

TR-S5800 Series Switch



Data Center Switches 100G/40G

Product Overview:

TECHROUTES TR-S5800 Series is a new generation full-10GE TOR switches oriented for high-performance computing, data center and high-end campuses. TR-S5800 Series adopts the advanced hardware architecture design. TR-S5800 Series (1U height) supports up to 2.56Tbps switching capacity and 48 10GE ports + 2 40GE ports + 4 100G ports or 72 10GE ports. TR-S5800 Series supports TRVSS, TRILL, SDN and FCoE/FC. By cooperating with TR-S9500 Series, TR-S5800 Series can converge data of 15000+ 10GE servers. Developed on the basis of TRROS 6 - a software platform Techroutes with its own independent intellectual property rights, TR-S5800 Series provides high-performance L2/L3/L4 wire speed switching capacity by integrating services such as IPv6, MPLS VPN, network security, flow analysis, virtualization, with high reliable techniques including continuous forwarding, graceful restarting and loop network protection, the work efficiency of TR-S5800 Series and its maximum running time are guaranteed. TR-S5800 Series supports the "Green Touch" architecture and "Smart@CHIP". Its power consumption is lower than 200W. TR-S5800 Series has 4 models: TR-S5828, TR-S5832, TR-S5864 and TR-S5864H.

Product Features:

Rich Data Center Services

TRVSS (Techroutes Virtual Switch System) TR-S5800 Series supports TRVSS, which can virtualizes multiple physical devices into one in logic. The virtualized system is superior to the independent physical device in performance, reliability, flexibility and management. **Doubled Performance:** The virtualized system makes the best use of each link in the device and avoids the blocking of STP to the link. **High-reliability:** Based on the advanced distributed processing technique and the efficient function of cross-physical device link aggregation.

TR-S5800 Series provides with non-stop layer-3 routing forwarding and avoids single points of failure. **Flexibility:** With the function of TR-S5800 virtual clusters, the distance of virtual cluster system can expand to 80KM, breaking the geographic restriction of traditional cluster technique. **Easy Management:** The whole virtual system realizes single IP unified management and simplifies the management of network device and network topology. ***Large Layer-2 Network Technique:**

TR-S5800 Series adopts large layer-2 network technique which supports TRILL/SPB protocol. With the technique, the network structure has become simple and compress, which can access to data center large-scale servers. ***Unified Architecture:**

TR-S5800 Series supports FCoE (FC over Ethernet) technique, which solves the problem of discrepancy between LAN network and FC storage network and integrates computing, data and storage networking. ***SDN:** TR-S5800 Series supports SDN (Software Defined Network), which can realize network virtualization and centralized management.

Carrier-Level Aggregation Layer-3 Ethernet Switch Innovative TRVSS (Techroutes Virtual Switch System):

Virtualize multiple physical devices into one. The performance, reliability and management of the virtual system are superior to the physical ones;

Improved Performance: TRVSS 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:** TRVSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.

Versatile IPv6 Solution

TR-S5800 Series supports the IPv6 protocol suite, IPv6 neighbour discovery, ICMPv6, path MTU discovery, DHCPv6, etc.; TR-S5800 Series supports Ping, Traceroute, Telnet, SSH, ACL based on IPv6; TR-S5800 Series supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc.; Supports IPv6 tunnel: manual tunnel, automatic tunnel, GRE tunnel, 6to4 tunnel, ISATAP; TR-S5800 Series supports IPv4 transiting to IPv6: IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel.

Data Center Level High-reliability

TR-S5800 Series adopts HPS (Hitless Protection System). The key components of TR-S5800 Series such as the power system and the fan system support redundancy design. All system modules support hot-swap and seamless switching without need of manual intervention. TR-S5800 Series supports redundancy protection mechanism such as STP/RSTP/MSTP protocol, VRRP protocol, ring network protection, dual uplink active/standby link protection and LACP link aggregation. TR-S5800 Series supports ISSU (In-Service Software Upgrade), guaranteeing the user data non-stop forwarding when the system is upgrading. TR-S5800 Series supports BFD and realizes fault detection and service recovery in seconds through linking with layer-2 or layer-3 protocol. TR-S5800 Series has perfect Ethernet OAM, 802.3ah, 802.1ag and ITU-Y.1731 which can real time monitor the network operating state and rapidly detect and locate the malfunction. High Reliability (99.999%): MTTR of TR-S5800 Series is 50ms, meeting the requirement of the carrier-level service.

Security+

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. Perfect security authentication mechanisms: IEEE 802.1x, Radius and Tacacs+.

TR-S5800 series supports storm/multicast/unicast limit, ensuring the normal running of equipment in harsh network conditions. TR-S5800 series supports perfect ring detection mechanism, ensuring the long-term stable running of network. TR-S5800 series supports port isolation within the same VLAN, DHCP-Snooping, and IP + MAC + Port binding.

Technical Specification

Item		TR-S5832	TR-S5864	TR-S5828	TR-S5864H
Interface		4xGE TX ports, 24x10GE/GE SFP+ ports, 2x40GE QSFP+ ports	48x10GE/GE SFP+ Ports, 4x40GE QSFP+ ports	24 10GE/GE SFP+ ports, 4 100GE/40GE QSFP28 ports	48 10GE/GE SFP+ ports, 2 40GE QSFP+ ports, 4 100GE/40GE QSFP28 ports
Console		1 RJ45 console, 1 MGMT	1 RJ45 console, 1 MGMT	1 RJ45 console, 1 MGMT	1 RJ45 console, 1 MGMT
Backplane		648Gbps	1280Gbps	800Gbps	1920Gbps
Forwarding rate		486Mpps	960Mpps	600 Mpps	1440 Mpps
Chassis	Dimensions(WxDxH)(mm)	442x404x44	442x404x44	440x350x44	442x404x44
	Weight(KG)(empty)	8.5	8.6	7.1	8.8
Package	Dimensions(WxDxH)(mm)	596x468x114	616x488x140	576x448x94	616x488x140
	Weight(KG)	9.7	9.8	8.3	10
Power	no-load	81.5W	94W	45W	102W

