





# Specifications

## Hardware Features & Performance

Product Picture			
Model		TL-SG2210MP	TL-SG2428P
General	Interface	8 10/100/1000Mbps RJ45 Ports 2 Gigabit SFP Slots	24 10/100/1000Mbps RJ45 ports 4 Gigabit SFP Slots
PoE	PoE Standard	802.3af/at	
	PoE Ports	8, up to 30W	24, up to 30W
	PoE Power Budget	150 W	250 W
Performance	Switching Capacity	20 Gbps	56 Gbps
	Packet Forwarding Rtae	14.88 Mpps	41.7 Mpps
	MAC Address Table	8K	
	Packet Buffer	4.1 Mbit	
	Number of IP Interfaces	1	16
	Number of Static Routers	0	32 (IPv4,, IPv6)
	Jumbo Frame	9 KB	
Physical & Environmet	Power Supply	100-240V AC, 50/60Hz	
	Max Power Consumption	12.2 W (110 V/60 Hz)(no PD connected) 173.9 W (110 V/60 Hz) (with 150 W PD connected)	32.1 W (110 V/60 Hz)(no PD connected) 308.6 W (110 V/60 Hz) (with 250 W PD connected)
	Max Heat Dissipation	41.63 BTU/h (no PD connected) 539.35 (with 150 W PD connected)	109.53 BTU/h (no PD connected) 1052.94 (with 250 W PD connected)
	Dimensions (W x D x H)	11.6 x 7.1 x 1.7 in (294 x 180 x 44 mm)	17.3 x 8.7 x 1.73 in (440 x 220 x 44 mm)
	Fan Quantity	1	2
	Operating Temperature	0°C to 50°C (32°F to 122°F)	
	Storage Temperature	-40°C to 70°C (-40°F to 158°F)	
	Operation Humidity	10% to 90% RH, non-condensing	
	Storage Humidity	5% to 90% RH, non-condensing	
Certification	CE, FCC		

## Software Features

Product Picture		
Model	TL-SG2210MP	TL-SG2428P
SDN Support	<ul style="list-style-type: none"> <li>• Automatic Device Discovery</li> <li>• Batch Configuration</li> <li>• Batch Firmware Upgrading</li> <li>• Intelligent Network Monitoring</li> <li>• Abnormal Event Warnings</li> <li>• Unified Configuration</li> <li>• Reboot Schedule</li> <li>• Captive Portal Configuration</li> </ul>	
L2+ Features	--	<ul style="list-style-type: none"> <li>• 16 IP Interfaces                             <ul style="list-style-type: none"> <li>- Support IPv4/IPv6 Interface</li> </ul> </li> <li>• Static Routing                             <ul style="list-style-type: none"> <li>- 32 IPv4/IPv6 Static Routes</li> </ul> </li> <li>• DHCP Server</li> <li>• DHCP Relay                             <ul style="list-style-type: none"> <li>- DHCP Interface Relay</li> <li>- DHCP VLAN Relay</li> </ul> </li> <li>• DHCP L2 Relay</li> <li>• Static ARP</li> <li>• Proxy ARP</li> <li>• Gratuitous ARP</li> </ul>
L2 Features	<ul style="list-style-type: none"> <li>• Link Aggregation                             <ul style="list-style-type: none"> <li>- Static link aggregation</li> <li>- Up to 8 aggregation groups and up to 8 ports per group</li> <li>- 802.3ad LACP</li> </ul> </li> <li>• Spanning Tree Protocol                             <ul style="list-style-type: none"> <li>- 802.1D STP</li> <li>- 802.1w RSTP</li> <li>- 802.1s MSTP</li> <li>- STP Security: Loop back detection, TC Protect, BPDU Filter/Protect, Root Protect</li> </ul> </li> <li>• Loopback Detection</li> <li>• Flow Control                             <ul style="list-style-type: none"> <li>- 802.3x Flow Control</li> </ul> </li> <li>• Mirroring                             <ul style="list-style-type: none"> <li>- Port Mirroring</li> <li>- One-to-One</li> <li>- Many-to-One</li> <li>- Flow-Based</li> <li>- Ingress/Egress/Both</li> <li>- CPU Mirroring</li> </ul> </li> <li>• Device Link Detect Protocol (DLDP)</li> </ul>	<ul style="list-style-type: none"> <li>• Link Aggregation                             <ul style="list-style-type: none"> <li>- static link aggregation</li> <li>- 802.3ad LACP</li> <li>- Up to 8 aggregation groups and up to 8 ports per group</li> </ul> </li> <li>• Spanning Tree Protocol                             <ul style="list-style-type: none"> <li>- 802.1D STP</li> <li>- 802.1w RSTP</li> <li>- 802.1s MSTP</li> <li>- STP Security: Loop back detection, TC Protect, BPDU Filter/Protect, Root Protect</li> </ul> </li> <li>• Loopback Detection</li> <li>• Flow Control                             <ul style="list-style-type: none"> <li>- 802.3x Flow Control</li> <li>- HOL Blocking Prevention</li> </ul> </li> <li>• Mirroring                             <ul style="list-style-type: none"> <li>- Port Mirroring</li> <li>- CPU Mirroring</li> <li>- One-to-One</li> <li>- Many-to-One</li> <li>- Flow-Based</li> <li>- Ingress/Egress/Both</li> </ul> </li> <li>• Device Link Detect Protocol (DLDP)</li> </ul>

