



# TP-LINK JetStream

## 48-Port Gigabit Smart Switch with 4 SFP Slots

T1600G-52TS (TL-SG2452)

### ■ Overview

TP-LINK JetStream Gigabit Smart Switch T1600G-52TS is a cost-effective product solution for small and medium-sized business which provides high performance, powerful L2 and L2+ features like static routing, enterprise-level QoS and useful security strategies. Equipped with 48 gigabit RJ45 ports and 4 SFP slots, T1600G-52TS supports multiple useful features. Static Routing helps route internal traffic for more efficient use of network resources. The Storm Control feature protects against Broadcast, Multicast and Unknown unicast Storm. Quality of Service (QoS, L2 to L4) provides enhanced traffic management capabilities to move your data smoother and faster. Moreover, the easy-to-use web management interfaces, along with SNMP, RMON and Dual Image, mean faster setup and configuration with less downtime. For workgroup and departments requiring cost-sensitive L2/L2+ switch and gigabit capability, TP-LINK JetStream Gigabit Smart Switch T1600G-52TS provides you the ideal access-edge solution.

## L2 and L2+ Features

- Static Routing
- Link Aggregation Control Protocol (LACP)
- 802.1Q tag VLAN
- Port Isolation
- STP/RSTP/MSTP
- IGMP Snooping

## Quality of Service

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

## Security Strategies

- Access Control List (L2~L4 ACL)
- Port Security
- Storm Control
- SSL and SSH encryptions
- 802.1x and Radius Authentication\*
- IP-MAC-Port Binding\*
- ARP Inspection\*
- Dos Defend\*

## IPv6 Support

- Dual IPv4/IPv6 Stack
- MLD Snooping
- PMTU Discovery
- IPv6 Neighbor Discovery

## Management

- Web-based GUI
- Command Line Interface
- SNMP v1/v2c/v3
- RMON (1,2,3,9 group)
- Dual Image

\* To be released.



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



# TP-LINK

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**T1600G-52TS (TL-SG2452)**

### 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.

### Abundant L2 and L2+ Features

For more application of L2 switches, T1600G-52TS supports a complete lineup of L2 features, including 802.1Q tag VLAN, Port Isolation, Port Mirroring, STP/RSTP/MSTP, Link Aggregation Group and 802.3x Flow Control function. Any more, the switches provide advanced features for network maintenance such as Loop Back Detection, Cable Diagnostics and IGMP Snooping. IGMP snooping ensures the switch intelligently forward the multicast stream only to the appropriate subscribers while IGMP throttling & filtering restrict each subscriber on a port level to prevent unauthorized multicast access. Moreover, T1600G-52TS supports L2+ feature—static routing, which is a simple way to provide segmentation of the network with internal routing through the switch and helps network traffic for more efficient use.

### IPv6 Support


T1600G-52TS supports various IPv6 functions such as Dual IPv4/IPv6 Stack, MLD Snooping, Path Maximum Transmission Unit (PMTU) Discovery and IPv6 Neighbor Discovery.

### Enterprise Level Management Features

T1600G-52TS is easy to use and manage. It supports various user-friendly standard management features, such as intuitive web-based Graphical User Interface(GUI) or SNMP (v1/2/3) and RMON support enables the switch to be polled for valuable status information and send traps on abnormal events. And it also supports Dual Image which provides for reduced down-time for the switches, when the image is being upgraded / downgraded.

## Specifications

### Hardware Features & Performance

<b>Product Picture</b>		
<b>Model</b>		T1600G-52TS (TL-SG2452)
<b>Physical Features</b>		
<b>Connector</b>	10/100/1000Mbps RJ45 Ports	48
	Gigabit SFP Ports	4
<b>Power Supply</b>		100-240VAC, 50/60Hz
<b>FAN Quantity</b>		Fanless
<b>Certifications</b>		CE, FCC
<b>Dimensions (W × D × H)</b>		17.3 x 8.7 x 1.7 in. (440 x 220 x 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>		104Gbps
<b>Forwarding Rate</b>		77.4Mpps
<b>MAC Address Table</b>		16k
<b>Package Buffer Memory</b>		1.5MB
<b>Jumbo Frame</b>		9216Bytes

### Software Features

#### L2+ Feature

##### Static Routing

- Up to 32 static route entries

#### L2 Switching Features

##### Link Aggregation

- Support 802.3ad LACP
- Support static link aggregation
- Up to 6 aggregation groups, containing 4 ports per group

##### Spanning Tree Protocol(STP)

- IEEE 802.1D Spanning Tree Protocol
- IEEE 802.1W Rapid Spanning Tree Protocol

- IEEE 802.1S Multiple 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 up to 512 VLANs simultaneously (out of 4K VLAN IDs)

**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

- Support Broadcast, Multicast and Unknown Unicast Storm Control
- Static/Dynamic Port Security (MAC-based)
- Access Control List (ACL)-L2~L4 package filtering based on source and destination MAC address, IP address, TCP/UDP ports
- SSL and SSH encryptions
- 802.1x and Radius Authentication\*
- IP-MAC-Port Binding\*
- ARP Inspection\*
- Dos Defend\*

## IPv6 Support

- Dual IPv4/IPv6 Stack
- MLD Snooping
- PMTU Discovery
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## IPv6 applications

- DHCPv6 Client
- Ping6
- Tracert6
- Telnet(v6)
- IPv6 SNMP
- IPv6 SSH
- IPv6 SSL
- Http/Https
- IPv6 TFTP

## Management

- Support Web-based GUI management mode
- Command Line Interface(CLI) through Telnet Management Mode
- SNMP v1/v2c/v3
- RMON (1, 2, 3, 9 groups)
- DHCP/BOOTP Client
- CPU Monitoring
- Port Mirroring (Many to One)
- Cable Diagnostics feature
- Ping/Tracert feature
- System Log
- Dual Image

## Ethernet Protocols

- IEEE 802.3i 10BASE-T
- IEEE 802.3u 100BASE-TX/FX
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3z 1000BASE-X
- IEEE 802.3x Flow control
- IEEE 802.1p QoS
- IEEE 802.1q VLANs / VLAN tagging
- IEEE 802.1d Spanning Tree Protocol (STP)
- IEEE 802.1w Rapid Spanning Tree (RSTP)
- IEEE 802.1s Multiple Spanning Tree (MSTP)

## 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)
- Remote Ping, Traceroute MIB (RFC2925)
- Support TP-LINK private MIBs

\* To be released.

## Ordering Information

Host Switch	
Product Model	Description
T1600G-52TS (TL-SG2452)	JetStream 48-Port Gigabit Smart Switch with 4 SFP Slots
Router	
Product Model	Description
TL-ER6120	SafeStream Gigabit Dual-WAN VPN Router
TL-ER5120	Gigabit Load Balance Broadband Router
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
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
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