tp-link

JetStream

Smart Switches Datasheet

MODELS: TL-SG2008 V3 / TL-SG2008P / TL-SG2210P V3.20 / TL-SG2210MP / TL-SG2218 / TL-SG2428P / TL-SL2428P V4.20

Overview

TP-Link's brand new JetStream gigabit smart switches provide huge upgrade comparing with previous versions. The switches can be managed by Omada SDN Controller, which provides professional and reliable one-step solutions. Integrated L2 and L2+ features such as 802.1Q VLAN, QoS, IGMP Snooping and static routing provide cost-effective networking solutions for small and medium-sized businesses without sacrificing enhanced usability and strong performance.

Omada Solution

Hospitality

High Quality and Full Coverage Wi-Fi

Education

High-Density Wi-Fi

Retail

Social Marketing for O2O

Office

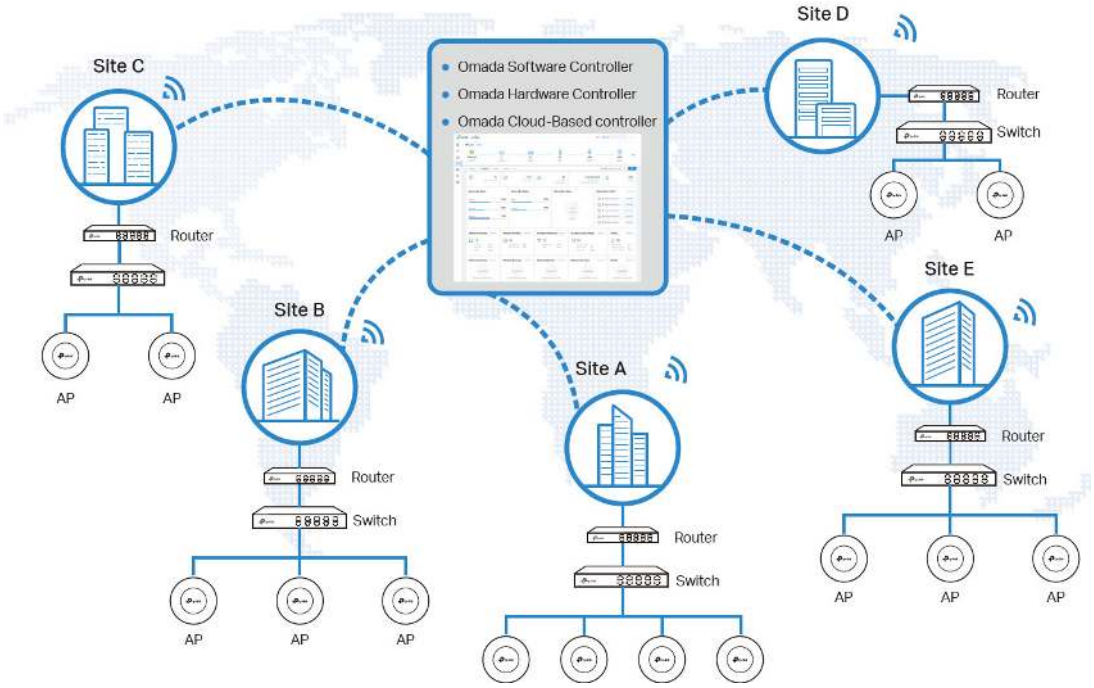
Wireless and Wired Connections

Catering

Full Wi-Fi Coverage in High-Density Environment

Software Defined Networking (SDN) with Cloud Access

Omada Software Defined Networking (SDN) platform integrates network devices, including access points, switches and gateways, providing 100% centralized cloud management. Omada creates a highly scalable network——all controlled from a single interface. Seamless wireless and wired connections are provided, ideal for use in hospitality, education, retail, offices, and more.



Higher Efficiency

- Centralized Cloud Management
- Zero-Touch Provisioning
- AI-Driven Technology
- Auto Channel Selection and Power Adjustment
- Multi-Tenant Privilege Assignment
- Easy and Intelligent Monitoring

