TP-LINK JetStream™
24-Port Gigabit L2 Managed Switch with 4 SFP Slots

TL-SG5428

◥ Overview

Designed for workgroups and departments, TL-SG5428 from TP-LINK provides full set of layer 2 management features. It delivers maximum throughput where you need it — to high-performance workgroups at the edge of the network, or as a backbone for Gigabit Ethernet switches and high-speed servers in small networks. Moreover, TL-SG5428 switch also comes equipped with 4 SFP slots, giving you greater network flexibility.

This TP-LINK L2 managed switch has robust security and management features. An advanced Access Control List (ACL, L2 to L4) and the TP-LINK strong safeguard provide security coverage from core to edge and 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. Anymore, the easy-to-use web management interfaces, along with CLI, SNMP and RMON, mean faster setup and configuration with less downtime. For workgroup and departments requiring cost-sensitive Layer 2 Switch, and additional Gigabit capability, TP-LINK L2 fully managed Switch TL-SG5428 can provide you the ideal access-edge solution.

Layer 2 Features

- Link Aggregation Control Protocol (LACP)
- 4K VLAN
- GVRP (GARP VLAN Registration Protocol)
- STP/RSTP/MSTP
- IGMP Snooping
- LLDP (LLDP-MED)

Quality of Service

- 4 priority queues
- Support IEEE 802.1P
- DSCP QoS
- Rate limit

Security Strategies

- IP-MAC-Port-VID Binding
- Access Control List (L2~L4 ACL)
- 802.1x and RADIUS Authentication
- Support DoS defend
- Port Security
- SSL and SSH encryptions

Management

- Web-based GUI
- Command Line Interface
- SNMP v1/v2c/v3
- RMON (1, 2, 3, 9 group)
- IP Clustering

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Global technical support

- Details:http://www.tp-link.com/ support/Localesupport.asp
- German/Austrian/Swiss users are not included

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High Switching Capacity

TP-LINK's L2 managed switch TL-SG5428 provides non-blocking switching solutions for gigabit connections and switching capacity with a non-blocking aggregated bandwidth of 56Gbps. It provides 24 gigabit ports and 4 SFP slots. With this high switching capacity, TL-SG5428 can markedly enhance your network throughput.

Virtual Stackable

IP Clustering allows up to 32 TL-SG5428 switches to be managed by a single IP, regardless of geographical locations. With all units identified by a single IP address, the stack could be configured, monitored, maintained as a single object.

Comprehensive Security Strategy

Access Control Lists (ACL, L2 to L4) restrict access to sensitive network resources by denying packets based on source and destination MAC address, IP address, TCP/UDP ports and even VLAN ID. This is done by hardware, so switching performance would not be compromised. Moreover, the TL-SG5428 switch supports 802.1X authentication, which is used in conjunction with a RADIUS server to require some authentication information before access to the network is allowed. And more, it supports Guest VLAN to enable the non-802.1X clients to access the specific network resource. In addition, IP-MAC-Port-VID Binding, Port Security, Storm control, DHCP Snooping and IP Source Guard support can protect against broadcast storms, ARP and Denial-of-Service(DoS) attacks, etc. Regarding to the DoS defending, TL-SG5428 provides you some typical DoS attacks to select. You can protect these attacks more easily ever than before. TL-SG5428 will provide you robust security to the network.

Enterprise Level Manageability and Resiliency

TL-SG5428 supports various user-friendly standard management features, such as intuitive web-based Graphical User Interface (GUI) or industry-standard Command Line Interface(CLI), either administration traffic can be protected through SSL or SSH encryptions. SNMP (v1/2/3) and RMON support enables the switch to be polled for valuable status information and send traps on abnormal events. This sharing of vital management information saves time and money. With link aggregation, spanning tree protocol (STP/RSTP/MSTP) and virtual stack, a highly intelligent and scalable topology could be established, fulfilling the enterprise customers´ requirement of building a unified, resilient network.

Optimized Voice and Video Applications

To integrate voice, data and video service on one network, TL-SG5428 applies rich QoS policies. Administrator can designate the priority of the traffic based on a variety of means including IP or MAC address, TCP or UDP port number, etc, so 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. For other multimedia-on-demand application such as IPTV, TL-SG5428 provides advanced features for easy stream management. For example, 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.