L2 Multicast	<ul style="list-style-type: none"> <li>• 512 IPv4, IPv6 shared multicast groups</li> <li>• IGMP Snooping <ul style="list-style-type: none"> <li>- IGMP v1/v2/v3 Snooping</li> <li>- Fast Leave</li> <li>- IGMP Snooping Querier</li> <li>- IGMP Authentication</li> <li>- Static Group Config</li> </ul> </li> <li>• MLD Snooping <ul style="list-style-type: none"> <li>- MLD v1/v2 Snooping</li> <li>- Fast Leave</li> <li>- MLD Snooping Querier</li> <li>- Static Group Config</li> </ul> </li> <li>• Multicast VLAN Registration</li> <li>• Multicast Filtering</li> </ul>	<ul style="list-style-type: none"> <li>• 512 IPv4,IPv6 shared multicast groups</li> <li>• IGMP Snooping <ul style="list-style-type: none"> <li>- IGMP v1/v2/v3 Snooping</li> <li>- Fast Leave</li> <li>- IGMP Snooping Querier</li> <li>- Static Group Config</li> </ul> </li> <li>• MLD Snooping <ul style="list-style-type: none"> <li>- MLD v1/v2 Snooping</li> <li>- Fast Leave</li> <li>- MLD Snooping Querier</li> <li>- Static Group Config</li> </ul> </li> <li>• Limited IP Multicast (256 profiles and 16 entries per profile)</li> <li>• Multicast VLAN Registration (MVR)</li> <li>• Multicast Filtering</li> </ul>
VLAN	<ul style="list-style-type: none"> <li>• VLAN Group <ul style="list-style-type: none"> <li>- Max. 4K VLAN Groups</li> </ul> </li> <li>• 802.1Q tag VLAN</li> <li>• MAC VLAN</li> <li>• Protocol VLAN</li> <li>• GVRP</li> <li>• Voice VLAN</li> </ul>	<ul style="list-style-type: none"> <li>• VLAN Group <ul style="list-style-type: none"> <li>- Max. 4K VLAN Groups</li> </ul> </li> <li>• 802.1Q VLAN</li> <li>• MAC VLAN</li> <li>• Protocol VLAN</li> <li>• GVRP</li> <li>• Voice VLAN</li> </ul>
QoS	<ul style="list-style-type: none"> <li>• 802.1p CoS/DSCP priority</li> <li>• 8 priority queues</li> <li>• Priority Schedule Mode <ul style="list-style-type: none"> <li>- SP (Strict Priority)</li> <li>- WRR (Weighted Round Robin)</li> </ul> </li> <li>• Queue Weight Config</li> <li>• Bandwidth Control <ul style="list-style-type: none"> <li>- Port/Flow based Rating Limit</li> </ul> </li> <li>• Smoother Performance</li> <li>• Actions for flows <ul style="list-style-type: none"> <li>- Mirror (to supported interface)</li> <li>- Redirect (to supported interface)</li> <li>- Rate Limit</li> <li>- QoS Remark</li> </ul> </li> <li>• Storm Control <ul style="list-style-type: none"> <li>- Multiple Control Modes(kbps/ratio/pps)</li> <li>- Broadcast/Multicast/Unknown-Unicast Control</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• 8 priority queues</li> <li>• 802.1p/DSCP priority</li> <li>• Priority Schedule Mode <ul style="list-style-type: none"> <li>- SP (Strict Priority)</li> <li>- WRR (Weighted Round Robin)</li> </ul> </li> <li>• Queue Weight Config</li> <li>• Bandwidth Control <ul style="list-style-type: none"> <li>- Port/Flow based Rating Limiting</li> </ul> </li> <li>• Smoother Performance</li> <li>• Actions for flows <ul style="list-style-type: none"> <li>- Mirror (to supported interface)</li> <li>- Redirect (to supported interface)</li> <li>- Rate Limit</li> <li>- QoS Remark</li> </ul> </li> <li>• Storm Control <ul style="list-style-type: none"> <li>- Multiple Control Modes (kbps/ratio/pps)</li> <li>- Broadcast/Multicast/Unknown-Unicast Control</li> </ul> </li> </ul>