Higher Security

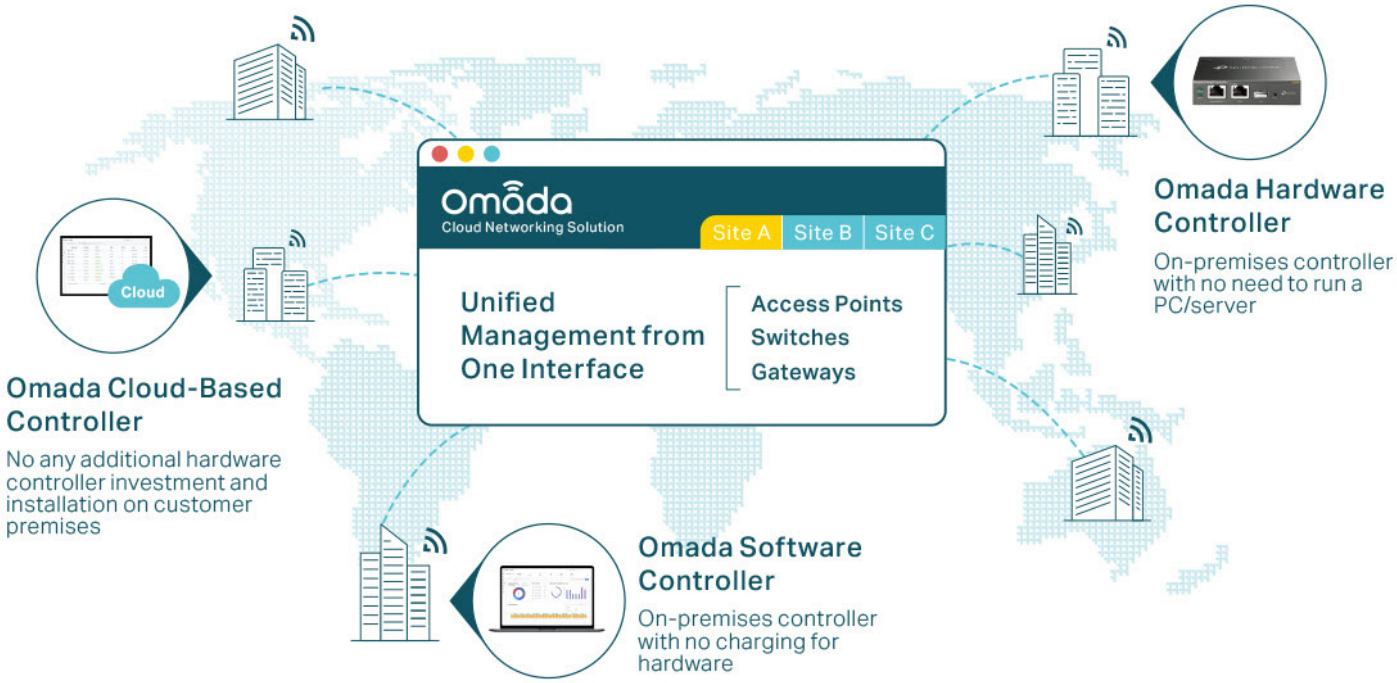
- Separate Management and User Data
- Abundant Security Functions

Higher Reliability

- 99.99% SLA Availability
- Reliable Connections with High-Density Clients

Hassle-Free Centralized Cloud Management

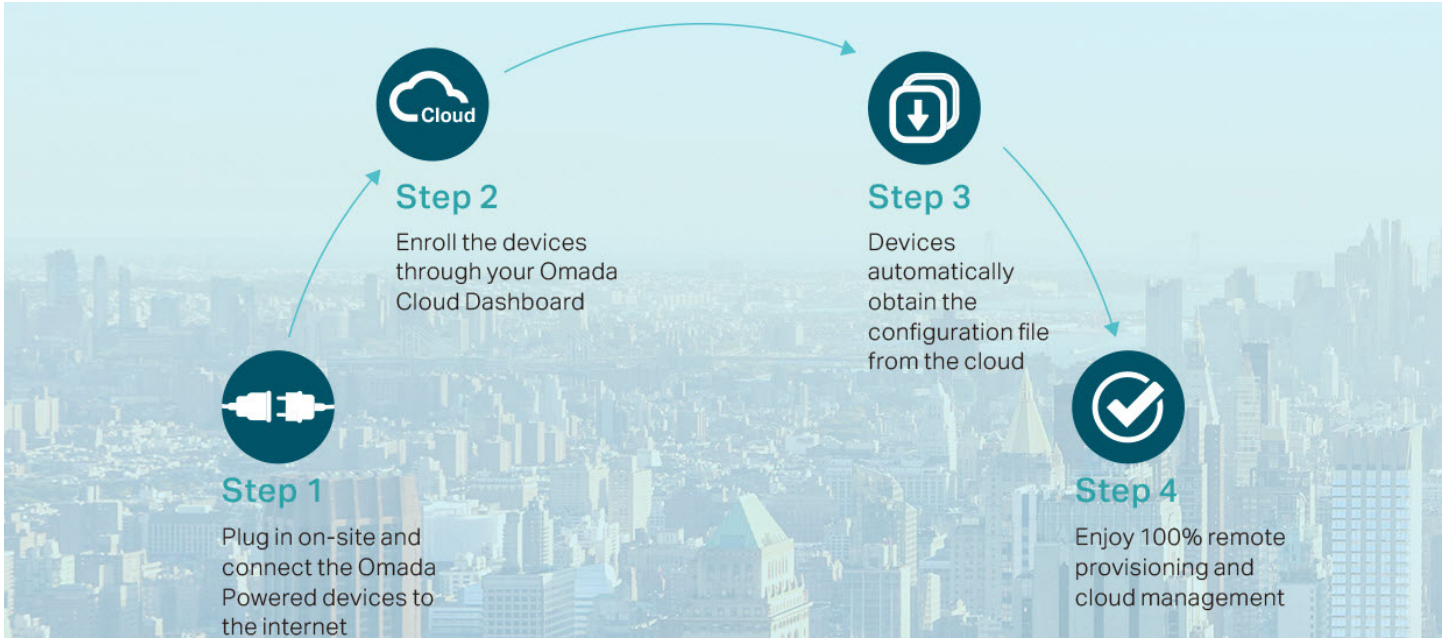
100% centralized cloud management of the whole network from different sites——all controlled from a single interface anywhere, anytime.



