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JetStream
Smart Switches Datasheet

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

The TP-Link Solution
One-Step Solution
Professional. Reliable. Secure.

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

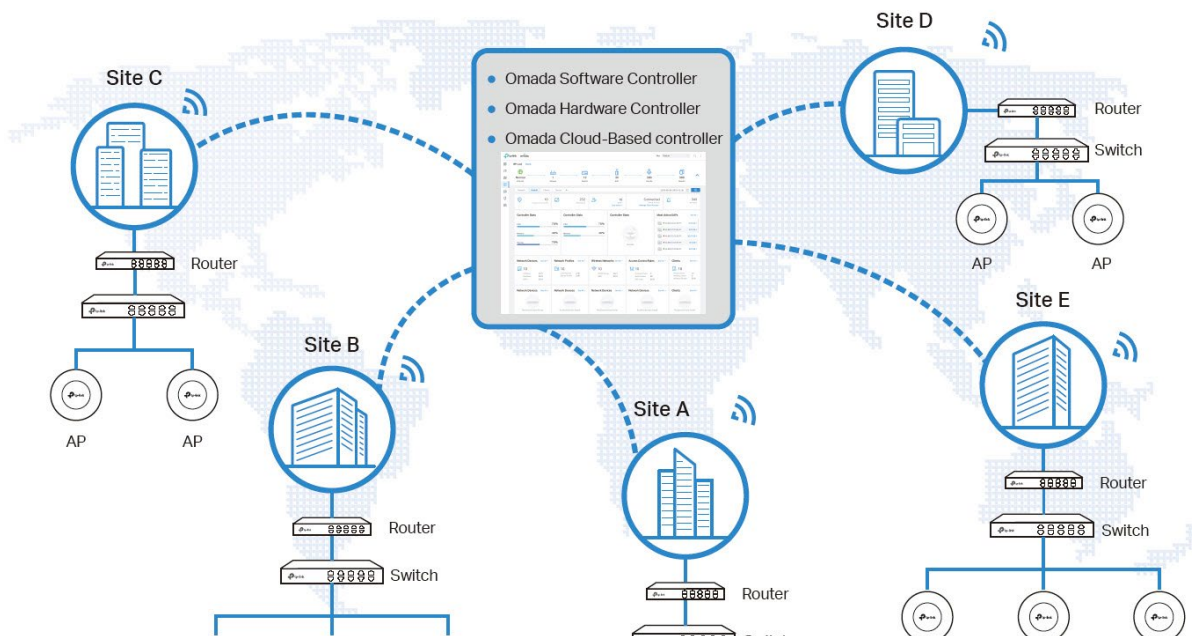| Hospitality	Education	Retail	Office	Catering
High Quality and Full Coverage Wi-Fi	High-Density Wi-Fi	Social Marketing for O2O	Wireless and Wired Connections	Full Wi-Fi Coverage in High-Density Environment

