

L2/L2+ Gigabit Managed Switches Datasheet

MODELS: TL-SG3428 V2.20 / TL-SG3428MP V6 / TL-SG3452 / TL-SG3452P V3.20 / TL-SG3210 V3



Overview

TP-Link's JetStream L2/L2+ managed switches provide high performance, powerful L2 and L2+ features like static routing, enterprise-level QoS, advanced security strategies and a bundle of ISP features. The IP-MAC-Port Binding (IMPB) and Access Control List (ACL) functions protect against broadcast storm, ARP and Denial-of-Service (DoS) attacks, etc. Quality of Service (QoS, L2 to L4) provides enhanced traffic management capabilities to move your data smoother and faster. The OAM and DDM functions help facilitate network management. Moreover, the easy-to-use web management interfaces, along with CLI, SNMP and Dual Image mean faster setup and configuration with less downtime. TP-Link JetStream L2/L2+ managed Switches provide a reliable, secure solution for enterprise, campus and ISP networks.

Omada Solution



Hospitality High Quality and Full Coverage Wi-Fi



Education High-Density Wi-Fi



Retail Social Marketing for O2O



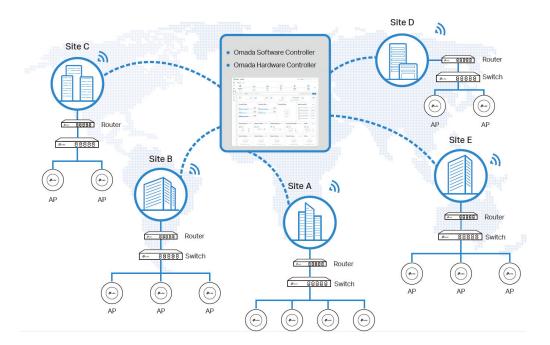
Office Wireless and Wired Connections



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.



Hassle-Free Centralized Cloud Management

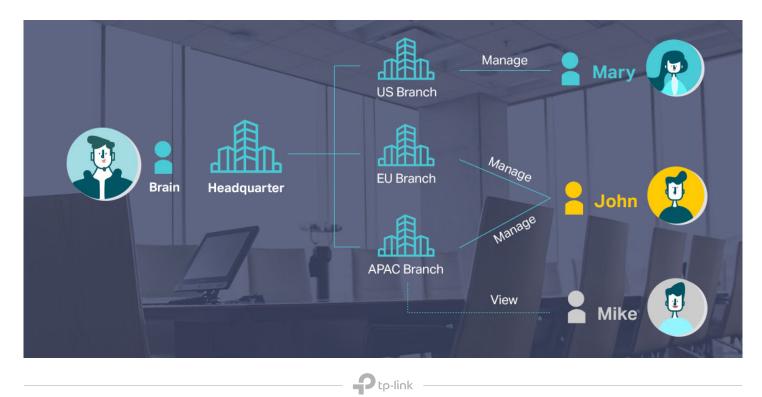
100% centralized cloud management of the whole network from different sites——all controlled from a single interface anywhere, anytime.



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.

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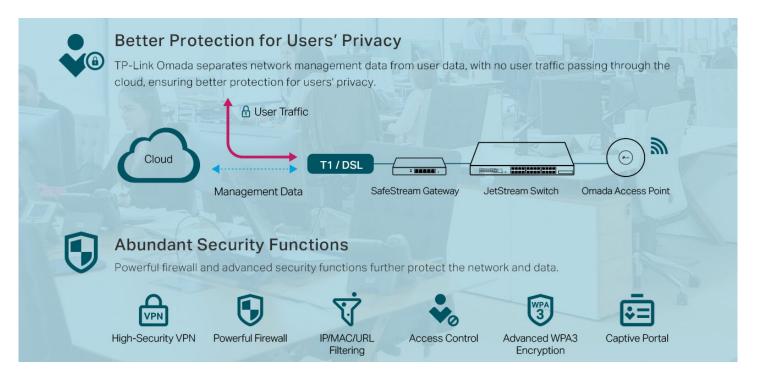


Easy and Intelligent Network Monitoring

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



Switch Product Features

Networking Security

The L2/L2+ managed switches provide IP-MAC-Port Binding, Port Security, Storm control and DHCP Snooping which protect against broadcast storms, ARP attacks, etc. It integrates some typical DoS attacks to select. You can protect these attacks more easily ever than before. In addition, the Access Control Lists (ACL, L2 to L4) feature restricts access to sensitive network resources by denying packets based on source and destination MAC address, IP address, TCP/ UDP ports and even VLAN ID. Moreover, the switch supports 802.1X authentication, which is used in conjunction with a RADIUS/TACACS+ server to require some authentication information before access to the network is allowed.