ACL

- Support up to 230 entries
- Time-Range
  - Time Slice
  - Week Time-Range
  - Absolute Time-Range
  - Holiday
- Time-based ACL
- MAC ACL
  - Source MAC
  - Destination MAC
  - VLAN ID
  - User Priority
  - Ether Type
- IP ACL
  - Source IP
  - Destination IP
  - IP Protocol
  - TCP Flag
  - TCP/UDP Source Port
  - TCP/UDP Destination Port
  - DSCP/IP TOS
- IPv6 ACL
- Combined ACL
- Rule Operation
  - Permit/Deny
- Policy Action
  - Mirror
  - Rate Limit
  - Redirect
  - QoS Remark
- ACL Rules Binding
  - Port Binding
  - VLAN Binding

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  - User Priority
  - Ether Type
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  - Source IP
  - Destination IP
  - Fragment
  - IP Protocol
  - TCP Flag
  - TCP/UDP Source Port
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  - User Priority
- IPv6 ACL
- Combined ACL
- Rule Operation
  - Permit/Deny
- Policy Action
  - Mirror
  - Rate Limit
  - Redirect
  - QoS Remark
  - Destination IP
- ACL Rules Binding
  - Port Binding
  - VLAN Binding

<p style="text-align: center;">Security</p>	<ul style="list-style-type: none"> <li>• AAA</li> <li>• 802.1X <ul style="list-style-type: none"> <li>- Port based authentication</li> <li>- MAC (Host) based authentication</li> <li>- Authentication Method includes PAP/EAP-MD5/EAP-TLS/EAP-TTLS/EAP-PEAP</li> </ul> </li> <li>- MAB</li> <li>- Guest VLAN</li> <li>- Support Radius authentication and accountability</li> <li>• IP/IPv6-MAC Binding <ul style="list-style-type: none"> <li>- 512 Binding Entries</li> <li>- DHCP Snooping</li> <li>- DHCPv6 Snooping</li> <li>- ARP Inspection</li> <li>- ND Detection</li> </ul> </li> <li>• IP Source Guard <ul style="list-style-type: none"> <li>- 253 Entries</li> <li>- Source IP+Source MAC</li> </ul> </li> <li>• IPv6 Source Guard <ul style="list-style-type: none"> <li>- 183 Entries</li> <li>- Source IPv6 Address+Source MAC</li> </ul> </li> <li>• DoS Defend</li> <li>• Static/Dynamic/Permanent Port Security <ul style="list-style-type: none"> <li>- Up to 64 MAC addresses per port</li> </ul> </li> <li>• Broadcast/Multicast/Unicast Storm Control <ul style="list-style-type: none"> <li>- kbps/ratio/pps control mode</li> </ul> </li> <li>• Port Isolation</li> <li>• Secure web management through HTTPS with SSLv3/TLS1.0</li> <li>• Secure Command Line Interface (CLI) management with SSHv1/SSHv2</li> <li>• IP/Port/MAC based access control</li> </ul>	<ul style="list-style-type: none"> <li>• AAA</li> <li>• 802.1X <ul style="list-style-type: none"> <li>- Port based authentication</li> <li>- MAC (Host) based authentication</li> <li>- VLAN Assignment</li> </ul> </li> <li>- MAB</li> <li>- Guest VLAN</li> <li>- Support Radius authentication and accountability</li> <li>• IP-MAC Binding <ul style="list-style-type: none"> <li>- 512 Binding Entries</li> <li>- DHCP Snooping</li> <li>- ARP Inspection</li> <li>- IP Source Guard</li> </ul> </li> <li>• IPv6-MAC Binding <ul style="list-style-type: none"> <li>- 512 Binding Entries</li> <li>- DHCPv6 Snooping</li> <li>- ND Detection</li> <li>- IPv6 Source Guard</li> </ul> </li> <li>• DoS Defend</li> <li>• Static/Dynamic/Permanent Port Security <ul style="list-style-type: none"> <li>- Up to 64 MAC addresses per port</li> </ul> </li> <li>• Broadcast/Multicast/Unicast Storm Control <ul style="list-style-type: none"> <li>- kbps/ratio/pps control mode</li> </ul> </li> <li>• Port Isolation</li> <li>• Secure web management through HTTPS with SSLv3/TLS1.0</li> <li>• Secure Command Line Interface (CLI) management with SSHv1/SSHv2</li> <li>• IP/Port/MAC based access control</li> </ul>
<p style="text-align: center;">IPv6 Support</p>	<ul style="list-style-type: none"> <li>• IPv6 Dual IPv4/IPv6</li> <li>• Multicast Listener Discovery (MLD) Snooping</li> <li>• IPv6 neighbor discovery (ND)</li> <li>• Path maximum transmission unit (MTU) discovery</li> <li>• Internet Control Message Protocol (ICMP) version 6</li> <li>• TCPv6/UDPv6</li> <li>• IPv6 applications <ul style="list-style-type: none"> <li>- DHCPv6 Client</li> <li>- Ping6</li> <li>- Tracert6</li> <li>- Telnet (v6)</li> <li>- IPv6 SNMP</li> <li>- IPv6 SSH</li> <li>- IPv6 SSL</li> <li>- Http/Https</li> <li>- IPv6 TFTP</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• IPv6 Static Routing and ACL</li> <li>• IPv6 Dual IPv4/IPv6</li> <li>• IPv6 Interface</li> <li>• Multicast Listener Discovery (MLD) Snooping</li> <li>• IPv6 neighbor discovery (ND)</li> <li>• Path maximum transmission unit (MTU) discovery</li> <li>• Internet Control Message Protocol (ICMP) version 6</li> <li>• TCPv6/UDPv6</li> <li>• IPv6 applications <ul style="list-style-type: none"> <li>- DHCPv6 Client</li> <li>- Ping6</li> <li>- Tracert6</li> <li>- Telnet(v6)</li> <li>- IPv6 SNMP</li> <li>- IPv6 SSH</li> <li>- IPv6 SSL</li> <li>- Http/Https</li> <li>- IPv6 TFTP</li> </ul> </li> </ul>