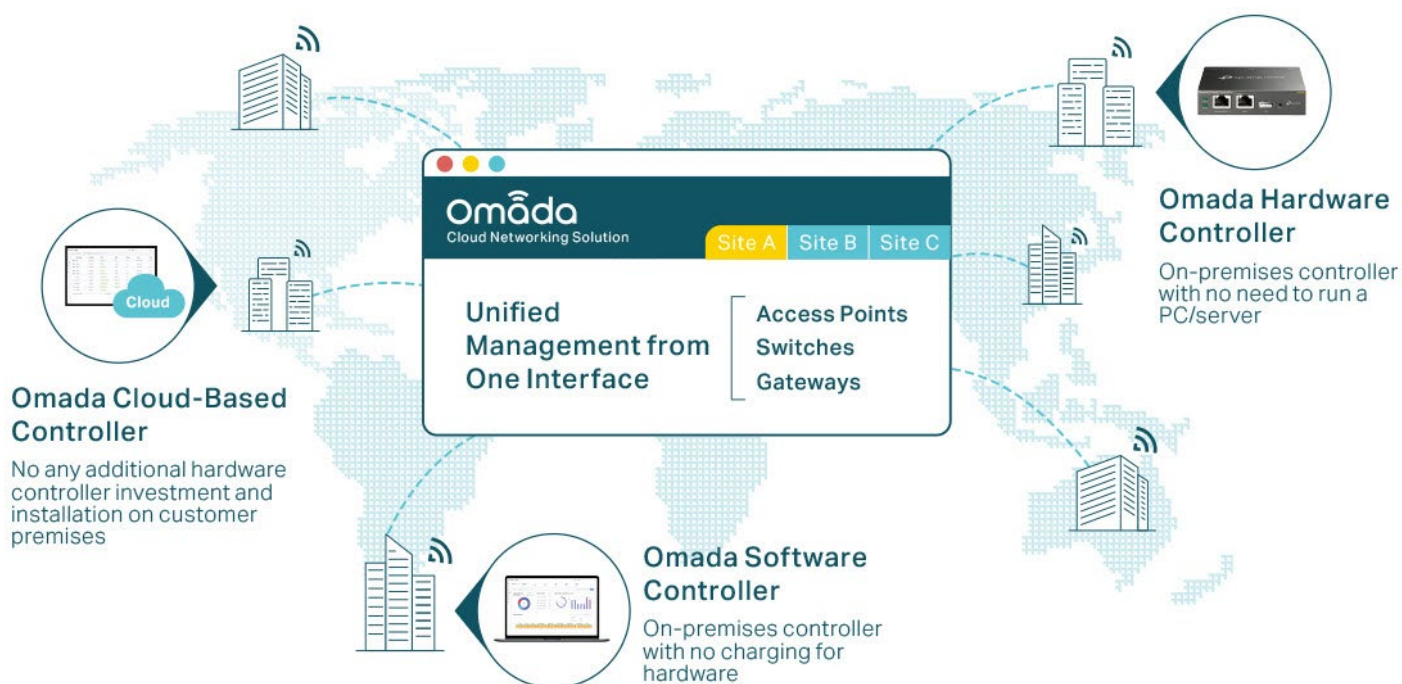## Software Defined Networking (SDN) with Cloud Access

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.

Site D

Site C

- Omada Software Controller
- Omada Hardware Controller
- Omada Cloud-Based controller

Router

Switch

AP   AP

Router

Site E

AP   AP

Site B

Site A

Router

Switch

Router

Router

Switch

Higher Efficiency

Higher Security

Higher Reliability

Cloud

Centralized Cloud Management

Zero-Touch Provisioning

AI-Driven Technology

Separate Management and User Data

99.99% SLA Availability

Auto

Auto Channel Selection and Power Adjustment

Multi-Tenant Privilege Assignment

Easy and Intelligent Monitoring

Abundant Security Functions

Reliable Connections with High-Density Clients

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Hassle-Free Centralized Cloud Management

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

Omada Cloud-Based Controller

No any additional hardware controller investment and installation on customer premises

Omada
Cloud Networking Solution

Site A | Site B | Site C

Unified Management from One Interface

Access Points
Switches
Gateways

Omada Hardware Controller

On-premises controller with no need to run a PC/server

Omada Software Controller

On-premises controller with no charging for hardware

- ✓ 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.

Cloud

Step 2
Enroll the devices through your Omada Cloud Dashboard

Step 3
Devices automatically obtain the configuration file from the cloud

Step 1
Plug in on-site and connect the Omada Powered devices to the internet

Step 4
Enjoy 100% remote provisioning and cloud management

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

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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

Overall network status

Warning

Optimization

*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.
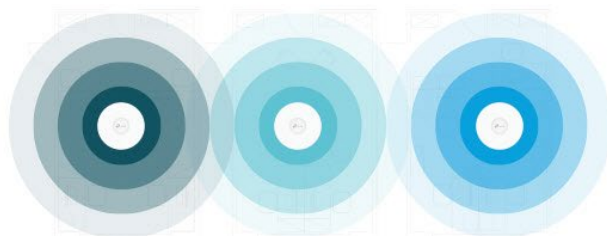
● Channel 1   ● Channel 11   ● Channel 6

Assign Different Management Roles

Multi-tenant 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.

