TP-LINK®

24-Port Gigabit Stackable Smart Switch with 4 10GE SFP+ Slots

T1700G-28TQ Datasheet

Highlights

-True physical stacking supports up to 6 units and 40Gbps bi-directional bandwidth for high scalability and efficient redundancy

-10G SFP+ ports for stacking and/or uplink, providing support for high-bandwidth applications for congestion relief and smooth data delivery

- L2+ feature, Static Routing help 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

- IPv6 support provides dual IPv4/IPv6 stacking, MLD snooping, and IPv6 neighbor discovery

- WEB/CLI managed modes, SNMP, RMON, and Dual Image enhance management

Overview

TP-LINK's Gigabit Stackable Smart Switch, the T1700G-28TQ, is designed to help you build a network that is highly accessible, scalable, and robust. The switch is equipped with 24 10/100/100Mbps RJ-45 ports and 4 dedicated 10G SFP+ slots which can be used for uplinks and/or stacking, providing a strong interconnection between access and aggregation. It provides excellent performance, powerful L2 and L2+ features, enterprise-level QoS, and effective security strategies. Besides, with physical stacking improving performance and simplifies management, T1700G-28TQ is able to provide reliable, cost-effective and resilient networking solutions for SMBs.

Physical Stacking

Physical stacking technology connects multiple devices to form a unified system which allows multiple devices to work together and be managed as a single unit, which improves performance and simplifies management. The stack system of T1700G-28TQs supports up to 40Gbps bi-directional stacking bandwidth with built-in redundancy and auto-failover. The switch supports up to 6 units in a stack, which allows it to provide up to 144 GE ports, 12 available 10G SFP+ uplinks and 768Gbps switching capacity, offering high-density developments as well as flexibility for future network expansion need.

Abundant L2 and L2+ features

The T1700G-28TQ supports rich L2 features, including 802.1Q tag VLAN, Port Isolation, Port Mirroring, STP/RSTP/MSTP, Link Aggregation Groups, and 802.3x Flow Control function. Additionally, the switch provides advanced features for network maintenance, such as Loop Back Detection, Cable Diagnostics, and IGMP Snooping. IGMP snooping ensures that the switch can intelligently forward the multicast stream only to the appropriate subscribers, while IGMP throttling and filtering restrict each subscriber on a port level to prevent unauthorized multicast access. Besides, T1700G-28TQ supports L2+ feature static routing, which provides simple network segmentation by routing internal transmissions to make the flow of network traffic more efficient.

Secure Networking

The T1700G-28TQ supports IP-MAC-Port Binding, Port Security, Storm control, and DHCP Snooping, which help to protect the network from broadcast storms, ARP attacks, and more. The Access Control List (ACL, L2 to L4) feature restricts access to sensitive network resources by rejecting certain packets based on the MAC address, IP address, TCP/UDP ports, and VLAN ID of both the source and destination. And the switch supports 802.1X, which allows network clients to be authenticated through external Radius servers and the guest VLAN function allows non-802.1X clients to access specific network resources.

Advanced QoS features

To support voice, data, and video services on one network, the switch utilizes rich QoS policies. Administrators can prioritize traffic based on a variety of factors, including Port Priority, 802.1P Priority, and DSCP Priority, to ensure that voice and video streams are always clear and smooth.

Enterprise Level Management Features

The T1700G-28TQ is 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 (v1/2/3), and RMON. This allows the switch to provide valuable status information and send reports on abnormal events. Comprehensive IPv6 support management ensures a smooth migration to an IPv6-based network. It also supports Dual Image to provide improved reliability and network uptime.

Specifications

Hardware Features & Performance

Product Picture	
Model	T1700G-28TQ

Hardware Features

General	Standards and Protocols	IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE802.3z, IEEE 802.3ae, IEEE 802.3ad, IEEE 802.3x, IEEE 802.1d, IEEE 802.1s, IEEE 802.1w, IEEE 802.1q, IEEE 802.1x, IEEE 802.1p
	Interfaces	24 10/100/1000Mbps RJ45 Ports 4 fixed 10G SFP+ Slots
	Network Media	10BASE-T: UTP category 3, 4, 5 cable (maximum 100m) 100BASE-TX/1000Base-T: UTP category 5, 5e or above cable (maximum 100m) 1000BASE-X: MMF, SMF 10GBASE-LR 10GBASE-SR
Physical Stacking	Installable SFP+ Transceivers and Direct Attach Copper (DAC) Cables	TXM431-SR TXM432-LR TXC432-CU1M TXC432-CU3M
	Max Number of Stacking Ports Installable	2 SFP+
	Stacking Speed (Per Port)	20Gbps (Full-Duplex)
	Max Number of Units Per Stack	6
Performance	Switching Capacity	Up to 128Gbps for a standalone switch
	Packet Forwarding Rate	Up to 95.2Mpps for a standalone switch
	MAC Address Table	16K
	Packet Buffer Memory	1.5MB
	Number of IP Interfaces	16
	Number of Static Routes	32 IPv4
	Jumbo Frame	9KB
Physical & Environment	Power Supply	100-240V AC, 50/60Hz
	Maximum Power Consumption	21.8W (220V/50W)
	Dimensions (W*D*H)	17.32 * 7.1 * 1.73 in. (440 * 180 * 44 mm)
	Weight	2.8kg
	FAN Quantity	Fanless
	Operating Temperature	0℃ ~40℃ （32 ℉ ~104 ℉）
	Storage Temperature	-40℃ ~70℃ （-40 ℉ ~158 ℉）
	Operating Humidity	10%~90% RH non-condensing
	Storage Humidity	5%~90% RH non-condensing
	Certification	CE, FCC

