


# Specifications

## Hardware Features & Performance

|                       |                          |   |
|-----------------------|--------------------------|---|
| Product Picture       |                          |                   |
| Model                 |                          | TL-SG3210XHP-M2   |
| General               | Interface                | 8 100/1000Mbps/2.5Gbps RJ45 Ports<br>2 10GE SFP+ Slots  |
|                       | Console                  | 1 RJ45 Console Port, 1 Micro-USB Console Port   |
| PoE                   | PoE Standard             | 802.3af/at  |
|                       | PoE Ports                | 8, up to 30 W   |
|                       | PoE Power Budget         | 240 W   |
| Performance           | Switching Capacity       | 80 Gbps   |
|                       | Packet Forwarding Rate   | 59.52 Mpps  |
|                       | MAC Address Table        | 16K   |
|                       | Packet Buffer            | 12 Mbit   |
|                       | Number of IP Interfaces  | 16  |
|                       | Number of Static Routers | 48 (IPv4, IPv6)   |
|                       | Jumbo Frame              | 9 KB  |
| Physical & Environmet | Power Supply             | 100-240 V AC~50/60 Hz   |
|                       | Max Power Consumption    | 17.24 W (110V/60Hz) (no PD connected)<br>291.49 W (110V/60Hz) (with 240 W PD connected)             |
|                       | Max Heat Dissipation     | 58.82 BTU/h (110 V/60 Hz) (no PD connected)<br>994.56 BTU/h (110 V/60 Hz) (with 240 W PD connected) |
|                       | Dimensions (W x D x H)   | 17.3 × 7.1 × 1.7 in (440 × 180 × 44 mm)   |
|                       | Fan Quantity             | 2   |
|                       | Installation             | Rack Mountable  |
|                       | 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, RoHS   |

## Hardware Features & Performance

|                        |                          |   |   |
|------------------------|--------------------------|---|---|
| Product Picture        |                          |  |                    |
| Model                  |                          | TL-SG3428X  | TL-SG3428XMP  |
| General                | Interface                | 24 10/100/1000Mbps RJ45 Ports<br>4 10GE SFP+ Slots                                |   |
|                        | Console                  | 1 RJ45 Console Port, 1 Micro-USB Console Port                                     |   |
| PoE                    | PoE Standard             | -   | 802.3af/at  |
|                        | PoE Ports                | -   | 24, up to 30W   |
|                        | PoE Power Budget         | -   | 384 W   |
| Performance            | Switching Capacity       | 128 Gbps  |   |
|                        | Packet Forwarding Rate   | 95.23 Mpps  |   |
|                        | MAC Address Table        | 16K   |   |
|                        | Packet Buffer            | 12 Mbit   |   |
|                        | Number of IP Interfaces  | 16  |   |
|                        | Number of Static Routers | 48 (IPv4, IPv6)   |   |
|                        | Jumbo Frame              | 9 KB  |   |
| Physical & Environment | Power Supply             | 100-240 V AC~50/60 Hz   |   |
|                        | Max Power Consumption    | 23.6 W (110V/60Hz)  | 34.4 W (110V/60Hz) ( no PD connected)<br>465.8 W (110V/60Hz) ( with 384 W PD connected)               |
|                        | Max Heat Dissipation     | 80.52 BTU/h (110 V/60 Hz)   | 117.38 BTU/h (110 V/60 Hz) (no PD connected)<br>1589.31 BTU/h (110 V/60 Hz) (with 384 W PD connected) |
|                        | Dimensions (W x D x H)   | 17.3 × 7.1 × 1.7 in (440 × 180 × 44 mm)   | 17.3 × 13.0 × 1.7 in (440 × 330 × 44 mm)  |
|                        | Fan Quantity             | Fanless   | 2   |
|                        | Installation             | Rack Mountable  |   |
|                        | Operating Temperature    | 0 °C to 45 °C (32 °F to 113 °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, RoHS   |   |