- No additional training needed
- Unlimited scalability
- Batch management
- Devices still work even when not connected to the Cloud

Zero-Touch Provisioning for Efficient Deplyment[1]

Omada zero-touch provisioning allows remotely deployment and configuration of multi-site networks, so there's no need to send out an engineer for on-site configuration. The Omada Cloud ensures efficient deployment with lower costs.



1. Zero-Touch Provisioning is supported when using Omada Cloud-Based Controller

AI-Driven Technology for Stronger Performance and Easy Network Maintenance

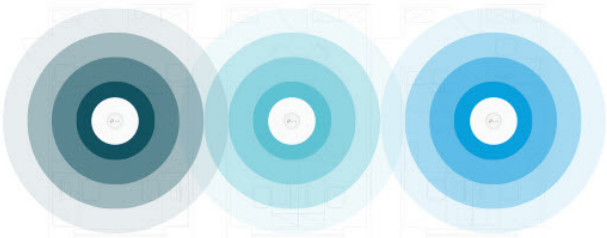
Intelligent Network Analysis, Warning, and Optimization*

- Analyzes potential network problems and sends optimization suggestions for higher network efficiency
- Locates network faults, warns and notify users, and generates solutions to reduce network risk

*Intelligent Network Analysis, Warning, and Optimization are being developed and are scheduled to be released in 2020

Auto Channel Selection and Power Adjustment

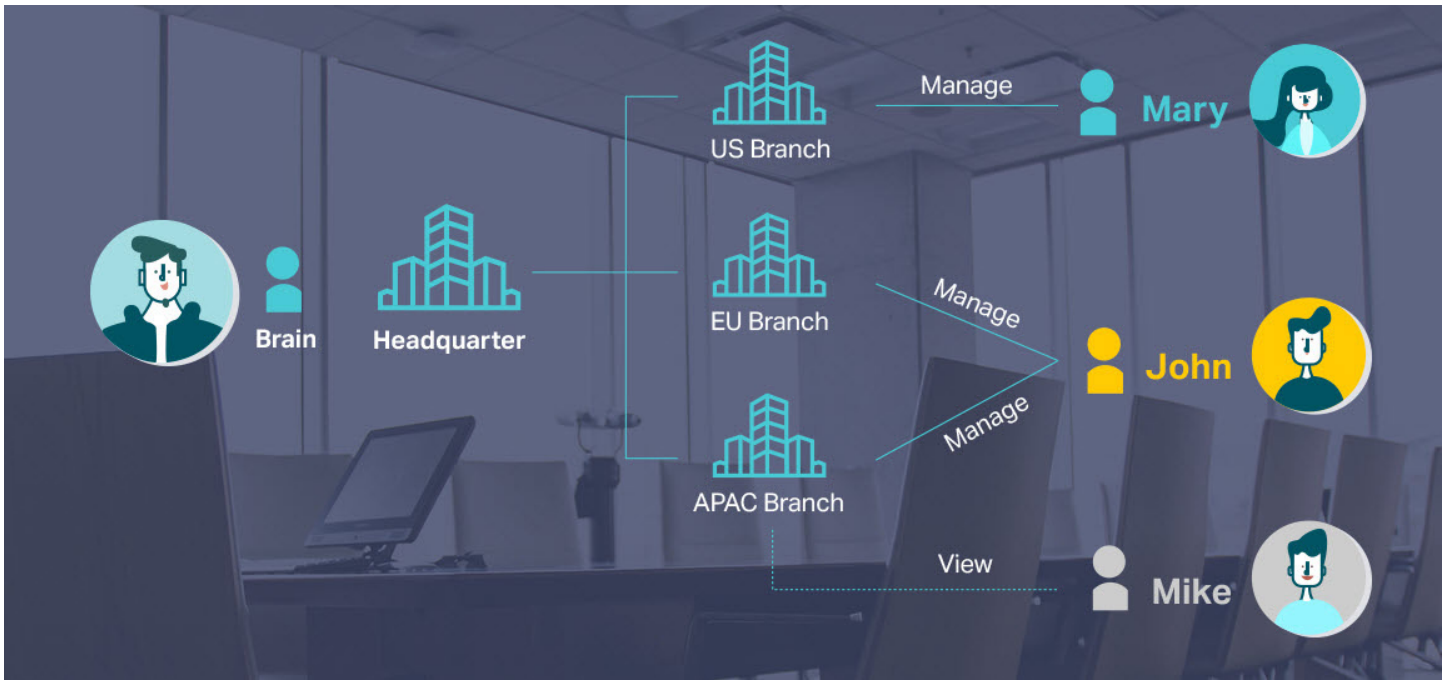
Provides powerful wireless performance while greatly reducing Wi-Fi interference by automatically adjusting the channel settings and transmission power levels of neighboring APs in the same network.



