ethernet MIB (RFC 1643)
- **IGMP Snooping:** Support IGMP version 2 (RFC 2236)

**GSW-4896**

## Key Features

- High performance L2 SNMP network switch for office and Metro-LAN applications
- Combines copper and fiber network for flexible network connectivity within one device
- Features comprehensive and powerful network management functions
- Supports IEEE802.1Q VLAN and programmable IEEE 802.1P QoS
- Supports DHCP Broadcasting Suppression
- Supports port mirroring, rapid spanning tree (802.1w RSTP) and 802.1X port security on a VLAN
- Provides Full-duplex flow control (IEEE802.3x) and half-duplex backpressure
- Features a built-in Web-based as well as CLI management user-interface

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## Technical Specification

### Standards and Interface

**Standard Compliance**

- IEEE 802.3 10Base-T Ethernet(twisted-pair copper)
- IEEE 802.3u 100Base-TX Ethernet(twisted-pair copper)
- IEEE 802.3ab 1000Base-TX Ethernet(twisted-pair copper)
- IEEE 802.3z 1000Base-X Ethernet
- IEEE 802.3x flow control capability
- ANSI/IEEE 802.3 auto-negotiation
- IEEE 802.1q VLAN
- RoHS Compliance

**Subscriber Interface**

- 48 GbE ports with 4 combo ports
- Port 45,46,47,48 are Gigabit TP/SFP Fiber auto sense
- Auto-Negotiation and Auto-MDIX
- Backpressure flow control for half duplex.
- 802.3x flow control for full duplex.
- Connector: 44 RJ-45 ports + 4 combo ports, RJ-45/SFP

### Performance

**Switching capacity**

- Non-blocking switch fabric supports up to 48GbE ports
- 8 K MAC addresses
- 400 KB Buffer Memory
- The maximum throughput is 96Gbps
- Jumbo frame support up to 16K Bytes

**VLAN**

- Port-base VLAN
- IEEE802.1q tag-base VLAN, 4094 max, up to 256 active VLANs including static plus dynamic entry
- IEEE802.1q tag-base VLAN
- Flooding unknown vlan frame setting, can flood packet with some vlan tag associated to a invalid/inactive vlan
- In tag-base VLAN, supports egress/ingress packet filter
- Q-in-Q is an efficient method for enabling Subscriber Aggregation
- Provide Management Vlan for managed policy
- Provide the multicast Vlan to reduce the multicast traffic

**QoS**

- Supports packet classification by each port or vlan ACL rule
- Supports four level priority queues and prioritized by Ethernet type, vlan tag, IP, UDP, TCP and flow
- Supports priority in a Q-in-Q tag
- Priority remarking, DSCP and priority tag remarking, control the tunnel quality exactly

**Broadcast Storm**

- Multicast/Broadcast/Unknown-Unicast Storm suppression.

**Port Mirroring**

- Support 1: N RX port mirroring
- Supports port sniffer function with 3 modes:
  - TX Monitor Mode
  - RX Monitor Mode
  - TX-RX pair Monitor Mode

**Rate Limit**

- Ingress rate limit:
  - Port 1~48: 1K up to 1000Mbps
- Egress rate limit:
  - Port 1~48: 1K up to 1000Mbps

### Protocol

**LACP**

- Max. 24 ports for each group
- Provides 24 groups for bandwidth aggregation.

**GVRP/GARP**

- 802.1q with GVRP/ GARP

**Multicasting**

- Supports IGMP snooping including active and passive mode
- Support IGMP Fast-leave that is suitable in IPTV application

**STP/RSTP**

- 802.1d/1w

### Network Security

- 802.1x access control, support port-based and mac-based authentication with RADIUS server
- Provide EAP-TTLS, PEAP-TTLS, MD5 for assuring the authentication security
- Static mac, to limit which mac addresses can pass through or not
- Mac addresses learning limit, to set up the maximum amount of each port

### SNMP Network Management (v1,v2c)

**RFC 1213 MIB (MIB-II)**

- Interface MIB
- Address Translation MIB
- IP MIB
- ICMP MIB
- TCP MIB
- UDP MIB
- SNMP MIB

**RFC 1757 RMON MIB**

- Statistics Group 1
- History Group 2
- Alarm Group 3
- Event Group 9

**RFC 1493 Bridge MIB**

**RFC 1643 Ethernet MIB**

**Enterprise MIB**

### Physical Specifications

**LED Indicators**

- Power
- CPU Active
- TP Link/Activity
- SFP Link/Activity

**Power Consumption**

- Voltage: 100~240 V AC
- Frequency: 50~60 Hz
- Consumption: 80W

**Operating Conditions**

- Ambient Temperature: 0° to 40°C
- Humidity: 5% to 90%

**Dimension and Weight**

44(H) × 442(W) × 248(D) mm

14kg

### Certification

FCC Class A

CE – EN55022, EN61000

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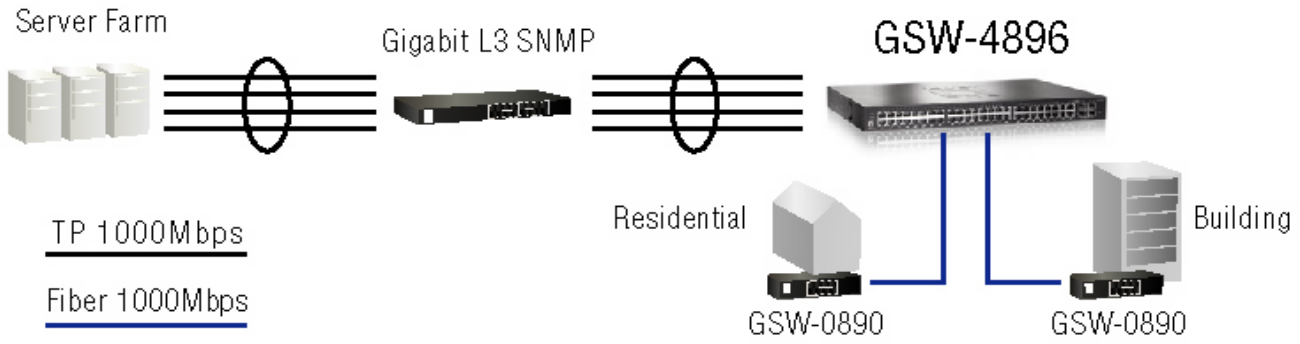
## Product Diagram




## Order Information

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**www.level1.com**