Techroutes
NETWORK

DATASHEET

TSR-2800-62
Next Generation

Multi Service Switching Router

Product Overview

TECHROUTES TSR-2800-62 is the next-generation multi service switching router platform developed by Techroutes Network (P) Limited. The router platform is of high performance by integrating a 64-bit multi-core processor, a gigabit switching chip and FPGA into one solution.
TECHROUTES TSR-2800-62 includes models such as TSR-2800-62. Each model has 2 Gigabit TX/SFP combo ports and 1 Gigabit TX Port, 1 USB2.0, 4-2 HIC/HIM slots. TSR-2800-62 supports a dozen of expanded modules and interfaces of different densities such as Ethernet, E1, T1, Serial, Async, 3G, FXS, FXO, which provide diversified options for the user.

TECHROUTES TSR-2800-62 series is equipped with TRROS operating system, of which TECHROUTES has the independent intellectual property right. TECHROUTES TSR-2800-62 builds a real multi service broadband platform by providing rich software functions such as routing, switching, safety and VPN.

With its strong processing and expansion capability, rich software functions and hardware modules, TECHROUTES TSR series meets requirements of the government, financial institutions, the defense system, operators and enterprises in network construction.

Main Characteristics

High Performance

TECHROUTES TSR-2800-62 series is driven by the 64-bit dual-core processor with specialized gigabit ASIC switching chip and FPGA components, which enables the whole hardware platform to run on the high-speed Ethernet frame. The innovative design endows TSR with a super processing capability, providing a guarantee for upper-layer software functions.

Strong expansibility

With the switching core, TSR-2800-62 can expand its external interface, slot and module without subjecting to the total CPU resource. The switching chip provides sufficient internal channels of high-bandwidth for the TSR equipment, so TSR-2800-62 expansibility has far surpassed that of the traditional modularized router.

Energy-saving Advantage

TSR-2800-62 series adopt the new-generation hardware chip in consideration of energy saving while guaranteeing its strong processing capacity. Compared with the mainstream devices in the industry, power consumption of the TSR router is reduced by 15% to 20%, which both reduces the device maintenance cost and accords with the low-carbon idea. TECHROUTES TSR-2800-62 series are also equipped with the environment friendly maglev mute fan.

Varied protocols

TSR-2800-62 series supports Layer 2 link protocols including HDLC, PPP and dot1q; static routers; policy routers; and dynamic routers such as RIP, OSPF, and BGP. These routing protocols are well compatible with the devices manufactured by the mainstream vendors in the industry. Besides, TSR-2800-62 series support integration of multiple services such as routing, switching, voice, safety and wireless, which meets the requirement of complicated network construction.

New services

TSR-2800-62 supports the MPLS characteristics and the MPLS-based layer-2/layer-3 VPN technology, which realize the transparent Ethernet transmission service and the flexible enterprise interconnection. TSR-2800-62 supports IPv6 data forwarding, routing protocols and multicast routing protocols; TSR-2800-62 also supports the IPv4/IPv6 protocol stack and the interconnection technology, which makes the existing networks smoothly upgrade to IPv6.

Secure service access

TSR-2800-62 supports selective ACL firewall filtration technology, NAT, VPNs such as IPSec/L2TP/PPTP/GRE, and security technologies such as AAA, Radius, PAP/CHAP.

Traffic management policy

TSR-2800-62 supports varied queues including FIFO, PQ, CQ, CBWFQ, LLQ, WFQ, DSCP, IP Precedence and CAR. TECHROUTES TSR-2800-62 series support its self-developed traffic control and service management policy (GBSC), which can better real-time arrange and monitor your data traffic

Flexible management and maintenance

TSR-2800-62 series is convenient in managing and monitoring the network by using the in-band and out-band management tools such as Console, Telnet, SSH and SNMP.

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Technical Parameters

Model		TSR-2800-62
Chassis	Console	1
	AUX	1
	USB2.0	1
	GE-Combo	2
	GE-TX	1
Expansibility	HIC	4
	HIM	2
	Encryption	built-in
Performance/Capacity	Forwarding Rate	2Mpps
	BootROM	512K
	Flash	32MB
	SDRAM	512MB up to 1GB
	CF	4GB
Peripherals	Fan	Floating
	Voltage	100~240VAC power supply, -36~-72VDC power supply (optional)
	Power	≤80W
	Dimensions mm (W×D×H)	19-inch standard chassis, 1U
Temperature/Humidity	Operating	0℃-40℃; 10%-85% non-condensation
	Storage	-20℃-65℃; 5%-95% non-condensation
Link interconnection	LAN	ARP, ARP proxy, Gratuitous ARP
	WAN	PPP, Multilink-PPP, PPPoE(Client/Serv)
		ISDN BRI/PRI,SLIP
		Frame Relay, FR Switch
		HDLC, LLC2, SDLC, DLSW-SSP
VPN	Unicast	static route, direct route, default route
		RIPv1/v2,OSPFv2, BGPv4
		PBR
		FastSwitch, Load-Balance

