JetStream
Smart Switches Datasheet

MODEL: T1500G-8T(TL-SG2008)/TL-SG2210P/
T1500G-10MPS/T1500-28PCT(TL-SL2428P)

Highlights

- Gigabit Ethernet connections on all ports provide full speed of data transferring
- 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
- WEB/CLI managed modes, SNMP, RMON bring abundant management features
- Dual Firmware Image and Dual Configuration improves reliability and up-time of your network

Overview

TP-Link's brand new JetStream Gigabit Smart Switches provide huge upgrade comparing with previous versions. New Web UI design features better operating experience. Integrated L2 features such as 802.1Q VLAN, QoS, IGMP Snooping provide cost-effective networking solutions for small and medium-sized businesses without sacrificing enhanced usability and strong performance.

Abundant L2 Features

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 CPU Mirroring. IGMP Snooping ensures the multicast stream be forwarded intelligently to the appropriate subscribers by the switch, while IGMP Throttling & Filtering restrict each subscriber on a certain level to prevent unauthorized multicast access.

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.

IPv6 Support

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.

Enterprise Level Management Features

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 (v1/2/3). 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.

Specifications

Hardware Specifications & Performance

		T1500G-8T (TL-SG2008)	TL-SG2210P	T1500G-10MPS	T1500-28PCT (TL-SL2428P)
Product Picture					
Model		T1500G-8T (TL-SG2008)	TL-SG2210P	T1500G-10MPS	T1500-28PCT (TL-SL2428P)
General	Interfaces	8 10/100/1000 Mbps RJ45 Ports	8 10/100/1000 Mbps RJ45 Ports 2 Gigabit SFP Slots		24 10/100 Mbps RJ45 Ports, 4 10/100/1000 Mbps RJ45 Ports, 2 Combo Gigabit SFP Slots
PoE	PoE Standard	/	802.3af/at	802.3af/at	802.3af
	PoE Ports		8, up to 30 W	8, up to 30 W	24, up to 30 W
	PoE Power Budget*		58 W	116 W	192 W
Performance	Switching Capacity	16 Gbps	20 Gbps		12.8 Gbps
	Packet Forwarding Rate	11.84 Mpps	14.88 Mpps		9.52 Mpps
	MAC Address Table	8K			
	Packet Buffer	4.1 Mbit			
	Jumbo Frame	9 KB			
Physical & Environment	Power Supply	100-240 V AC, 50/60 Hz			
	Max Power Consumption	5.75 W (220 V/50 Hz)	10.5 W (220 V/50 Hz) (no PD connected) 75.3 W (220 V/50 Hz) (with 58 W PD connected)	15.61 W (220 V/50 Hz) (no PD connected) 139.52 W (220 V/50 Hz) (with 116 W PD connected)	21.7 W (220 V/50 Hz) (no PD connected) 229.73 W (110 V/60 Hz) (with 192 W PD connected)
	Max Heat Dissipation	19.62 BTU/h	35.80 BTU/h (no PD connected) 256.77 BTU/h (with 58 W PD connected)	53.26 BTU/h (no PD connected) 476.04 BTU/h (with 116 W PD connected)	74.04 BTU/h (no PD connected) 783.84 BTU/h (with 192 W PD connected)
	Dimensions (W × D × H)	209 mm*126 mm *26 mm	209 mm*126 mm *26 mm	294 mm*180 mm *44 mm	440 mm*180 mm *44 mm
	Fan Quantity	Fanless	Fanless	1	2
	Operating Temperature	0°C to 40°C (32°F to 104°F)			
	Storage Temperature	-40°C to 70°C (-40°F to 158°F)			
	Operating Humidity	10% to 90% RH, non-condensing			
	Storage Humidity	5% to 90% RH, non-condensing			
	Certification	CE, FCC			

Note:

*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.

Software Features

L2 Features	• Link Aggregation
	  - Static link aggregation
	  - Up to 8 aggregation groups and up to 8 ports
	    per group
	  - 802.3ad LACP
	• Spanning Tree Protocol
	  - 802.1D STP
	  - 802.1w RSTP
	  - 802.1s MSTP
	  - STP Security: Loop back detection, TC Protect,
	    BPDU Filter/Protect, Root Protect
		• Loopback Detection
		• Flow Control
		  - 802.3x Flow Control
		• Mirroring
		  - Port Mirroring
		  - One-to-One
		  - Many-to-One
		  - Flow-Based
		  - Ingress/Egress/Both
		  - CPU Mirroring
		• Device Link Detect Protocol (DLDP)

L2 Multicast	• 512 IPv4, IPv6 shared multicast groups
	• IGMP Snooping
	  - IGMP v1/v2/v3 Snooping
	  - Fast Leave
	  - IGMP Snooping Querier
	  - IGMP Authentication
	  - Static Group Config
		• MLD Snooping
		  - MLD v1/v2 Snooping
		  - Fast Leave
		  - MLD Snooping Querier
		  - Static Group Config
		• Multicast VLAN Registration
		• Multicast Filtering

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
		• Actions for flows
		  - Mirror (to supported interface)
		  - Redirect (to supported interface)
		  - Rate Limit
		  - QoS Remark
		• Storm Control
		  - Multiple Control Modes (kbps/ratio/pps)
		  - Broadcast/Multicast/Unknown-Unicast Control

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

Security	• AAA
	• 802.1X
	  - Port based authentication
	  - MAC (Host) based authentication
	  - Authentication Method includes PAP/EAP-MD5/
	    EAP-TLS/EAP-TTLS/EAP-PEAP
	  - 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/pps control mode
		• Port Isolation
		• Secure web management through HTTPS with
		  SSLv3/TLS1.0
		• 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

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 • System Log • 802.1ab LLDP/ LLDP-MED
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

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