Advanced QoS features

To integrate voice, data and video service on one traffic based on a variety of means including IP or MAC address, TCP or UDP port number, etc. to ensure that voice and video are always clear, smooth and jitter free. In conjunction with the Voice VLAN the switch supporting, the voice applications will operate with much smoother performance.

Abundant L2 and L2+ features

The L2/L2+ managed switches support a complete lineup of L2 features, including 802.1Q VLAN, Port Mirroring, STP/ RSTP/MSTP, Link Aggregation Control Protocol and 802.3x Flow Control function. Any more, the switch provides advanced features for network maintenance. Such as Loopback Detection, Cable Diagnostics and IGMP Snooping. IGMP snooping ensures the switch intelligently forward the multicast stream only to the appropriate subscribers while IGMP throttling & filtering restrict each subscriber on a port level to prevent unauthorized multicast access. Moreover, L2/L2+ managed switches support L2+ feature-static routing, which is a simple way to provide segmentation of the network with internal routing through the switch and helps network traffic for more efficient use.

ISP Features

The L2/L2+ managed switches support a bundle of ISP features such as 802.3ah OAM, DDM, sFlow, QinQ, L2PT PPPoE ID Insertion, IGMP authentication etc. 802.3ah OAM and Device Link Detection Protocol (DLDP) functions improve monitor and troubleshoot Ethernet networks, help facilitate network management. DDM(Digital Diagnostic Monitoring) function helps view the status of SFP modules inserting to the Switch and to configure alarm settings, warning settings, temperature threshold settings, voltage threshold settings, bias current threshold settings, TX power threshold settings, and Rx power threshold settings.

Enterprise Level Management Features

TP-Link's new L2/L2+ managed switches are easy to use and manage. It supports various user-friendly standard management features, such as intuitive web-based Graphical User Interface (GUI), industry-standard Command Line Interface (CLI), SNMP (v1/v2c/v3), and RMON. This allows the switch to provide valuable status information and send reports on abnormal events. It also supports Dual Image and Dual Configuration to provide improved reliability and network uptime.

IPv6 Support

The L2/L2+ managed switches support various IPv6 functions such as Dual IPv4/IPv6 Stack, MLD Snooping, IPv6 ACL, DHCPv6 Snooping, IPv6 Interface, Path Maximum Transmission Unit (PMTU) Discovery and IPv6 Neighbor Discovery, which guarantees your network is ready for the Next Generation Network (NGN) without upgrading your network equipment.

Specifications

Hardware Features & Performance

Product Picture				
Model		TL-SG3428 V2.20	TL-SG3428MP V6	
	Interface	24 10/100/1000Mbps RJ45 Ports MDI/ MDI X 4 Gigabit SFP Slots		
General	Console	1 RJ45 Console Port, 1 Micro-USB Console Port		
	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 Standard	-	802.3af/at	
PoE	PoE Ports	-	24, up to 30 W	
	PoE Power Budget	-	384 W	
	Switching Capacity	56 Gbps		
	Packet Forwarding Rate	41.66 Mpps		
	MAC Address Table	16K		
	Packet Buffer	12 Mbit		
Performance	Transmission Method	Store and Forward		
	Number of IP Interfaces	16		
	Number of Static Routers	48 (IPv4, IPv6)		
	Jumbo Frame	9 KB		
	Power Supply	100-240 V AC~50/60 Hz		
	Max Power Consumption	20.6 W (220 V/50 Hz)	480.1 W (110 V/60 Hz) (with 384 W PD connected)	
	Max Heat Dissipation	70.30 BTU/hr (220 V/50 Hz)	1637.14 BTU/hr (110 V/60 Hz) (with 384 W PD connected)	
	Standby Power Consumption	10.3 W (220 V/50 Hz)	15.7 W (110V/60 Hz)	
Physical &	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)	
Environment	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		