Channel 1 Channel 11 Channel 6

Assign Different Management Roles

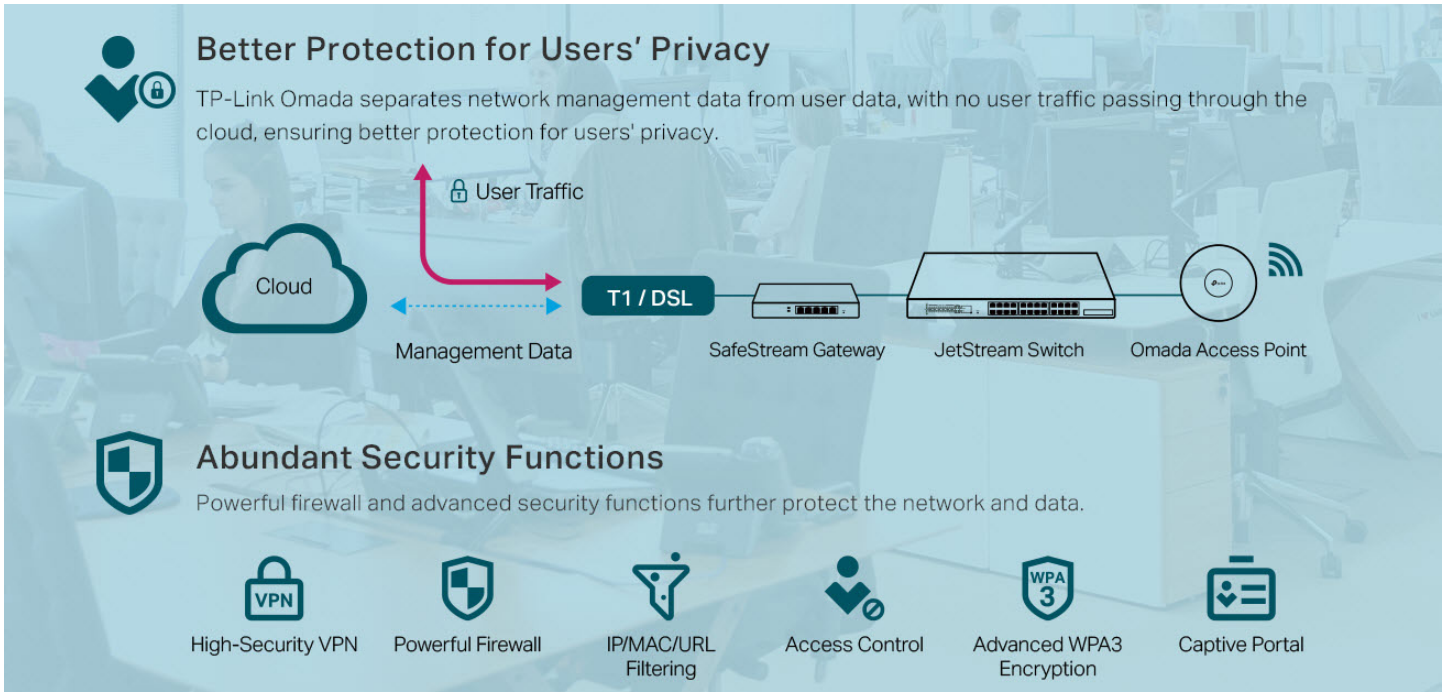
Multi-user privilege assignment is available to increase management efficiency and security. Multi-person management, multi-level permissions, and the ability to add admins as needed, enable flexible network operation and maintenance.