◼ Specifications

Hardware Features & Performance

Product Picture		
Model		TL-SG5428
Hardware Features		
Connector	10/100/1000Mbps RJ45 Ports	24
	Gigabit SFP slots	4
	Console Port	1
Power Supply		100-240VAC, 50/60Hz
Fan Quantity		0
Certifications		CE, FCC
Dimensions (W × D × H)		17.3 × 10.2 × 1.7 in. (440 × 260 × 44 mm)
		19-inch Rack mount Steel Case, 1U Height
Environment		Operating Temperature: 0°C~40°C (32°F~104°F), Storage Temperature: -40°C~70°C (-40°F~158°F) Operating Humidity: 10%~90% non-condensing, Storage Humidity: 5%~90% non-condensing
Performance		
Switch Capacity		56Gbps
Forwarding Rate		41.7Mpps
Mac Address Table		8k
Jumbo Frame		10KB

Software Features

L2 Switching Features

- **Link Aggregation**
  - Support static link aggregation
  - Support 802.3ad LACP
  - Up to 14 aggregation groups, containing 8 ports per group
- **Spanning Tree Protocol(STP)**
  - IEEE 802.1D Spanning Tree Protocol
  - IEEE 802.1s Multiple Spanning Tree Protocol
  - IEEE 802.1w Rapid Spanning Tree Protocol
  - STP Security: Loop back detection, TC Protect, BPDU Filter/Protect, Root Protect

- **Multicast**
  - Support IGMP Snooping V1/V2/V3, up to 256 groups
  - Support multicast VLANs, IGMP Immediate Leave, Unknown IGMP Throttling, IGMP Filtering, Static Multicast IP
- **VLAN**
  - Support IEEE802.1Q with 4K VLANs simultaneously (out of 4K VIDs)
  - Support Port VLAN, Protocol VLAN, and Private VLAN
  - Support GARP/GVRP feature
- **IEEE 802.3x flow control for Full Duplex mode and**
- **backpressure for Half Duplex mode LLDP (LLDP-MED)**

Quality of Service (QoS)

- **Support 802.1p CoS/DSCP priority**
- **Support 4 priority queues**
- **Queue scheduling: SP, WRR, SP+WRR**
- **Port/Flow- based Rate Limiting**
- **Voice VLAN assure voice applications much smoother performance**

Advanced Security Strategies

- **IP-MAC-Port-VID Binding**
- **Static/Dynamic Port Security (MAC-based)**
- **DoS defend feature**
- **Dynamic ARP Inspection**
- **802.1x authentication**
  - Support 802.1x port/MAC based authentication
  - Support Radius authentication and accountability
  - Guest VLAN
- **Access Control List (ACL)**
  - L2~L4 package filtering based on source and destination MAC address, IP address, TCP/UDP ports, 802.1p, DSCP, protocol and VLAN ID
  - Time based ACL
- **Support Broadcast, Multicast and Unknown unicast Storm Control**
- **Secure web management through HTTPS and SSLv2/v3/TLSv1**
- **Secure remote command line interface(CLI) management with SSH v1/V2**

Management

- **Support Web-based GUI management mode**
- **Support Command Line Interface(CLI) through console port, telnet management mode**
- **SNMP v1/v2c/v3**
- **RMON (1, 2, 3, 9 groups)**
- **DHCP/BOOTP Client**
- **DHCP Snooping**
- **DHCP Option 82**

- **CPU Monitoring**
- **Port Mirroring (Many to One)**
- **Cable Diagnostics feature**
- **Ping/Tracert feature**
- **SNTP**
- **Integrated NDP/NTDP feature**
- **System Log**

Ethernet Protocols

- **IEEE 802.3i 10BASE-T**
- **IEEE 802.3u 100BASE-TX/FX**
- **IEEE 802.3ab 1000BASE-T**
- **IEEE 802.3z 1000BASE-X**
- **IEEE 802.3av GVRP**
- **IEEE 802.3ad Link Aggregation**
- **IEEE 802.3x Flow control**
- **IEEE 802.1p QoS**
- **IEEE 802.1q VLANs / VLAN tagging**
- **IEEE 802.1v Protocol VLAN**
- **IEEE 802.1d Spanning Tree Protocol (STP)**
- **IEEE 802.1s Multiple Spanning Tree (MSTP)**
- **IEEE 802.1w Rapid Spanning Tree (RSTP)**
- **IEEE 802.1x Network Login Security**

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 MIBs**

◪ Ordering Information

Host Switch	
Product Model	**Description**
TL-SG5428	JetStream™ 24-Port Gigabit L2 Managed Switch with 4 SFP Slots
SFP Modules	
Product Model	**Description**
TL-SM311LS	Gigabit SFP module, Single-mode, LC interface, Up to 10km 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:1550nm/RX:1310nm, 10km
TL-SM321B	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX:1310nm/RX:1550nm, 10km
Media Converter	
Product Model	**Description**
MC210CS	Gigabit single-mode SC SFP Transceiver, up to 15Km, chassis mountable
MC200CM	Gigabit multi-mode SC SFP Transceiver, up to 550m, chassis mountable
MC220L	Gigabit SFP slot supporting mini-GBIC modules, chassis mountable
MC1400	14-slot power supply chassis for TP-LINK Media Converter, 19-inch rack-mountable