



# TP-LINK JetStream™

## 24-Port 10/100Mbps + 4-Port Gigabit L2 Managed Switch

TL-SL5428E

### Overview

TP-LINK JetStream™ L2 managed switch TL-SL5428E provides high performance, enterprise-level QoS, advanced security strategies and rich layer 2 management features. Moreover, TL-SL5428E also come equipped with multiple combo SFP slots, expanding your network flexibly.

TL-SL5428E has robust security and management features. The IP-MAC-Port-VID Binding 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. 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 gigabit capability, TP-LINK JetStream™ L2 managed Switch TL-SL5428E provides 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

**Quality of Service**

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

**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



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



## TP-LINK JetStream™ 24-Port 10/100Mbps + 4-Port Gigabit L2 Managed Switch

### TL-SL5428E

**Secure Networking**

TP-LINK these JetStream™ 5 series switches provide IP-MAC-Port-VID Binding, Port Security, Storm control and DHCP Snooping protecting against broadcast storms, ARP attacks, etc. They integrate 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 switches support 802.1X authentication, which is used in conjunction with a RADIUS server to require some authentication information before access to the network is allowed. Guest VLAN function supports to enable the non-802.1X clients to access the specific network resource.

**Advanced QoS Features**

To integrate voice, data and video service on one network, the switches apply 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, to ensure that voice and video are always clear, smooth and jitter free. In conjunction with the Voice VLAN the switches supporting, the voice applications will operate with much smoother performance.

**Virtual Stackable**


IP clustering allows up to 32 TL-SL5428E switches to be managed by a single IP, regardless of the geographical locations. With all units identified by a single IP, the stack could be configured, monitored, maintained as a single object.

**Enterprise Level Management Features**

TP-LINK JetStream™ 5 series switches family is easy to use and manage. They support 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. In addition, integrated NDP/NTDP protocol, the switches support to be managed by the commander switch through IP clustering function more easily.

## Specifications

### Hardware Features & Performance

<b>Product Picture</b>		
<b>Model</b>	TL-SL5428E	
<b>Physical Features</b>		
<b>Connector</b>	10/100Mbps RJ45 Ports	24
	10/100/1000Mbps RJ45 Ports	4
	Combo Gigabit SFP slots	2
	Console Port	1
<b>Power Supply</b>	100-240VAC, 50/60Hz	
<b>FAN Quantity</b>	0	
<b>Certifications</b>	CE, FCC	
<b>Dimensions (W × D × H)</b>	17.3 × 10.2 × 1.7 in. (440 × 260 × 44 mm)	
	19-inch Rack mount Steel Case, 1U Height	
<b>Environment</b>	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	
<b>Performance</b>		
<b>Switch Capacity</b>	12.8Gbps	
<b>Forwarding Rate</b>	9.5Mpps	
<b>MAC Address Table</b>	8k	
<b>Packet Buffer Memory</b>	512KB	
<b>Jumbo Frame</b>	2048Bytes	

### 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, MAC-based VLAN and Private VLAN
  - Support GARP/GVRP feature
- **IEEE 802.3x flow control for Full Duplex mode and backpressure for Half Duplex mode**

## 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

<b>Host Switches</b>	
Product Model	Description
TL-SL5428E	24-Port 10/100Mbps and 4-Port Gigabit JetStream™ L2 Managed Switch with 2 Combo SFP Slots
<b>SFP Modules</b>	
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
<b>Media Converter</b>	
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