Easy and Intelligent Network Monitoring

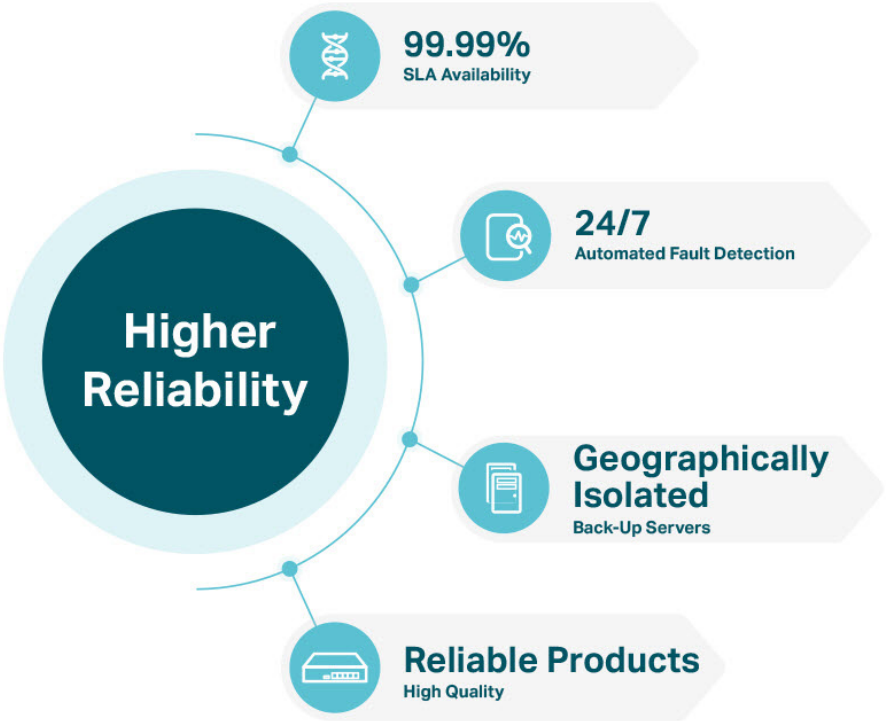
The easy-to-use dashboard makes it easy to see your real-time network status; check network usage and traffic distribution; receive network condition logs, abnormal event warnings, and notifications; or even track key data for better business results. Network topology helps IP admins quickly see and troubleshoot connection at a glance.

Comprehensive Protection for the Whole Network



Multiple Factors Guarantee Higher Reliability

Higher reliability of cloud service is guaranteed with 99.99% SLA availability, 24/7 automated fault detection, geographically isolated backup servers, and reliable product quality. Your network functions even if management traffic is interrupted.



Reliable Connections Even with High-Density Clients

Equipped with enterprise chipsets, dedicated antennas, advanced RF functions, auto channel selection, and power adjustment, Omada Wi-Fi 6 and Wi-Fi 5 APs have high concurrency capacities for remarkable performance in high-density environments.

Switch Product Features

Highlights

- Gigabit Ethernet connections on all ports provide full speed of data transferring
- L2+ Feature ——Static Routing, helps route internal traffic for more efficient use of network resources
- Advanced security features include IP-MAC-Port Binding, ACL, Port Security, DoS Defend, Storm Control, DHCP Snooping, 802.1X and Radius Authentication
- L2/L3/L4 QoS and IGMP Snooping optimize voice and video applications
- Comprehensive IPv6 support for management, QoS and ACL
- Web/CLI managed modes, SNMP, RMON and Dual Image bring abundant management features

Advanced QoS features

To integrate voice, data and video service on one network, the switch applies rich QoS policies. Administrator can designate the priority of the traffic based on a variety of means including Port Priority, 802.1P Priority and DSCP Priority, to ensure that voice and video are always clear, smooth and jitter free. In conjunction with the Voice VLAN that the switches support, Voice Applications will perform better and smoother.