Software Features

Stackability	· Physical Stacking
	  - Up to 6 units per stack
	  - Up to 40Gbps bi-directional bandwidth
		- Distributed Link Aggregation
		- Hot Swappable Design
		- Ring Stacking for Link Redundancy

L2+ Features	· 16 IP Interfaces
	  - Support IPv6 interface*
	  - Support IPv4 interface
	· DHCP Relay*
		· Static Routing
		  - 32 IPv4 static routes
		  - 32 IPv6 static routes*

L2 Features	· Link Aggregation
	  -static link aggregation
	  - 802.3ad LACP
	  -Up to 14 aggregation groups, containing 8 ports per group
	· 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
		  - HOL Blocking Prevention
		· Port Mirroring
		  - One-to-One
		  - Many-to-One
		  - Flow-Based
		  - Tx/Rx/Both
		· LLDP, LLDP-MED*

L2 Multicast	· 1000 IPv4, IPv6 shared IGMP groups
	· IGMP Snooping
	  - IGMP v1/v2/v3 Snooping
	  - IGMP FastLeave
	  - Multicast VLAN
	  - IGMP Snooping Querier
	  - Limited IP Multicast (256 profiles and 16 entries per profile)
	  - Static Multicast Forwarding
		· MLD Snooping
		  - MLD v1/v2 Snooping
		  - MLD Snooping Querier
		  - Fast Leave
		  - Limited IP Multicast (256 profiles and 16 entries per profile)
		  - Static Multicast Forwarding

VLAN	· VLAN Group - Max. 4K VLAN Groups · 802.1Q tag VLAN	· MAC VLAN · Protocol VLAN

Qos	· 802.1p CoS/DSCP priority
	· 8 priority queues
	· Queue scheduling
	  - SP (Strict Priority)
	  - WRR (Weighted Round Robin)
	  - SP+WRR
	· Bandwidth Control
	  - Port/Flow based Rating Limiting
		· Smoother Performance
		· Actions for flows
		  - Mirror (to supported interface)
		  - Redirect (to supported interface)
		  - Rate Limit
		  - QoS Remark
		· Voice VLAN
		· Support IPv6 QoS*

ACL	· Supports up to 300 entries
	· MAC ACL
	  - Source MAC
	  - Destination MAC
	  - VLAN ID
	  - User Priority
	  - EtherType
	· Standard IP ACL
	  - Source IP
	  - Destination IP
		· Extended IP ACL
		  - Source IP
		  - Destination IP
		  - Fragment
		  - IP Protocol
		  - TCP Flag
		  - TCP/UDP Port
		  - DSCP/IP TOS

Software Features

ACL	· Combined ACL
	  - Source MAC
	  - Destination MAC
	  - VLAN ID
	  - EtherType
		- User Priority
		- Source IP
		- Destination IP
		· ACL apply to Port/VLAN
		· Support IPv6 ACL*

Security	· AAA*
	· DHCP Snooping
	· IP-MAC-Port Binding
	· Dynamic ARP Inspection
	· Static/Dynamic Port Security
	  - Up to 64 MAC addresses per port
	· Broadcast/Multicast/Unicast Storm Control
	  - kbps/ratio/pps control mode
	· 802.1X
	  - Port based authentication
	  - MAC (Host) based authentication
		- Guest VLAN
		- Support Radius authentication and
		  accountability
		· 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
		· DoS Defend

Mangement	· Web-based GUI · Command Line Interface (CLI) through console port, telnet · SNMPv1/v2c/v3 · SNMP Trap/Inform · RMON (1, 2, 3, 9 groups) · DHCP Option 82	· CPU Monitoring · Cable Diagnostics · Access Control · SNTP · System Log · Dual Image

IPv6 Support	· IPv6 Static Routing, ACL, QoS*
	· 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

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

*These features will be released on the latest firmware.

Ordering Information

Host Switch

Product Model	Description
T1700G-28TQ	JetStream 24-Port Gigabit Stackable Smart Switch with 4 10GE SFP+ Slots

Auxiliary Products

Product Model	Description
TXM431-SR	10GBase-SR SFP+ LC Transceiver
TXM431-LR	10GBase-LR SFP+ LC Transceiver
TXC432-CU1M	1M Direct Attach SFP+ Cable
TXC432-CU3M	3M Direct Attach SFP+ Cable

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

Router

Product Model	Description
TL-ER6120	SafeStream Gigabit Dual-WAN VPN Router
TL-ER5120	Gigabit Load Balance Broadband Router

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
MC200L	Gigabit SFP slot supporting mini-GBIC modules, chassis mountable
MC1400	14-slot power supply chassis for TP-LINK Media Converter, 19-inch rack-mountable

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