US Branch — Manage — Mary

Brain   Headquarter   EU Branch — Manage — John
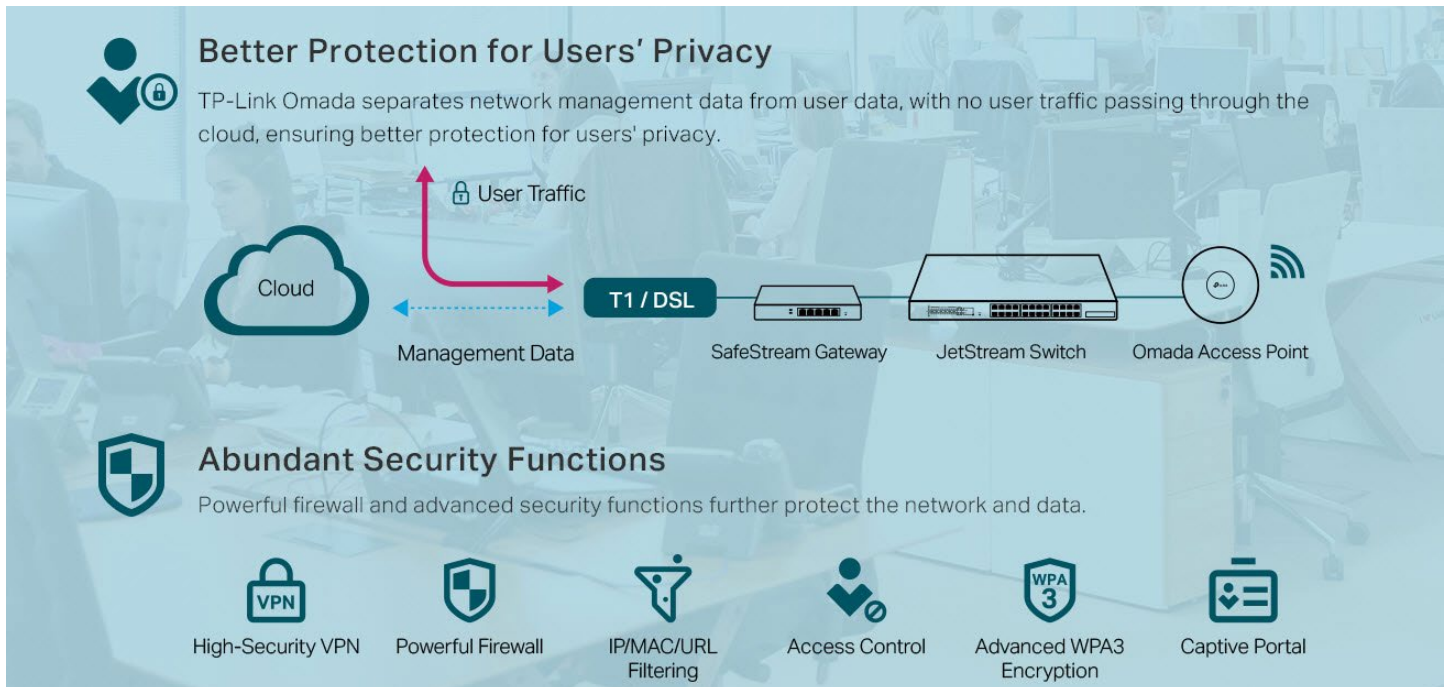
APAC Branch — Manage

