

TR-S3700 Series



S3700 Gigabit Ethernet 10G Switch Series

Product Overview

Techroutes TR-S3700 Series is a new generation of aggregation 10G switches introduced by Techroutes Network (P) Limited. It is targeted at the IP MAN (metropolitan area network), campus networks and enterprise networks. It is developed on the basis of high performance hardware and TRROS - a software platform with Techroutes own independent intellectual property rights. It supports multiple services like IPv6, MPLS, VPN and network security based on L2/L3/L4 wire-speed switching service. It also supports nonstop upgrade, continuous forwarding, graceful restarting and redundancy protection.

Techroutes TR- S3700 Series has 4 models: TR-S3740, TR-S3756, TR-S3740F and TR-S3756F. It supports maximum 48 Gigabit ports and 8 10G ports.

Product Characteristics

➤ Advanced Hardware Architecture and Industry-Leading Port Intensity

- 1U box-shaped switch with 48 GE ports and 8 10GE ports with high-performance ASIC switch chip
- 64K MAC and 64K routing items.

➤ Innovative Virtual Cluster Switching Technique

- **Innovative TVSS** (Techroutes Virtual Switch System): virtualizes multiple physical devices into one. The performance, reliability and management of the virtual system are superior to the physical ones.

- **Improved Performance:** TVSS makes full use of each link in the physical devices, which avoids STP blocking the link and protects the original link to the maximum extent.
- **High Reliability:** Based on the advanced distribution mechanism and efficient cross-physical link aggregation link function, the logic control plane, service control plane and service data plane are separated. Thus, the device can support continuous layer3 routing forwarding, avoiding service interruption as a result of a single point of failure.
- **Easy Management:** TVSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.

➤ Carrier-Level High Reliability

- Based on HPS (Hitless Protection System), the key components of S3700 series such as the power module support dual back-up, hot-swap, seamless switching in the downtime without manual intervention.
- Supports STP/RSTP/MSTP, VRRP protocol, Ethernet ring protection, dual master-slave uplink protection and LACP link aggregation.
- Supports ISSU (In-Service Software Upgrade).
- Supports BFD mechanism.
- Supports Ethernet OAM mechanism, 802.3ah, 802.1ag and ITU-Y.1731.
- High reliability (99.999%): MTTR of S3700 Series is 50ms, meeting the requirement of the carrier-level service.

➤ Varied Service Characteristics

- Supports layer2 and layer3 multicast routing protocol, which enable the device can access to IPTV, HD video surveillance and HD video conference.
- Supports layer3 routing protocol and super-large routing table capacity, which enables the device is available in large campus networks, enterprise networks and industry networks.
- Supports layer2 and layer3 MPLS VPN.

➤ Versatile Ipv6 Solution

- Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, etc.
- Supports Ping, Trace route, Telnet, SSH, ACL.
- Supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc.
- Supports IPv6 tunnel: manual tunnel, automatic tunnel, GRE tunnel, 6to4, ISATAP
- Supports IPv4 transits to IPv6: IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel.

➤ Complete Security Mechanism

- **Equipment-Level Security:** The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP-related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions.
- **Security Authentication Mechanism:** IEEE 802.1x, Radius and Tacacs+

- **Enhanced Service Security Mechanism:** supports the plaintext or MD5 authentication of relevant routing protocol, URPF, deep inspection of hardware packet, control packet and data packet and filtering technology.

➤ Innovative Energy-Saving Design

- Intelligent power management: The power system of S3700 series supports real-time monitoring the device and the slow-start. It is also power-saving.
- Intelligent fan management system: The fan system of S3700 Series supports automatic speed regulation, which efficiently slow the fan speed and mitigate the noise.

Comply with the international standard IEEE 802.3az.