Abundant L2 and L2+ features

TP-Link JetStream smart switches support a complete lineup of L2 features, including IGMP Snooping/ MLD Snooping, 802.1Q/MAC/Protocol VLAN, STP/RSTP/MSTP, Link Aggregation Group (LAG), Port Isolation, Port Mirroring, and 802.3x Flow control function. IGMP Snooping ensures the multicast stream be forwarded intelligently to the appropriate subscribers by the switch, while IGMP Throttling & Filtering restricts each subscriber on a certain level to prevent unauthorized multicast access. Besides, these smart switches also support L2+ features like static routing. It is a simple way to provide segmentation of the network with internal routing through the switch and helps network traffic to be more efficient.

Enterprise Level Management Features

TP-Link JetStream smart switches support multiple user-friendly standard management features such as intuitive web-based Graphical User Interface (GUI), industrially standard Command Line Interface (CLI) and SNMP (v1/v2c/v3). These switches support RMON (Remote Network Monitoring), which enables the switch to be polled for valuable status information and send traps when encountering abnormal events. Also, this series of switches support Dual Image function, which makes there be less 'down-time' when switches are being upgraded/downgraded.

IPv6 Support

TP-Link JetStream smart switches support comprehensive IPv6 features including IPv6 management, ACL, QoS and MLD Snooping, all of these features help to ensure a smooth migration to IPv6-based network without changing switches in the future.

Specifications

Hardware Features & Performance

Product Picture				
Model		TL-SG2008 V3	TL-SG2008P	TL-SG2210P V3.20
General	Interface	8 10/100/1000Mbps RJ45 Ports	8 10/100/1000Mbps RJ45 ports	8 10/100/1000Mbps RJ45 Ports 2 Gigabit SFP Slots
	Flash	32 MB		
	DRAM	256 MB		
	Port Standard	IEEE 802.3i:10BASE-T Ethernet; IEEE 802.3u:100BASE-X Fast Ethernet; IEEE 802.3ab:1000BASE-T Gigabit Ethernet; IEEE 802.3z:1000BASE-X Gigabit Ethernet (Optical fiber) (only for TL-SG2210P)		
PoE	PoE Standard	--	802.3af/at	802.3af/at
	PoE Ports		4, up to 30 W	8, up to 30 W
	PoE Power Budget		62 W	61 W
Performance	Switching Capacity	16 Gbps	16 Gbps	20 Gbps
	Packet Forwarding Rate	11.90 Mpps		14.88 Mpps
	MAC Address Table	8K		
	Packet Buffer	4.1 Mbit		
	Transmission Method	Store and Forward		
	Number of IP Interfaces	16		
	Number of Static Routers	32 (IPv4, IPv6)		
	Jumbo Frame	9 KB		
Physical & Environmet	Power Supply	12 VDC/1 A External Adapter or Obtain Power from PoE Source	53.5 VDC/1.31 A External Adapter	
	Max Power Consumption	6.4 W (220 V/50 Hz)	7.9 W (220 V/50 Hz) (no PD connected) 69.7 W (220 V/50 Hz) (with 62 W PD connected)	10.3 W (220 V/50 Hz) (no PD connected) 76.5 W (220 V/50 Hz) (with 61 W PD connected)
	Max Heat Dissipation	21.84 BTU/hr (220 V/50 Hz)	26.95 BTU/hr (220 V/50 Hz) (no PD connected) 237.82 BTU/hr (220 V/50 Hz) (with 62 W PD connected)	35.14 BTU/hr (220 V/50 Hz) (no PD connected) 261.02 BTU/hr (220 V/50 Hz) (with 61 W PD connected)
	Standby Power Consumption	2.56 W (220 V/50 Hz)	2.89 W (220 V/50 Hz)	4.99 W (220 V/50 Hz)
	Dimensions (W x D x H)	8.2 × 4.9 × 1.0 in (209 × 126 × 26 mm)		
	Fan Quantity	Fanless		
	Installation	Desktop/Wall-Mounting		
	Operating Temperature	0 °C to 40 °C (32 °F to 104 °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-SG2210MP	TL-SG2218	TL-SG2428P
General	Interface	8 10/100/1000Mbps RJ45 Ports 2 Gigabit SFP Slots	16 10/100/1000Mbps RJ45 Ports 2 Gigabit SFP Slots	24 10/100/1000Mbps RJ45 ports 4 Gigabit SFP Slots
	Flash	32 MB		
	DRAM	256 MB		
	Port Standard	IEEE 802.3i:10BASE-T Ethernet; IEEE 802.3u:100BASE-X Fast Ethernet; IEEE 802.3ab:1000BASE-T Gigabit Ethernet; IEEE 802.3z:1000BASE-X Gigabit Ethernet (Optical fiber)		
PoE	PoE Standard	802.3af/at	-	802.3af/at
	PoE Ports	8, up to 30 W	-	24, up to 30 W
	PoE Power Budget	150 W	-	250 W
Performance	Switching Capacity	20 Gbps	36 Gbps	56 Gbps
	Packet Forwarding Rate	14.88 Mpps	26.78 Mpps	41.66 Mpps
	MAC Address Table	8K		
	Packet Buffer	4.1 Mbit		
	Transmission Method	Store and Forward		
	Number of IP Interfaces	16		
	Number of Static Routers	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)	12.3 W (220 V/50 Hz)	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/hr (110 V/60 Hz) (no PD connected) 539.35 BTU/hr (110 V/60 Hz) (with 150 W PD connected)	41.97 BTU/hr	109.53 BTU/hr (110 V/60 Hz) (no PD connected) 1052.94 BTU/hr (110 V/60 Hz) (with 250 W PD connected)
	Standby Power Consumption	8.56 W (110 V/60 Hz)	3.84 W (220 V/50 Hz)	21.96 W (110 V/60 Hz)
	Dimensions (W x D x H)	11.6 x 7.1 x 1.7 in (294 x 180 x 44 mm)	17.3 × 7.1 × 1.7 in (440 × 180 × 44 mm)	17.3 × 8.7 × 1.7 in (440 × 220 × 44 mm)
	Fan Quantity	1	Fanless	2
	Installation	Rackmount/Desktop	Rackmount	Rackmount
	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-SL2428P V4.20
General	Interface	24 10/100 Mbps RJ45 Ports 2 10/100/1000 Mbps RJ45 Ports 2 Combo Gigabit RJ45/SFP Ports
	Flash	32 MB
	DRAM	256 MB
	Port Standard	IEEE 802.3i:10BASE-T Ethernet; IEEE 802.3u:100BASE-X Fast Ethernet; IEEE 802.3ab:1000BASE-T Gigabit Ethernet; IEEE 802.3z:1000BASE-X Gigabit Ethernet (Optical fiber)
PoE	PoE Standard	802.3af/at
	PoE Ports	24, up to 30 W
	PoE Power Budget	250 W
Performance	Switching Capacity	12.8 Gbps
	Packet Forwarding Rate	9.52 Mpps
	MAC Address Table	Store and Forward
	Packet Buffer	8K
	Transmission Method	4.1 Mbit
	Number of IP Interfaces	16
	Number of Static Routers	32 (IPv4, IPv6)
	Jumbo Frame	9 KB
Physical & Environmet	Power Supply	100-240V AC, 50/60Hz
	Max Power Consumption	18.8 W (220 V/50 Hz) (with no PD connected) 286.7 W (220 V/50 Hz) (with 250 W PD connected)
	Max Heat Dissipation	64.1 BTU/hr (220 V/50Hz) (with no PD connected) 977.6 BTU/hr (220 V/50 Hz) (with 250 W PD connected)
	Standby Power Consumption	15.9 W (220 V/50 Hz)
	Dimensions (W x D x H)	17.3 × 7.1 × 1.7 in (440 × 180 × 44 mm)
	Fan Quantity	2
	Installation	Rackmount
	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