	Multicast	IGMP
		PIM-DM, PIM-SM, DVMRP
	IP	ICMP, TCP, UDP, IP Option
		NAT, PAT, Port-MAP, Private-Service, ALG
		Ping, TraceRoute, Nslookup
		IP ACL, IMP filter, Fast-Access
		DHCP Client/Serv/Relay
		DNS, DNS host, DNS Proxy, DDNS(PeanutHull/DynDNS/CTC)
		Helper-Address, UDP Helper
		IP unnumber, DDR
		Keepalive, PDP(Compatible with CISCO)
		NetFlow, IP Accounting
		TFTP Client/Serv, FTP Client
		SNTP, job/schedule
		PNP
		ALIAS
		reverse telnet, VTY
	MPLS	AToM, VPLS, MP-BGP, VRF
		L2VPN, L3VPN
		MPLS TE
	IPv6	IPv6 ND, IPv6 PMTU, IPv6 FIB, IPv6 ACL, IPv6 (Approved by IPv6 PhaseII)
		IPv6 QoS
		IPv6 transition: NAT-PT, IPv6 tunnel, 4over6
		IPv6 tunnel: IPSec v6, GRE, 6to4, ISATAP
		IPv6 route: IPv6 static route, RIPng, OSPFv3, BGP4+
Reliability	Backup function	Interface backup
		Floating route backup
		E-Backup, Keepalive Ethernet remote monitoring
		VRRP, HSRP
		bandwidth based load sharing and backup
		traffic based load balancing and backup
	BFD	BFD for RIP, OSPF, BGP, MPLS and VRRP
QoS	Congestion management	FIFO, PQ, CQ, WFQ, CBWFQ
	Congestion avoidance	WRED/RED
	Traffic shaping	GTS(Generic Traffic Shaping)
	Resource reservation	RSVP
	Others	GBSC, Layer7filter
	Traffic classification	ACL
		IP Precedence
		DSCP
		MAC

		802.1P
Switching function	Switching	802.1p CoS, 802.1Q VLAN, 802.1x
		STP, RSTP, PVST
		Keepalive, port mirror, broadcast/multicast storm control
Network safety	AAA	Authentication, Authorization, Accouting
		enable, local, Radius, Tacacs+
		PAP, CHAP, MS-CHAP
	Firewall	ACL, NAT
		ASPF state detection
		SYN flood, UDP flood or ICMP flood
		ARP attack protection, ARP-SCAN and DHCP-Snooping
		Prevention of Ping of Death, Tear-drop, Land-Based, WinNuke, PingSweep, ARP attack and IP-Spoofing
	VPN	IKE, IPSec, DMVPN, EZVPN
		L2TP, PPTP, GRE, SSL VPN
		VPN nesting
VoIP	Interface	FXS/FXO/E&M
	Protocol stack	h.323, MGCP, SIP
	Codec	G.711A law, G.711U law, G.723R53, G.723R63, G.729a, G.729R8
3G wireless	Type	WCDMA, CDMA2000, TD-SCDMA
Management and maintenance	Network management	SNMP, MIB, SYSLOG, RMON, HTTP management
	Local management	CLI management and file system management
	Log-on	Console/Telnet/VTY/SSH log-on mode

Order Information

TSR chassis	
TSR2800-62	Modularized multi-service router TSR2800-62 (1 CON, 1 USB2.0, 2 GE-Combo, 1 GE-TX, built-in encryption engine, 4 HIC, 2 HIM Slots)
TSR private HIC modules	
HIC-1GE-TX	1-port 10/100/1000M Base-T electric interface card (RJ45)
HIC-1GE-TX/SFP	1-port 10/100/1000M TX/SFP combo interface card (RJ45/SFP)
HIC-2GE-TX+SFP	2-port 100/1000Me Ethernet interface card (RJ45+SFP)
DIC-8GES-TX	8-port 10/100/1000M Base-T Ethernet interface card (RJ45)
HIC-1E1B	1-port unchannelized E1-F interface card
HIC-2E1B	2-port unchannelized E1-F interface card
HIC-1T1	1-port T1 card
HIC-2T1	2-port T1 card
HIC-1TB	1-port synchronous serial interface card (V28/V35)
HIC-2TB	2-port synchronous serial interface card (V28/V35)
HIC-8ASY	8-port asynchronous serial interface card
HIC-2FXS	2-port FXS voice interface card slot (user interface)
HIC-2FXO	2-port FXO voice interface card slot (relay interface)
TSR Private HIM/DIM Module	
DIM-16FES-TX	16-port 10/100M Layer2 switching module(RJ45)
HIM-4T	4-port synchronous serial interface card (V28/V35)
HIM-4E1	4-port unchannelized E1-F interface card
HIM-4CE1	4-port channelized CE1/PRI interface card
HIM-8CE1	8-port channelized CE1/PRI interface card
HIM-16CE1	16-port channelized CE1/PRI interface card
HIM-1CE3	1-port E3 interface card
HIM-1CPOS-OC3-B	1-port channelized 155M CPOS module (SFP)
HIM-1POS-OC3-B	1-port unchannelized 155M POS module (SFP)
HIM-2POS-OC3-B	2-port unchannelized 155M POS module (SFP)

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