

# JetStream T1700 Series Smart Switches Datasheet

MODELS: T1700G-28TQ/T1700X-16TS



## Highlights

- T1700G-28TQ is equipped with 10 G SFP+ ports for stacking and/or uplink, providing support for high-bandwidth applications for congestion relief and smooth data delivery.
- T1700G-28TQ's true physical stacking supports up to 6 units and 40 Gbps bi-directional bandwidth for high scalability and efficient redundancy.
- T1700X-16TS is equipped with twelve 10GBase-T RJ45 Ports and four 10G SFP+ Fiber Ports, providing 320 Gbps Switching Capacity.
- T1700X-16TS's 10GBase-T Technology provides a cost-effective method for migrating from current network to 10 Gigabit Ethernet by utilizing existing copper cabling and above investments.
- 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.
- L2/L3/L4 QoS and IGMP snooping optimize voice and video applications.
- 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

In a world of expanding enterprises and growing virtualization, cloud-based services and applications, like VoIP, HD streaming video, and IP surveillance, SMB networks need to evolve beyond simple reliability to provide increased scalability, higher bandwidth, and enhanced performance. TP-Link's new T1700 Series Smart Switches represent an ideal solution that meets these requirements. The series includes the T1700X-16TS Full 10-Gigabit Smart Switch and the T1700G-28TQ Gigabit Stackable Smart Switch with 4 10G SFP+ Slots, which both provide high levels of performance, scalability, and cost-effectiveness.

## Abundant L2 and L2+ Features

TP-Link's new T1700 Series Smart Switches support rich L2 features, including 802.1Q 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 Loopback 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, TP-Link's new T1700 Series Smart Switches support L2+ feature static routing, which provides simple network segmentation by routing internal transmissions to make the flow of network traffic more efficient.

## 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. In conjunction with the Voice VLAN the switch supports, the voice applications will operate with much smoother performance.

## Secure Networking



TP-Link's new T1700 Series Smart Switches support 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.

# Enterprise Level Management Features

TP-Link's new T1700 Series Smart 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 (v1/2c/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	T1700X-16TS
General	Standards and Protocols	IEEE 802.3az, IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3ae, IEEE 802.3ad, IEEE 802.3x, IEEE 802.1p, IEEE 802.1Q, IEEE 802.1X, IEEE 802.1D, IEEE 802.1s, IEEE 802.1w	IEEE 802.3ax, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3an, IEEE 802.3z, IEEE 802.3ae, IEEE 802.3aq, IEEE 802.3ad, IEEE 802.3x, IEEE 802.1p, IEEE 802.1Q, IEEE 802.1X, IEEE 802.1D, IEEE 802.1s, IEEE 802.1w, IEEE 802.1ab
	Network Media	10BASE-T 100BASE-TX 1000BASE-T 1000BASE-SX 1000BASE-LX 1000BASE-LX10 1000BASE-BX10 10GBASE-SR 10GBASE-LR SFP+ Direct Attach Cable	100BASE-TX 1000Base-T 1000BASE-SX 1000BASE-LX 1000BASE-LX10 1000BASE-BX10 10GBase-T 10GBASE-SR 10GBASE-LR SFP+ Direct Attach Cable
	Interfaces	24 10/100/1000Mbps RJ45 Ports 4 10G SFP+ Slots	12 100M/1000M/10Gbps RJ45 Ports 4 10G SFP+ Slots
Performance	Switching Capacity	128 Gbps	320 Gbps
	Packet Forwarding Rate	95.2 Mpps	238.1 Mpps
	MAC Address Table	16K	
	Packet Buffer	1.5 MB	2 MB
	Number of IP Interfaces	16	
	Number of Static Routes	48 (IPv4, IPv6)	32 (IPv4, IPv6)
	Jumbo Frame	9 KB	
Physical & Environment	Power Supply	100-240V AC, 50-60Hz	
	Max Power Consumption	21.3 W (220 V/50 Hz)	78.3 W (110 V/60 Hz)
	Max Heat Dissipation	72.68 BTU/h	267.16 BTU/h
	Dimensions (W × D × H)	17.3 × 7.1 × 1.73 in (440 × 180 × 44 mm)	17.3 × 8.9 × 1.73 in (440 × 227 × 44 mm)
	Fan Quantity	Fanless	2
	Operating Temperature	0°C-40°C (32°F-104°F)	
	Storage Temperature	-40°C-70°C (-40°F-158°F)	
	Operating Humidity	10%-90%RH, non-condensing	
	Storage Humidity	5%-90%RH, non-condensing	
Certification	CE, FCC		