Management	<ul style="list-style-type: none"> <li>• Web-based GUI</li> <li>• Command Line Interface (CLI) through telnet</li> <li>• SNMPv1/v2c/v3</li> <li>• SNMP Trap/Inform</li> <li>• RMON (1,2,3,9 groups)</li> <li>• SDM Template</li> <li>• DHCP/BOOTP Client</li> <li>• Dual Image, Dual Configuration</li> <li>• CPU Monitoring</li> <li>• Cable Diagnostics</li> <li>• EEE</li> <li>• System Log</li> <li>• 802.1ab LLDP/ LLDP-MED</li> </ul>	<ul style="list-style-type: none"> <li>• Web-based GUI</li> <li>• Command Line Interface (CLI) through telnet</li> <li>• SNMPv1/v2c/v3</li> <li>• SNMP Trap/Inform</li> <li>• RMON (1,2,3,9 groups)</li> <li>• SDM Template</li> <li>• DHCP/BOOTP Client</li> <li>• Dual Image, Dual Configuration</li> <li>• CPU Monitoring</li> <li>• Cable Diagnostics</li> <li>• EEE</li> <li>• SNTTP</li> <li>• System Log</li> <li>• 802.1ab LLDP/LLDP-MED</li> </ul>
MIBs	<ul style="list-style-type: none"> <li>• MIB II (RFC1213)</li> <li>• Interface MIB (RFC2233)</li> <li>• Ethernet Interface MIB (RFC1643)</li> <li>• Bridge MIB (RFC1493)</li> <li>• P/Q-Bridge MIB (RFC2674)</li> <li>• RMON MIB (RFC2819)</li> <li>• RMON2 MIB (RFC2021)</li> <li>• Radius Accounting Client MIB (RFC2620)</li> <li>• Radius Authentication Client MIB (RFC2618)</li> <li>• Remote Ping, Traceroute MIB (RFC2925)</li> <li>• Support TP-Link private MIBs</li> </ul>	<ul style="list-style-type: none"> <li>• MIB II (RFC 1213)</li> <li>• Interface MIB (RFC 2233)</li> <li>• Ethernet Interface MIB (RFC 1643)</li> <li>• Bridge MIB (RFC 1493)</li> <li>• P/Q-Bridge MIB (RFC 2674)</li> <li>• RMON MIB (RFC 2819)</li> <li>• RMON2 MIB (RFC 2021)</li> <li>• Radius Accounting Client MIB (RFC 2620)</li> <li>• Radius Authentication Client MIB (RFC 2618)</li> <li>• Remote Ping, Traceroute MIB (RFC 2925)</li> <li>• Support TP-Link private MIBs</li> </ul>

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