View — Mike
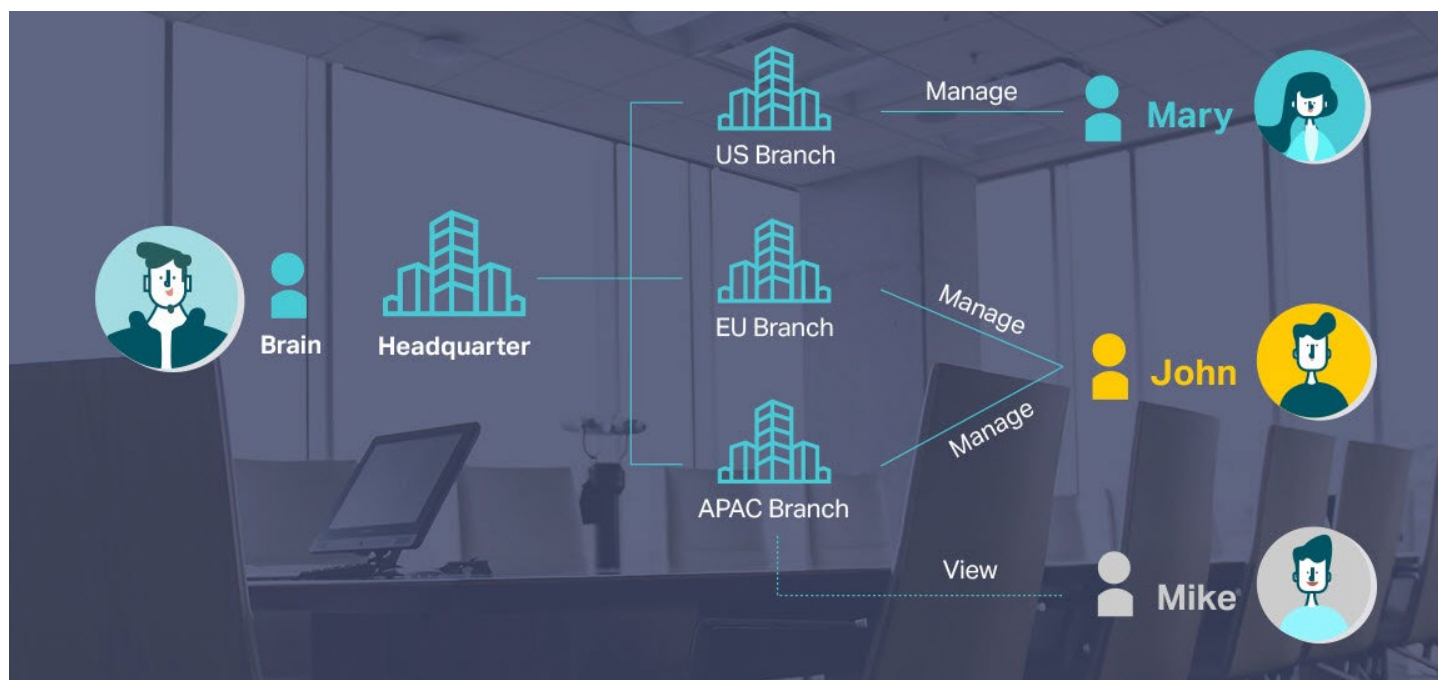
Easy and Intelligent Network Monitoring

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.

Network Status Report

Check the Traffic Distribution

Network Topology at a Glance

Comprehensive Protection for the Whole Network

Better Protection for Users' Privacy

TP-Link Omada separates network management data from user data, with no user traffic passing through the cloud, ensuring better protection for users' privacy.

User Traffic

Cloud

Management Data

T1 / DSL

SafeStream Gateway

JetStream Switch

Omada Access Point

Abundant Security Functions

Powerful firewall and advanced security functions further protect the network and data.

| High-Security VPN	Powerful Firewall	IP/MAC/URL Filtering	Access Control	Advanced WPA3 Encryption	Captive Portal

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.

99.99%
SLA Availability

24/7
Automated Fault Detection

Higher Reliability

Geographically Isolated
Back-Up Servers

Reliable Products
High Quality
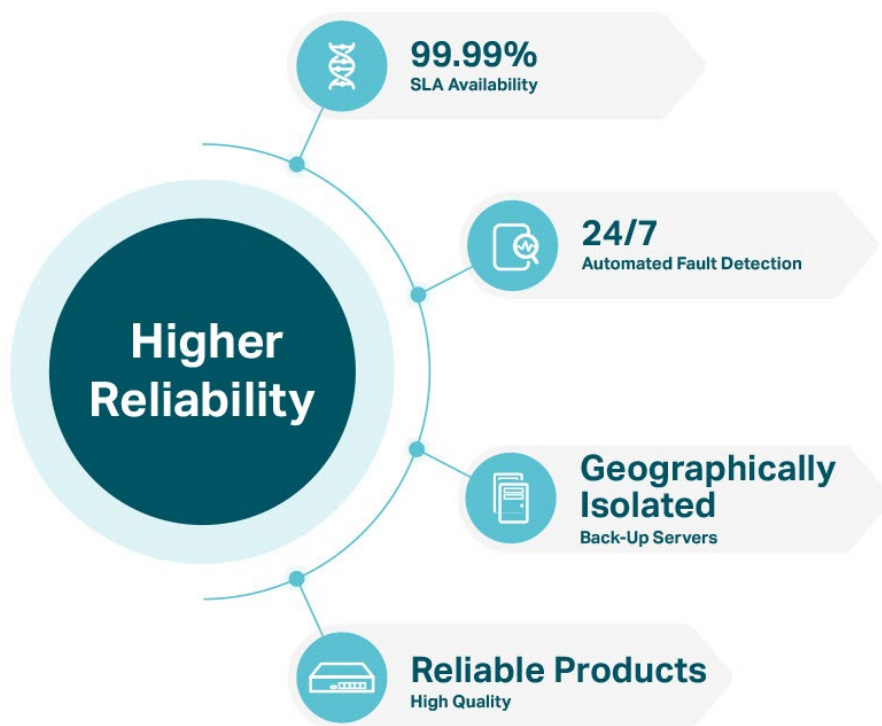
Reliable Connections Even with High-Density Clients

