

## TSR-2800-10-Series



## Multiservice Routers

### Product Overview

TSR-2800-10 series is the next-generation multiservice 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.

TSR-2800-10 includes models such as TSR-2800-10C, TSR-2800-10-LTE. Each TSR model has 2 Gigabit Combo (TX/SFP) WAN port, 8 Gigabit LAN ports, 1 built-in 4G module, (4G LTE model supports TDD, FDD, 3G, 2G) 1 USB 2.0 port. TSR-2800-10 provides diversified options for the user.

TSR-2800-10 series is equipped with TRROS operating system, of which TECHROUTES has the independent intellectual property right. TECHROUTES TSR-2800-10 builds a real multiservice 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 meet requirements of the government, financial institutions, the defense system, operators and enterprises in network construction.

## Main Characteristics

### High Performance

TSR-2800-10 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.

### Energy-saving Advantage

TSR-2800-10 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-2800-10 series is also equipped with the environment friendly maglev mute fan.

### New services

TSR-2800-10-Series 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-2800-10 Series supports IPv6 data forwarding, routing protocols and multicast routing protocols; TSR-2800-10 Series also supports the IPv4/IPv6 protocol stack and the interconnection technology, which makes the existing networks smoothly upgrade to IPv6.

### Secure service access

TSR-2800-10 Series 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-2800-10 Series supports varied queues including FIFO, PQ, CQ, CBWFQ, LLQ, WFQ, DSCP, IP Precedence and CAR. TSR-2800-10 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-2800-10 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.

## Technical Specification

Model		TSR-2800-10C	TSR-2800-10-LTE
Chassis	Console	1	1
	USB2.0	1	1
	GE-WAN	2 Combo(TX/SFP)	2 Combo(TX/SFP)
	GE-LAN	8	8
	4G	N/A	4G LTE( TDD/FDD)
	RESET	1	1
Built-in Encryption	Encryption Engine	support	support
Performance/Capacity	PPS	2 Mpps	2 Mpps
	Boot ROM	512K	512K
	Flash	32MB	32MB
	RAM	512MB~1GB	512MB~1GB
Peripherals	Fan	Fan less	Fan less
	Voltage	AC Adaptor	
	Power	≤20W	
	Dimensions mm (W×D×H)	300x200x44	
Temperature/Humidity	Operating	0℃-50℃; 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	
VPN	Unicast	static route, direct route, default route	
		RIPv1/v2, OSPFv2, BGPv4	
		PBR	
		FastSwitch, Load-Balance	
	Multicast	IGMP	
		PIM-DM, PIM-SM, DVMRP	
		ICMP, TCP, UDP, IP Option	
	IP	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
		ALIAS
	MPLS	AToM, VPLS, MP-BGP, VRF
		L2VPN, L3VPN
		MPLS TE
	IPv6	IPv6 ND, IPv6 PMTU, IPv6 FIB, IPv6 ACL
		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, Accounting

		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, PM IPv6 (Proxy Mobility)
		VPN nesting
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-2800-10C	TSR-2800-10 multi-service router (1 CON, 1 USB2.0, 2 GE-Combo (TX/SFP) WAN, 8 GE-LAN; built-in encryption engine, 220AC power supply)
TSR-2800-10-LTE	TSR-2800-10 multi-service router (1 CON, 1 USB2.0, 2 GE-Combo (TX/SFP) WAN, 8 GE-LAN; built-in universal 4G-LTE module, built-in encryption engine, 220AC power supply)

### For More details:

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