Technical Specifications

Item	S3740	S3740F	S3756	S3756F
Backplane	256 Gbps	256 Gbps	256 Gbps	256 Gbps
Forwarding	168 Mpps	168 Mpps	192 Mpps	192 Mpps
MAC table	32K/64K	32K/64K	32K/64K	32K/64K
Ports	32 Gigabit TX ports +8 10G SFP ports	24 Gigabit SFP ports+8 Gigabit TX ports+8 10G SFP ports	48 Gigabit TX ports +8 10G SFP ports	44 Gigabit SFP ports +4 Gigabit Combo (TX/SFP) Ports +8 10G SFP ports
Dimensions mm (W×D×H)	442*330*44	442*350*44	442.5*315*44	442*350*44
Power	AC: 100V-240V, 50Hz±10% DC: -36V~-72V Dual-power is optional	AC: 100V-240V, 50Hz±10% DC: -36V~-72V Dual-power is optional	AC: 100V-240V, 50Hz±10% DC: -36V~-72V Dual-power is optional	AC: 100V-240V, 50Hz±10% DC: -36V~-72V Dual-power is optional
Environment	Operating temperature/humidity: 0℃-50℃; 10%-90% non-condensing Storage temperature/humidity: -20℃-70℃; 5%-95% non-condensing			
MAC exchange	Static configuration and dynamic MAC learning MAC browsing and removal Configurable aging time of the MAC address Limited number of learnable MAC addresses MAC filtration Black-hole MAC list			
VLAN	4K VLAN			

	GVRP 1:1 VLAN mapping and N:1 VLAN mapping QinQ and flexible QinQ PVLAN
STP	802.1D (STP), 802.1W (RSTP) and 802.1S (MSTP) BPDU protection, root protection, and loopback protection
Multicast	IGMP v1/v2/v3 IGMP Snooping IGMP Fast Leave Multicast group strategy and quantity limitation Multicast flow copying over VLANs PIM-SM and PIM-DM
IPv4	Static routing, RIP v1/v2, OSPF, BGP Policy based routing Load balance by equivalent routing BFD for OSPF, BGP
IPv6	ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet IPv6 neighbor discovery Path MTU discovery MLD V1/V2 IGMP snooping IPv6 Static Routing, RIPng, OSPFv3, BGP4+ Manual tunnel, ISATAP tunnel, 6to4 tunnel
MCE	MCE
MPLS VPN	LDP protocol P/PE of MPLS VPN MPLS OAM
QoS	Flow classification based on L2~4 protocols CAR flow limit 802.1P/DSCP priority re-labeling SP, WRR, and "SP+WRR" Congestion avoidance mechanisms like Tail-Drop and WRED Flow monitoring and flow shaping

Security features	L2/L3/L4 ACL flow identification and filtration DDoS attack prevention, TCP's SYN Flood attack prevention, UDP Flood attack prevention, etc Broadcast/multicast/unknown unicast storm-control Port isolation Port security, and "IP+MAC+port" binding DHCP snooping and DHCP option 82 IEEE 802.1x authentication Radius, Tacacs+ authentication URPF Level-based command line protection
Reliability	1+1 power backup Static/LACP link aggregation EAPS VRRP GR for OSPF,BGP BFD for OSPF,BGP ISSU uninterrupted system upgrade
Management	Console, Telnet, SSH 2.0, Web SNMP v1/v2/v3 TFTP RMON sFLOW
Energy saving	IEEE 802.3az

Ordering Information

Techroutes S3700 Series

Item	Description
TR-S3740	Ethernet routing switch with 32 Gigabit TX ports +8 10G SFP ports (1 Mini USB Console port, 32 Gigabit TX ports, 8 10G/GE auto-adaptation SFP+ ports; AC 220V power; the cooling fan, 1U, standard 19 inch rack-mounted installation)
TR-S3740F	Ethernet routing switch with 24 Gigabit SFP ports+8 Gigabit TX ports+8 10G SFP ports (1 Mini USB Console port, 24 100/1000M auto-adaptation SFP ports, 8 Gigabit TX ports, 8 10G/GE auto-adaptation SFP+ ports; AC 220V power; the cooling fan, 1U, standard 19 inch rack-mounted installation)
TR-S3756	Ethernet routing switch with 48 Gigabit TX ports+8 10G SFP ports (1 Mini USB Console port, 48 Gigabit TX ports, 8 10G/GE auto-adaptation SFP+ ports; AC 220V power, the cooling fan, 1U, standard 19 inch rack-mounted installation)
TR-S3756F	Ethernet routing switch with 48 Gigabit SFP ports+8 10G SFP ports (1 Mini USB Console port, 44 100/1000M auto-adaptation SFP ports, 4 Gigabit Combo (TX/SFP) Ports, 8 10G/GE auto-adaptation SFP+ ports; AC 220V power; the cooling fan, 1U, standard 19 inch rack-mounted installation)

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