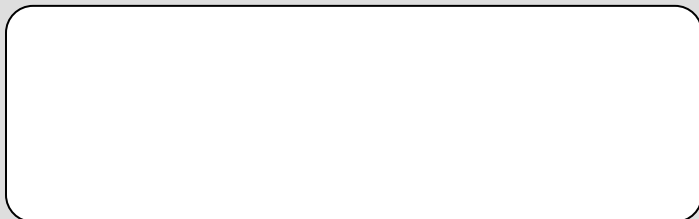
consumption	full-load	92W	131.5W	70W	147W
Power supply (hot-swap)	AC: 100V-240V,50Hz±10%	2	2	2	2
Power status monitoring		Support	Support	Support	Support
Total output BTU (1000BTU/H=293W)		313.99	448.81	238.91	501.71
Fan number		5	5	4	4
Noise@25°C (dBA)		55	55	57	57
MTBF(H)		>100,000	>100,000	>100,000	>100,000
Forwarding mode		Store-forward	Store-forward	Store-forward	Store-forward
Flash (MB)		32	32	32	64
DRAM (MB)		2048	2048	1024	512
MAC		128K	128K	32K	64K
Jumbo frame		9K	9K	9K	9K
Routing table	IPv4	16K	16K	16K	8K
	IPv6	8K	8K	12K	4K
ARP table	IPv4	16K	16K	10K	4K
	IPv6	8K	8K	10K	4K
Total SVI		1K	1K	1K	1K
VLAN		4K Active VLAN, QinQ & Selective QinQ, GVRP, Private VLAN			
Spanning Tree		802.1D (STP), 802.1W (RSTP) and 802.1S (MSTP)			
		BPDU guard, root guard and loopback guard			
Multicast		PIM-SM, PIM-DM, IGMP v1/v2/v3, IGMP Snooping, IGMP Fast Leave, MVR, IGMP filter			
IPv4		Static routing, RIP v1/v2, OSPF, BGP, PBR, ECMP			
		BFD for OSPF, BGP			
IPv6		ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet			
		IPv6 neighbor discovery, Path MTU discovery			
		MLD V1/V2, MLD snooping			
		IPv6 Static Routing, RIPng, OSPFv3, BGP4+			
MPLS		Manual tunnel, ISATAP tunnel, 6 to 4 tunnel			
		LDP protocol, Multi-VRF, MPLS L2 VPN			
QoS		CAR, HQoS, MAC/IP/TCP/UDP/VLAN/COS/DSCP/TOS based QoS, 802.1P/DSCP			
		priority re-labeling, SP, WRR, and "SP+WRR", Tail-Drop, WRED, flow monitoring and			

	traffic shaping
Security	Port isolation, Port security, and “IP+MAC+port” binding, MAC sticky DHCP
	Snooping and option 82, DAI & IP source guard, PPPoE+,
	IEEE 802.1x, Radius and Tacacs+
	L2/L3/L4 ACL flow identification and filtration Anti-attack from DDoS, TCP’s SYN
	Flood, UDP Flood, etc. Broadcast/multicast/unknown unicast storm-control
	MD5, SHA-256, RSA-1024, AES256, etc.
Reliability	Static/LACP link aggregation, Interface backup
	TRVSS virtual-stacking
	EAPS and ERPS
	URPF, LLDPISU
	VRRP
	1+1 power backup
Management	Console, Telnet, SSH v1/2, HTTP,
	HTTPS,SNMP v1/v2/v3, RMON
	TFTP, FTP, SFTP
	NTP, SPAN, RSPAN
Environment	Operating temperature/humidity: 0°C -50°C ,10%-90% non-condensing
	Storage temperature/humidity: -20°C -70°C , 5%-95% non-condensing

Product Order Information:

Item	Description
TR-S5800 Series	
TR-S5832	Ethernet routing switch with 24 10GE ports, 2 40GE ports and 4 GE ports (1 console port, 1 out-band port, 24 10GE/GE SFP+ ports, 2 40GE QSFP+ ports (each 40GE port can expand to 4 10GE ports); 2 power slots with 2 hot-swap AC220V power supplies; 5 fan slots, including 5 fans; 1U, 19-inch rack-mounted installation)
TR-S5864	Ethernet routing switch with 48 10GE ports, 4 40GE ports (1 console port, 1 out-band port, 1 USB2.0, 48 10GE/GE SFP+ ports, 4 40GE QSFP+ ports (each 40GE port can expand to 4 10GE ports); 2 power slots with 2 hot-swap AC220V power supplies; 5 fan slots, including 5 fans; 1U, 19-inch rack-mounted installation)
TR-S5828	Ethernet routing switch with 24 10GE ports, 4 100GE ports (1 console port, 1 out-band port, 24 10GE/GE SFP+ ports, 4 100GE/40GE QSFP28 ports (can expand to 4 10GE ports); 2 power slots with 2 hot-swap AC220V power supplies; 4 fan slots, including 4 fans; 1U, 19-inch rack-mounted installation)
TR-S5864H	Ethernet routing switch with 48 10GE ports, 2 40GE ports and 4 100GE ports (1 console port, 1 out-band port, 48 10GE/GE SFP+ ports, 2 40GE QSFP+ ports, 4 100GE (can expand to 4 10GE ports), 2 power slots with 2 hot-swap AC220V power supplies; 5 fan slots, including 5 fans; 1U, 19-inch rack-mounted installation)

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