Pro	oduct Picture			
Model		TL-SG3452	TL-SG3452P V3.20	
iniddei		48 10/100/1000Mbps RJ45 Ports MDI/ MDI X,		
General	Interface	4 Gigabit SFP Slots		
	Console	1 RJ45 Console Port, 1 Micro-USB Console Port		
	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 Standard	-	802.3af/at	
PoE	PoE Ports	-	48, up to 30 W	
	PoE Power Budget	-	384 W	
	Switching Capacity	104 Gbps		
	Packet Forwarding Rate	77.38 Mpps		
	MAC Address Table	16K		
	Packet Buffer	12 Mbit		
Performance	Transmission Method	Store and Forward		
	Number of IP Interfaces	16		
	Number of Static Routers	48 (IPv4, IPv6)		
	Jumbo Frame	9 KB		
	Power Supply	100-240 V AC~50/60 Hz		
	Max Power Consumption	34.86 W (220 V/50 Hz)	464.2 W (110 V/60 Hz) (with 384 W PD connected)	
	Max Heat Dissipation	118.94 BTU/hr (220 V/50 Hz)	1584.08 BTU/hr (110 V/60 Hz) (with 384 V PD connected)	
	Standby Power Consumption	11.65 W (220 V/50 Hz)	27.9 W (110V/60 Hz)	
Physical &	Dimensions (W x D x H)	17.3 × 8.7 × 1.7 in (440 × 220 × 44 mm)	17.3 × 13.0 × 1.7 in (440 × 330 × 44 mm)	
Environment	Fan Quantity	Fanless	3	
	Installation	Rack Mountable		
	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 F	eatures & Performar	nce		
Product Picture				
Model		TL-SG3210 V3		
General	Interface	8 10/100/1000Mbps RJ45 Ports MDI/ MDI X 2 Gigabit SFP Slots		
	Console	1 RJ45 Console Port, 1 Micro-USB Console Port		
	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 Standard	-		
PoE	PoE Ports	-		
	PoE Power Budget	-		
	Switching Capacity	20 Gbps		
	Packet Forwarding Rate	14.89 Mpps		
	MAC Address Table	8K		
	Packet Buffer	4.1 Mbit		
Performance	Transmission Method	Store and Forward		
	Number of IP Interfaces	16		
	Number of Static Routers	48 (IPv4, IPv6)		
	Jumbo Frame	9 KB		
	Power Supply	100-240 V AC~50/60 Hz		
	Max Power Consumption	6.84 W (220 V/50 Hz)		
	Max Heat Dissipation	23.33 BTU/hr (220 V/50 Hz)		
	Standby Power Consumption	1.91 W (220 V/50 Hz)		
Physical &	Dimensions (W x D x H)	11.6 × 7.1 × 1.7 in (294 × 180 × 44 mm)		
Environment	Fan Quantity	Fanless		
	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		

oftware Features	3	
Model	TL-SG3428 V2.20 / TL-SG3428MP V6 / TL-S	G3452 / TL-SG3452P V3.20 / TL-SG3210 V3
SDN Support	 Support Omada Hardware Controller (OC200/ OC300), Software Controller Automatic Device Discovery Batch Configuration Batch Firmware Upgrading 	 Intelligent Network Monitoring Abnormal Event Warnings Unified Configuration Reboot Schedule
L3 Features	 16 IPv4/IPv6 Interfaces Static Routing 48 static routes Static ARP 128 static entries 316 ARP Entries (512 ARP Entries for TL-SG3428 V2.0 & TL-SG3428MP V4.0) 	 Proxy ARP Gratuitous ARP DHCP Server DHCP Relay DHCP interface relay DHCP VLAN relay DHCP L2 Relay
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, BPDU Protect, Root Protect, Loop Protect 	 Loopback Detection Port based VLAN based Flow Control 802.3x Flow Control HOL Blocking Prevention Mirroring Port Mirroring CPU Mirroring One-to-One Many-to-One Tx/Rx/Both
L2 Multicast	 Supports 511 (IPv4, IPv6) IGMP groups IGMP Snooping IGMP v1/v2/v3 Snooping Fast Leave IGMP Snooping Querier IGMP Authentication IGMP Authentication MVR 	 MLD Snooping MLD v1/v2 Snooping Fast Leave MLD Snooping Querier Static Group Config Limited IP Multicast Multicast Filtering: 256 profiles and 16 entries per profile
VLAN	 VLAN Group Max 4K VLAN Groups 802.1Q Tagged VLAN MAC VLAN: 12 Entries for TL-SG3210 30 Entries for TL-SG3428 V2.0 & TL-SG3428MP V4.0 48 Entries for TL-SG3452 & TL-SG3452P V2.0 Protocol VLAN: Protocol Template 16, Protocol VLAN 16 	 Private VLAN GVRP VLAN VPN (QinQ) Port-Based QinQ Selective QinQ Voice VLAN
QoS	 8 priority queues 802.1p CoS/DSCP priority Queue scheduling SP (Strict Priority) WRR (Weighted Round Robin) SP+WRR Bandwidth Control Port/Flow based Rating Limiting 	 Smoother Performance Action for Flows Mirror (to supported interface) Redirect (to supported interface) Rate Limit QoS Remark