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.
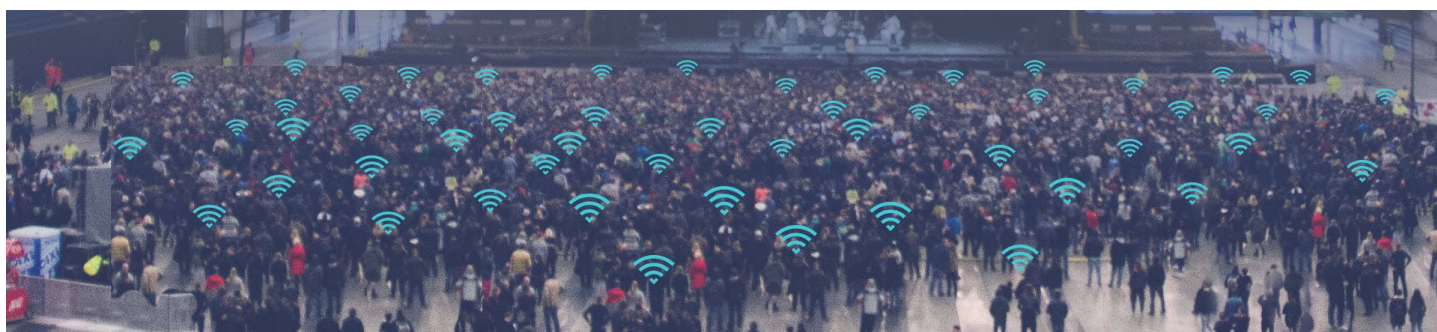
Switch Product Features

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

		TL-SG2008 V3	TL-SG2008P	TL-SG2210P V3.20
	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
PoE	PoE Standard	--	802.3af/at	802.3af/at
	PoE Ports		4, up to 30W	8, up to 30W
	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		
	Number of IP Interfaces	16	1	16
	Number of Static Routers	32 (IPv4, IPv6)	--	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/1.31A 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/h (220 V/50 Hz)	26.95 BTU/h (220 V/50 Hz) (no PD connected) 237.82 BTU/h (220 V/50 Hz) (with 62 W PD connected)	35.14 BTU/h (220 V/50 Hz) (no PD connected) 261.02 BTU/h (220 V/50 Hz) (with 61 W PD connected)
	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 ℃ to 40 ℃ (32 ℉ to 104 ℉)		
	Storage Temperature	-40 ℃ to 70 ℃ (-40 ℉ to 158 ℉)		
	Operation Humidity	10% to 90% RH, non-condensing		
	Storage Humidity	5% to 90% RH, non-condensing		
	Certification	CE, FCC, RoHS		

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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 Rate	14.88 Mpps	41.66 Mpps
	MAC Address Table	8K	
	Packet Buffer	4.1 Mbit	
	Number of IP Interfaces	1	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)	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 (110 V/60 Hz) (no PD connected) 539.35 BTU/h (110 V/60 Hz) (with 150 W PD connected)	109.53 BTU/h (110 V/60 Hz) (no PD connected) 1052.94 BTU/h (110 V/60 Hz) (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 × 8.7 × 1.7 in (440 × 220 × 44 mm)
	Fan Quantity	1	2
	Installation	Rackmount/Desktop	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-SG2008P / TL-SG2210MP	TL-SG2008 V3 / TL-SG2210P V3.20 / TL-SG2428P
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	• DHCP Relay
	  - DHCP VLAN Relay
	• DHCP L2 Relay
		• 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

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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
	• IP Source Guard
	  - 253 Entries
	  - Source IP+Source MAC
		• IPv6 Source Guard
		  - 183 Entries
		  - Source IPv6 Address+Source MAC
		• DoS Defend
		• 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

IPv6 Support	• IPv6 Dual IPv4/IPv6
	• 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
		• 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)

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