Software Features		
Model	TL-SG2008 V3 / TL-SG2008P / TL-SG2210P V3.20 / TL-SG2210MP / TL-SG2218 / TL-SG2428P / TL-SL2428P V4.20	
SDN Support	• Support Omada Hardware Controller (OC200/ OC300), Software Controller, Cloud-Based Controller • Automatic Device Discovery • Batch Configuration • Batch Firmware Upgrading	• Intelligent Network Monitoring • Abnormal Event Warnings • Unified Configuration • Reboot Schedule • ZTP (Zero-Touch Provisioning)*
L2+ Features	• 16 IP Interfaces - Support IPv4/IPv6 Interface • Static Routing - 32 IPv4/IPv6 Static Routes • DHCP Server • DHCP Relay - DHCP Interface Relay - DHCP VLAN Relay • DHCP L2 Relay	• Static ARP • Proxy ARP • Gratuitous ARP
L2 Features	• Link Aggregation - Static link aggregation - 802.3ad LACP - Up to 8 aggregation groups and up to 8 ports per group • Spanning Tree Protocol - 802.1D STP - 802.1w RSTP - 802.1s MSTP - STP Security: TC Protect, BPDU Filter/Protect, Root Protect • Loopback Detection	• Flow Control - 802.3x Flow Control • Mirroring - Port Mirroring - CPU Mirroring - One-to-One - Many-to-One - Flow-Based - Ingress/Egress/Both • Device Link Detect Protocol (DLDP) • 802.1ab LLDP/ LLDP-MED
L2 Multicast	• 511 IPv4, IPv6 shared multicast groups • IGMP Snooping - IGMP v1/v2/v3 Snooping - Fast Leave - IGMP Snooping Querier - Static Group Config • Multicast VLAN Registration (MVR) • Multicast Filtering	• MLD Snooping - MLD v1/v2 Snooping - Fast Leave - MLD Snooping Querier - Static Group Config • Limited IP Multicast (256 profiles and 16 entries per profile)
VLAN	• VLAN Group - Max. 4K VLAN Groups • 802.1Q tag VLAN • MAC VLAN	• Protocol VLAN • GVRP • Voice VLAN
QoS	• 802.1p CoS/DSCP priority • 8 priority queues • Priority Schedule Mode - SP (Strict Priority) - WRR (Weighted Round Robin) • Queue Weight Config	• Bandwidth Control - Port/Flow based Rating Limit • Smoother Performance • Storm Control - Multiple Control Modes(kbps/ratio) - Broadcast/Multicast/Unknown-Unicast Control

