

# TP-LINK®

## JetStream 12-Port 10GBase-T Smart Switch with 4 10G SFP+ Slots

### T1700X-16TS Datasheet



#### Highlights

- Equipped with 12 10GBase-T RJ45 Ports and 4 10G SFP+ Fiber Ports, providing 320Gbps Switching Capacity
- 10GBase-T technology provides a cost-effectively network migration way from current network to 10G Ethernet leveraging 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
- Comprehensive IPv6 support for management, QoS and ACL
- WEB/CLI managed modes, SNMP, RMON enhance management
- Dual Firmware Image improves reliability and up-time of your network

#### 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 T1700X-16TS Full 10-Gigabit Smart Switch provides high levels of performance, scalability, and cost-effectiveness that SMBs require from their 10G networking solutions, representing an ideal solution that meets these requirements.

## Future Proof 10GBase-T Technology

Until recently, 10-Gigabit connectivity was available only in the expensive fiber based technology that supports high-speed access to the network backbone or data center environment.

Today, 10GBase-T Technology is becoming more common and affordable. Low-Latency, Line-Rate 10G Copper Base-T is backward compatible with Fast Ethernet and Gigabit Ethernet and can automatically negotiate between higher and lower speed connections. Most importantly, 10GBase-T provides a cost-effective method for migrating from your current network to 10G Ethernet by utilizing your existing CAT5e/CAT6 RJ-45 short connections (up to 55m) and CAT6A/CAT7 connections (up to 100m). This reduces cabling complexity and ultimately results in significant savings for customers.

## Abundant L2 and L2+ Features

The T1700X-16TS supports 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 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, T1700X-16TS 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 T1700X-16TS 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 T1700X-16TS 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		T1700X-16TS
Hardware Features		
General	Standards and Protocols	IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE802.3z, IEEE 802.3 an, 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	12 100/1000/10GBase-T RJ45 Ports 4 10G SFP+ Slots
	Network Media	100BASE-TX/1000Base-T: UTP category 5, 5e or above cable (maximum 100m) 10GBase-T: UTP CAT 5e, 6 (Maximum 55m) or above cable (Maximum 100m) 1000BASE-X: MMF, SMF 10GBASE-LR 10GBASE-SR
Performance	Switching Capacity	Up to 320Gbps
	Packet Forwarding Rate	Up to 238.1Mpps for a standalone switch
	MAC Address Table	16K
	Packet Buffer Memory	2MB
	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	76.58W
	Dimensions (W*D*H)	17.32 * 8.7 * 1.73 in. (440 * 220 * 44 mm)
	Weight	4kg
	FAN Quantity	2 Smart Fans
	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 interface</li> <li>- Support IPv6 interface*</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Static Routing <ul style="list-style-type: none"> <li>- 32 IPv4 static routes</li> <li>- 32 IPv6 static routes*</li> </ul> </li> <li>• DHCP Relay*</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, containing 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 back detection, TC Protect, BPDU Filter/Protect, Root Protect</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Loopback Detection</li> <li>• Flow Control <ul style="list-style-type: none"> <li>- 802.3x Flow Control</li> <li>- HOL Blocking Prevention</li> </ul> </li> <li>• Port Mirroring <ul style="list-style-type: none"> <li>- One-to-One</li> <li>- Many-to-One</li> <li>- Flow-Based</li> <li>- Tx/Rx/Both</li> </ul> </li> </ul>
L2 Multicast	<ul style="list-style-type: none"> <li>• 1000 IPv4, IPv6 shared IGMP groups</li> <li>• IGMP Snooping <ul style="list-style-type: none"> <li>- IGMP v1/v2/v3 Snooping</li> <li>- IGMP Fast Leave</li> <li>- Multicast VLAN</li> <li>- IGMP Snooping Querier</li> <li>- Limited IP Multicast (256 profiles and 16 entries per profile)</li> <li>- Static Multicast Forwarding</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• MLD Snooping <ul style="list-style-type: none"> <li>- MLD v1/v2 Snooping</li> <li>- MLD Snooping Querier</li> <li>- Fast Leave</li> <li>- Limited IP Multicast (256 profiles and 16 entries per profile)</li> <li>- Static Multicast Forwarding</li> </ul> </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 tag VLAN</li> </ul>	<ul style="list-style-type: none"> <li>• MAC VLAN</li> <li>• Protocol VLAN</li> <li>• Private VLAN</li> </ul>
Qos	<ul style="list-style-type: none"> <li>• 802.1p CoS/DSCP priority</li> <li>• 8 priority queues</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 Limiting</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>• Support IPv6 QoS*</li> </ul>
ACL	<ul style="list-style-type: none"> <li>• Supports up to 300 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>- EtherType</li> </ul> </li> <li>• Standard IP ACL <ul style="list-style-type: none"> <li>- Source IP</li> <li>- Destination IP</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Extended 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 Port</li> <li>- DSCP/IP TOS</li> </ul> </li> </ul>

## Software Features

ACL	<ul style="list-style-type: none"> <li>• Combined ACL <ul style="list-style-type: none"> <li>- Source MAC</li> <li>- Destination MAC</li> <li>- VLAN ID</li> <li>- EtherType</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- User Priority</li> <li>- Source IP</li> <li>- Destination IP</li> <li>• ACL apply to Port/VLAN</li> <li>• Support IPv6 ACL*</li> </ul>
Security	<ul style="list-style-type: none"> <li>• AAA*</li> <li>• DHCP Snooping</li> <li>• IP-MAC-Port Binding</li> <li>• Dynamic ARP Inspection</li> <li>• Static/Dynamic 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>• 802.1X <ul style="list-style-type: none"> <li>- Port based authentication</li> <li>- MAC (Host) based authentication</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Guest VLAN</li> <li>- Support Radius authentication and accountability</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> <li>• DoS Defend</li> </ul>
Mangement	<ul style="list-style-type: none"> <li>• Web-based GUI</li> <li>• Command Line Interface (CLI) through console port, 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>
IPv6 Support	<ul style="list-style-type: none"> <li>• IPv6 Static Routing, ACL, QoS*</li> <li>• IPv6 Dual IPv4/IPv6</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> </ul>	<ul style="list-style-type: none"> <li>• IPv6 applications <ul style="list-style-type: none"> <li>- DHCPv6 Client</li> <li>- Ping6</li> <li>- Tracert6</li> <li>- Telnet (v6)</li> <li>- IPv6 SNMP</li> <li>- IPv6 SSH</li> <li>- IPv6 SSL</li> <li>- Http/Https</li> <li>- IPv6 TFTP</li> </ul> </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>

\*These features will be released on the latest firmware.

# Ordering Information

Host Switch	
Product Model	Description
T1700X-16TS	JetStream 12-Port 10GBase-T Smart Switch with 4 10G 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
TL-ER5120	Gigabit Load Balance Broadband Router

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