## Software Features

| Model        | TL-SG3210XHP-M2/TL-SG3428X/TL-SG3428XMP  |   |
|--------------|--|---|
| SDN Support  | <ul style="list-style-type: none"> <li>• Support Omada Hardware Controller (OC200/OC300), Software Controller, Cloud-Based Controller</li> <li>• Automatic Device Discovery</li> <li>• Batch Configuration</li> <li>• Batch Firmware Upgrading</li> </ul>  | <ul style="list-style-type: none"> <li>• Intelligent Network Monitoring</li> <li>• Abnormal Event Warnings</li> <li>• Unified Configuration</li> <li>• Reboot Schedule</li> <li>• ZTP (Zero-Touch Provisioning)*</li> </ul>   |
| L3 Features  | <ul style="list-style-type: none"> <li>• 16 IPv4/IPv6 Interfaces</li> <li>• Static Routing                             <ul style="list-style-type: none"> <li>- 48 static routes</li> </ul> </li> <li>• Static ARP                             <ul style="list-style-type: none"> <li>- 128 static entries</li> </ul> </li> <li>• 512 ARP Entries</li> </ul>   | <ul style="list-style-type: none"> <li>• Proxy ARP</li> <li>• Gratuitous ARP</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> </ul>  |
| L2 Features  | <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: TC Protect, BPDU Filter, BPDU Protect, Root Protect, Loop Protect</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Loopback Detection                             <ul style="list-style-type: none"> <li>- Port based</li> <li>- VLAN based</li> </ul> </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>- Tx/Rx/Both</li> </ul> </li> </ul> |
| L2 Multicast | <ul style="list-style-type: none"> <li>• Supports 1000 (IPv4, IPv6) IGMP 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> </ul> </li> <li>• IGMP Authentication</li> <li>• MVR</li> </ul>  | <ul style="list-style-type: none"> <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> <li>- Limited IP Multicast</li> </ul> </li> <li>• Multicast Filtering: 256 profiles and 16 entries per profile</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 Tagged VLAN</li> <li>• MAC VLAN: 30 Entries</li> <li>• Protocol VLAN: Protocol Template 16, Protocol VLAN 16</li> </ul>  | <ul style="list-style-type: none"> <li>• Private VLAN</li> <li>• GVRP</li> <li>• VLAN VPN (QinQ)                             <ul style="list-style-type: none"> <li>- Port-Based QinQ</li> <li>- Selective QinQ</li> </ul> </li> <li>• Voice VLAN</li> </ul>  |
| QoS          | <ul style="list-style-type: none"> <li>• 8 priority queues</li> <li>• 802.1p CoS/DSCP priority</li> <li>• Queue scheduling                             <ul style="list-style-type: none"> <li>- SP (Strict Priority)</li> <li>- WRR (Weighted Round Robin)</li> <li>- SP+WRR</li> </ul> </li> <li>• Bandwidth Control                             <ul style="list-style-type: none"> <li>- Port/Flow based Rating Limiting</li> </ul> </li> </ul>  | <ul style="list-style-type: none"> <li>• Smoother Performance</li> <li>• Action 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> </ul>  |

\* Zero-Touch Provisioning is supported when using Omada Cloud-Based Controller

## Software Features

| Model        | TL-SG3210XHP-M2/TL-SG3428X/TL-SG3428XMP   |   |
|--------------|---|---|
| ACL          | <ul style="list-style-type: none"> <li>• MAC ACL                             <ul style="list-style-type: none"> <li>- Source MAC</li> <li>- Destination MAC</li> <li>- VLAN ID</li> <li>- User Priority</li> <li>- Ether Type</li> </ul> </li> <li>• IP ACL                             <ul style="list-style-type: none"> <li>- Source IP</li> <li>- Destination IP</li> <li>- Fragment</li> <li>- IP Protocol</li> <li>- TCP Flag</li> </ul> </li> </ul>  | <ul style="list-style-type: none"> <li>- TCP/UDP Port</li> <li>- DSCP/IP TOS</li> <li>- User Priority</li> <li>• Combined ACL</li> <li>• IPv6 ACL</li> <li>• Policy                             <ul style="list-style-type: none"> <li>- Mirroring</li> <li>- Redirect</li> <li>- Rate Limit</li> <li>- QoS Remark</li> </ul> </li> <li>• ACL apply to Port/VLAN</li> <li>• Time-based ACL</li> </ul>   |
| Security     | <ul style="list-style-type: none"> <li>• IP-MAC-Port Binding                             <ul style="list-style-type: none"> <li>- 512 Entries</li> <li>- DHCP Snooping</li> <li>- ARP Inspection</li> <li>- IPv4 Source Guard: 100 Entries</li> </ul> </li> <li>• IPv6-MAC-Port Binding                             <ul style="list-style-type: none"> <li>- 512 Entries</li> <li>- DHCPv6 Snooping</li> <li>- ND Detection</li> <li>- IPv6 Source Guard: 100 Entries</li> </ul> </li> <li>• DoS Defend</li> <li>• Static/Dynamic 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> </ul> | <ul style="list-style-type: none"> <li>• 802.1X                             <ul style="list-style-type: none"> <li>- Port base authentication</li> <li>- Mac base authentication</li> <li>- VLAN Assignment</li> <li>- MAB</li> <li>- Guest VLAN</li> <li>- Support RADIUS authentication and accountability</li> </ul> </li> <li>• AAA (including TACACS+)</li> <li>• Port Isolation</li> <li>• Secure web management through HTTPS with SSLv3/TLS 1.2</li> <li>• Secure Command Line Interface (CLI) management with SSHv1/SSHv2</li> <li>• IP/Port/MAC based access control</li> </ul> |
| ISP Features | <ul style="list-style-type: none"> <li>• 802.3ah Ethernet Link OAM</li> <li>• L2PT (Layer 2 Protocol Tunneling)</li> <li>• PPPoE ID Insertion</li> </ul>  | <ul style="list-style-type: none"> <li>• Device Link Detect Protocol (DLDP)</li> <li>• sFlow</li> <li>• DDM</li> </ul>  |
| Management   | <ul style="list-style-type: none"> <li>• Web-based GUI</li> <li>• Command Line Interface (CLI) through consoleport, telnet</li> <li>• SNMPv1/v2c/v3                             <ul style="list-style-type: none"> <li>- Trap/Inform</li> <li>- RMON (1, 2, 3, 9 groups)</li> </ul> </li> <li>• SDM Template</li> <li>• DHCP/BOOTP Client</li> <li>• 802.1ab LLDP/LLDP-MED</li> </ul>   | <ul style="list-style-type: none"> <li>• DHCP Auto Install</li> <li>• Dual Image, Dual Configuration</li> <li>• CPU Monitoring</li> <li>• Cable Diagnostics</li> <li>• EEE</li> <li>• Password Recovery</li> <li>• SNTP</li> <li>• System Log</li> </ul>  |
| IPv6 Support | <ul style="list-style-type: none"> <li>• IPv6 Dual IPv4/IPv6</li> <li>• Multicast Listener Discovery (MLD) Snooping</li> <li>• IPv6 ACL</li> <li>• IPv6 Interface</li> <li>• Static IPv6 Routing</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> </ul>  | <ul style="list-style-type: none"> <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>  |