## Software Features

L2+ Features	<ul style="list-style-type: none"> <li>• 16 IP Interfaces               <ul style="list-style-type: none"> <li>- Support IPv4/IPv6 interface</li> </ul> </li> <li>• Static Routing               <ul style="list-style-type: none"> <li>- 48 IPv4/IPv6 static routes (T1700G-28TQ)</li> <li>- 32 IPv4 static routes (T1700X-16TS)</li> </ul> </li> <li>• DHCP Server</li> </ul>	<ul style="list-style-type: none"> <li>• DHCP Relay               <ul style="list-style-type: none"> <li>- DHCP Interface Relay</li> <li>- DHCP VLAN Relay</li> </ul> </li> <li>• DHCP L2 Relay</li> <li>• Static ARP</li> <li>• Proxy ARP</li> <li>• Gratuitous ARP</li> </ul>
L2 Features	<ul style="list-style-type: none"> <li>• Link Aggregation               <ul style="list-style-type: none"> <li>- static link aggregation</li> <li>- 802.3ad LACP</li> <li>- Up to 14 aggregation groups and up to 8 ports per group</li> </ul> </li> <li>• Spanning Tree Protocol               <ul style="list-style-type: none"> <li>- 802.1d STP</li> <li>- 802.1w RSTP</li> <li>- 802.1s MSTP</li> <li>- STP Security: Loop protect, TC Protect, BPDU Filter/Protect, Root Protect</li> </ul> </li> <li>• Loopback Detection</li> </ul>	<ul style="list-style-type: none"> <li>• Flow Control               <ul style="list-style-type: none"> <li>- 802.3x Flow Control</li> <li>- HOL Blocking Prevention</li> </ul> </li> <li>• Mirroring               <ul style="list-style-type: none"> <li>- Port Mirroring</li> <li>- CPU Mirroring</li> <li>- One-to-One</li> <li>- Many-to-One</li> <li>- Flow-Based</li> <li>- Ingress/Egress/Both</li> </ul> </li> <li>• LLDP, LLDP-MED</li> <li>• Device Link Detect Protocol (DLDP)</li> </ul>
L2 Multicast	<ul style="list-style-type: none"> <li>• 1000 IPv4, IPv6 shared multicast groups</li> <li>• IGMP Snooping               <ul style="list-style-type: none"> <li>- IGMP v1/v2/v3 Snooping</li> <li>- IGMP Fast Leave</li> <li>- IGMP Snooping Querier</li> <li>- Static Group Config</li> </ul> </li> <li>• MLD Snooping               <ul style="list-style-type: none"> <li>- MLD v1/v2 Snooping</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- MLD Fast Leave</li> <li>- MLD Snooping Querier</li> <li>- Static Group Config</li> <li>• Limited IP Multicast (256 profiles and 16 entries per profile)</li> <li>• Multicast VLAN Registration (MVR)</li> <li>• Multicast Filtering</li> </ul>
VLAN	<ul style="list-style-type: none"> <li>• VLAN Group               <ul style="list-style-type: none"> <li>- Max. 4K VLAN Groups</li> </ul> </li> <li>• 802.1Q VLAN</li> </ul>	<ul style="list-style-type: none"> <li>• MAC VLAN</li> <li>• Protocol VLAN</li> <li>• GVRP</li> </ul>
QoS	<ul style="list-style-type: none"> <li>• 8 priority queues</li> <li>• 802.1p ToS/DSCP priority</li> <li>• Queue scheduling               <ul style="list-style-type: none"> <li>- SP (Strict Priority)</li> <li>- WRR (Weighted Round Robin)</li> <li>- SP+WRR</li> </ul> </li> <li>• Bandwidth Control               <ul style="list-style-type: none"> <li>- Port/Flow based Rating Limit</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Smoother Performance</li> <li>• Actions for flows               <ul style="list-style-type: none"> <li>- Mirror (to supported interface)</li> <li>- Redirect (to supported interface)</li> <li>- Rate Limit</li> <li>- QoS Remark</li> </ul> </li> <li>• Voice VLAN</li> <li>• IPv6 QoS</li> </ul>
ACL	<ul style="list-style-type: none"> <li>• Support up to 350 entries</li> <li>• MAC ACL               <ul style="list-style-type: none"> <li>- Source MAC</li> <li>- Destination MAC</li> <li>- VLAN ID</li> <li>- User Priority</li> <li>- Ether Type</li> </ul> </li> <li>• IP ACL               <ul style="list-style-type: none"> <li>- Source IP</li> <li>- Destination IP</li> <li>- Fragment</li> <li>- IP Protocol</li> <li>- TCP Flag</li> <li>- TCP/UDP Source Port</li> <li>- TCP/UDP Destination Port</li> <li>- DSCP/IP TOS</li> </ul> </li> <li>• Time-Range</li> </ul>	<ul style="list-style-type: none"> <li>- Time Slice</li> <li>- Week Time-Range</li> <li>- Absolute Time-Range</li> <li>- Holiday</li> <li>• Time-based ACL</li> <li>• IPv6 ACL</li> <li>• Combined ACL</li> <li>• Rule Operation               <ul style="list-style-type: none"> <li>- Permit/Deny</li> </ul> </li> <li>• Policy Action               <ul style="list-style-type: none"> <li>- Mirror</li> <li>- Rate Limit</li> <li>- Redirect</li> <li>- QoS Remark</li> </ul> </li> <li>• ACL Rules Binding               <ul style="list-style-type: none"> <li>- Port Binding</li> <li>- VLAN Binding</li> </ul> </li> </ul>