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

Software Features	
Model	TL-SG2008 V3 / TL-SG2008P / TL-SG2210P V3.20 / TL-SG2210MP / TL-SG2218 / TL-SG2428P / TL-SL2428P V4.20
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 • Actions for flows - Mirror (to supported interface) - Redirect (to supported interface) - Rate Limit - QoS Remark
Security	• AAA • 802.1X - Port based authentication - MAC (Host) based authentication - Authentication Method includes PAP/EAP-MD5 - MAB - Guest VLAN - Support Radius authentication and accountability • IP/IPv6-MAC Binding - 512 Binding Entries - DHCP Snooping - DHCPv6 Snooping - ARP Inspection - ND Detection - ND Snooping • IP Source Guard - 253 Entries - Source IP+Source MAC • IPv6 Source Guard - 183 Entries - Source IPv6 Address+Source MAC • DoS Defend • DHCP Filter • Static/Dynamic/Permanent Port Security - Up to 64 MAC addresses per port • Broadcast/Multicast/Unicast Storm Control - kbps/ratio control mode • Port Isolation • Secure web management through HTTPS with SSLv3/TLS 1.2 • Secure Command Line Interface (CLI) management with SSHv1/SSHv2 • IP/Port/MAC based access control

Software Features		
Model	TL-SG2008 V3 / TL-SG2008P / TL-SG2210P V3.20 / TL-SG2210MP / TL-SG2218 / TL-SG2428P / TL-SL2428P V4.20	
IPv6 Support	• IPv6 Static Routing and ACL • IPv6 Dual IPv4/IPv6 • IPv6 Interface • Multicast Listener Discovery (MLD) Snooping • IPv6 neighbor discovery (ND) • Path maximum transmission unit (MTU) discovery • Internet Control Message Protocol (ICMP) version 6 • TCPv6/UDPv6 • IPv6 applications - DHCPv6 Client - Ping6 - Tracert6 - Telnet(v6) - IPv6 SNMP - IPv6 SSH - IPv6 SSL - Http/Https - IPv6 TFTP	
Management	• Web-based GUI • Command Line Interface (CLI) through telnet • SNMPv1/v2c/v3 • SNMP Trap/Inform • RMON (1,2,3,9 groups) • SDM Template • DHCP/BOOTP Client	• Dual Image, Dual Configuration • CPU Monitoring • Cable Diagnostics • EEE • SNTP • System Log
MIBs	• MIB II (RFC1213) • Bridge MIB (RFC1493) • P/Q-Bridge MIB (RFC2674) • Radius Accounting Client MIB (RFC2620)	• Radius Authentication Client MIB (RFC2618) • Remote Ping, Traceroute MIB (RFC2925) • Support TP-Link private MIBs • RMON MIB(RFC1757, rmon 1,2,3,9)

Ordering Information

Host Switch

Model	Description
TL-SG2008 V3	JetStream 8-Port Gigabit Smart Switch
TL-SG2008P	JetStream 8-Port Gigabit Smart Switch with 4-Port PoE+
TL-SG2210P V3.20	JetStream 10-Port Gigabit Smart Switch with 8-Port PoE+
TL-SG2210MP	JetStream 10-Port Gigabit Smart Switch with 8-Port PoE+
TL-SG2218	JetStream 16-Port Gigabit Smart Switch with 2 SFP Slots
TL-SG2428P	JetStream 28-Port Gigabit Smart Switch with 24-Port PoE+
TL-SL2428P V4.20	JetStream 24-Port 10/100Mbps + 4-Port Gigabit Smart Switch with 24-Port PoE+

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

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

FC Series Media Converter

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.

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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