## Software Features

| Model | TL-SG3210XHP-M2/TL-SG3428X/TL-SG3428XMP  |   |
|-------|--|---|
| 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></ul> | <ul style="list-style-type: none"><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 MIB</li></ul> |

# Ordering Information

## Host Switch

| Model           | Description  |
|-----------------|--|
| TL-SG3210XHP-M2 | JetStream 8-Port 2.5GBASE-T and 2-Port 10GE SFP+ L2+ Managed Switch with 8-Port PoE+ |
| TL-SG3428XMP    | JetStream 24-Port Gigabit and 4-Port 10GE SFP+ L2+ Managed Switch with 24-Port PoE+  |
| TL-SG3428X      | JetStream 24-Port Gigabit L2+ Managed Switch with 4 10GE SFP+ Slots                  |

## SFP/SFP+ Modules

| Model        | Description  |
|--------------|--|
| TL-SM311LS   | Gigabit SFP module, Single-mode, LC interface, Up to 20km distance                               |
| TL-SM311LM   | Gigabit SFP module, Multi-mode, LC interface, Up to 550m distance                                |
| TL-SM321A    | Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1550 nm/RX: 1310 nm, 20 km |
| TL-SM321A-2  | Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1550 nm/RX: 1310 nm, 2 km  |
| TL-SM321B    | Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1310 nm/RX: 1550 nm, 20 km |
| TL-SM321B-2  | Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1310 nm/RX: 1550 nm, 2 km  |
| TL-SM5110-LR | 10GBase-LR SFP+ LC Transceiver, single-mode, LC connector, 1310nm, 10 km                         |
| TL-SM5110-SR | 10GBase-SR SFP+ LC Transceiver, multi-mode, LC connector, 850nm, 300 m                           |

## MC Series Media Converter

| Model     | Description  |
|-----------|--|
| MC210CS   | Gigabit Single-Mode Media Converter, up to 20 km, chassis mountable                        |
| MC200CM   | Gigabit multi-mode SC SFP Transceiver, up to 550 m, chassis mountable                      |
| MC200L    | Gigabit SFP slot supporting mini-GBIC modules, chassis mountable                           |
| TL-MC1400 | 14-slot power supply chassis for TP-LINK MC Series Media Converter, 19-inch rack-mountable |

## SFP/SFP+ Modules

| Model        | Description   |
|--------------|---|
| TL-FC111A-20 | 100Mbps Single-Mode WDM Media Converter, up to 20 km, TX:1550nm, RX:1310nm, chassis mountable |
| TL-FC111B-20 | 100Mbps Single-Mode WDM Media Converter, up to 20 km, TX:1310nm, RX:1550nm, chassis mountable |
| TL-FC311A-2  | Gigabit Single-Mode WDM Media Converter, up to 2 km, TX:1550nm, RX:1310nm, chassis mountable  |
| TL-FC311B-2  | Gigabit Single-Mode WDM Media Converter, up to 2 km, TX:1310nm, RX:1550nm, chassis mountable  |
| TL-FC311A-20 | Gigabit Single-Mode WDM Media Converter, up to 20 km, TX:1550nm, RX:1310nm, chassis mountable |
| TL-FC311B-20 | Gigabit Single-Mode WDM Media Converter, up to 20 km, TX:1310nm, RX:1550nm, chassis mountable |
| TL-FC1400    | 14-slot power supply chassis for TP-LINK FC Series Media Converter, 19-inch rack-mountable    |

Some models featured in this guide may be unavailable in your country or region. Visit TP-Link website for local sales information: [www.tp-link.com](http://www.tp-link.com).

PoE budget calculations are based on laboratory testing. Actual PoE power budget is not guaranteed and will vary as a result of client limitations and environmental factors.

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