## Software Features

Security	<ul style="list-style-type: none"> <li>• AAA</li> <li>• 802.1X <ul style="list-style-type: none"> <li>- Port based authentication</li> <li>- MAC (Host) based authentication</li> <li>- VLAN Assignment</li> <li>- MAB</li> <li>- Guest VLAN</li> <li>- Support Radius authentication and accountability</li> </ul> </li> <li>• IP-MAC-Port Binding <ul style="list-style-type: none"> <li>- 512 Binding Entries</li> <li>- DHCP Snooping</li> <li>- ARP Inspection</li> <li>- IP Source Guard</li> </ul> </li> <li>• IPv6-MAC Binding <ul style="list-style-type: none"> <li>- 512 Binding Entries</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- DHCPv6 Snooping</li> <li>- ND Detection</li> <li>- IPv6 Source Guard</li> <li>• DoS Defend</li> <li>• Static/Dynamic/Permanent Port Security <ul style="list-style-type: none"> <li>- Up to 64 MAC addresses per port</li> </ul> </li> <li>• Broadcast/Multicast/Unicast Storm Control <ul style="list-style-type: none"> <li>- kbps/ratio/pps control mode</li> </ul> </li> <li>• Port Isolation</li> <li>• Secure web management through HTTPS with SSLv3/TLS1.0</li> <li>• Secure Command Line Interface (CLI) management with SSHv1/SSHv2</li> <li>• IP/Port/MAC based access control</li> </ul>
IPv6 Support	<ul style="list-style-type: none"> <li>• IPv6 Static Routing and ACL</li> <li>• IPv6 Dual IPv4/IPv6</li> <li>• IPv6 Interface</li> <li>• Multicast Listener Discovery (MLD) Snooping</li> <li>• IPv6 neighbor discovery (ND)</li> <li>• Path maximum transmission unit (MTU) discovery</li> <li>• Internet Control Message Protocol (ICMP) version 6</li> <li>• TCPv6/UDPv6</li> <li>• IPv6 applications</li> </ul>	<ul style="list-style-type: none"> <li>- DHCPv6 Client</li> <li>- Ping6</li> <li>- Tracert6</li> <li>- Telnet</li> <li>- IPv6 SNMP</li> <li>- IPv6 SSH</li> <li>- IPv6 SSL</li> <li>- Http/Https</li> <li>- IPv6 TFTP</li> </ul>
Management	<ul style="list-style-type: none"> <li>• Web-based GUI</li> <li>• Command Line Interface (CLI) through telnet</li> <li>• SNMPv1/v2c/v3</li> <li>• SNMP Trap/Inform</li> <li>• RMON (1,2,3,9 groups)</li> <li>• DHCP Option82</li> </ul>	<ul style="list-style-type: none"> <li>• CPU Monitoring</li> <li>• Cable Diagnostics</li> <li>• Access Control</li> <li>• SNTP</li> <li>• System Log</li> <li>• Dual Image</li> </ul>
MIBs	<ul style="list-style-type: none"> <li>• MIB II (RFC1213)</li> <li>• Interface MIB (RFC2233)</li> <li>• Ethernet Interface MIB (RFC1643)</li> <li>• Bridge MIB (RFC1493)</li> <li>• P/Q-Bridge MIB (RFC2674)</li> <li>• RMON MIB (RFC2819)</li> </ul>	<ul style="list-style-type: none"> <li>• RMON2 MIB (RFC2021)</li> <li>• Radius Accounting Client MIB (RFC2620)</li> <li>• Radius Authentication Client MIB (RFC2618)</li> <li>• Remote Ping, Traceroute MIB (RFC2925)</li> <li>• Support TP-Link private MIBs</li> </ul>

## Ordering Information

Host Switch	
Product Model	Description
T1700G-28TQ	JetStream 24-Port Gigabit Stackable Smart Switch with four 10GE SFP+ Slots
TT1700X-16TS	JetStream 12-Port 10GBase-T Smart Switch with four 10 G 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
Router	
Product Model	Description
TL-ER6120	SafeStream Gigabit Dual-WAN VPN Router

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