Software Features	;	
Model	TL-SG3428 V2.20 / TL-SG3428MP V6 / TL-S	G3452 / TL-SG3452P V3.20 / TL-SG3210 V3
ACL	 MAC ACL Source MAC Destination MAC VLAN ID User Priority Ether Type IP ACL Source IP Destination IP Fragment IP Protocol TCP Flag 	 TCP/UDP Port DSCP/IP TOS User Priority Combined ACL IPv6 ACL Policy Mirroring Redirect Rate Limit QoS Remark ACL apply to Port/VLAN Time-based ACL
Security	 IP-MAC-Port Binding -512 Entries DHCP Snooping ARP Inspection IPv4 Source Guard: 100 Entries IPv6-MAC-Port Binding -512 Entries DHCPv6 Snooping ND Detection ND Snooping IPv6 Source Guard: 100 Entries DoS Defend DHCP Filter Static/Dynamic Port Security Up to 64 MAC addresses per port 	 Broadcast/Multicast/Unicast Storm Control kbps/ratio/pps control mode 802.1X Port base authentication Mac base authentication VLAN Assignment MAB Guest VLAN Support RADIUS authentication and accountability AAA (including TACACS+) 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
ISP Features	 802.3ah Ethernet Link OAM (except TL-SG3452) L2PT (Layer 2 Protocol Tunneling) DDM (for TL-SG3428 V2.0 & TL-SG3428MP V4.0 & TL-SG3210) 	 Device Link Detect Protocol (DLDP) PPPoE ID Insertion sFlow (for TL-SG3428 V2.0 & TL-SG3428MP V4.0)
Management	 Web-based GUI Command Line Interface (CLI) through consoleport, telnet SNMPv1/v2c/v3 Trap/Inform RMON (1, 2, 3, 9 groups) SDM Template DHCP/BOOTP Client 802.1ab LLDP/LLDP-MED 	 DHCP Auto Install Dual Image, Dual Configuration CPU Monitoring Cable Diagnostics EEE Password Recovery SNTP System Log
IPv6 Support	 IPv6 Dual IPv4/IPv6 Multicast Listener Discovery (MLD) Snooping IPv6 ACL IPv6 Interface Static IPv6 Routing 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
MIBs	 MIB II (RFC1213) Interface MIB (RFC2233) Ethernet Interface MIB (RFC1643) Bridge MIB (RFC1493) P/Q-Bridge MIB (RFC2674) RMON MIB (RFC2819) 	 RMON2 MIB (RFC2021) RADIUS Accounting Client MIB (RFC2620) RADIUS Authentication Client MIB (RFC2618) Remote Ping, Traceroute MIB (RFC2925) Support TP-Link Private MIB

Ordering Information

Host Switch	
Model	Description
TL-SG3428 V2.20	JetStream 24-Port Gigabit L2+ Managed Switch with 4 SFP Slots
TL-SG3428MP V6	JetStream 28-Port Gigabit L2+ Managed Switch with 24-Port PoE+
TL-SG3452	JetStream 48-Port Gigabit L2 Managed Switch with 4 SFP Slots
TL-SG3452P V3.20	JetStream 52-Port Gigabit L2+ Managed Switch with 48-Port PoE+
TL-SG3210 V3	JetStream 8-Port Gigabit L2+ Managed Switch with 2 SFP Slots

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	

RJ45 SFP/SFP+ Modules	
Model	Description
TL-SM331T	1000BASE-T RJ45 SFP Module
TL-SM5310-T	10GBASE-T RJ45 SFP+ Module

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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