



## **Intelligent Network • Fusion Bearing**

—— **ZXR10 M6000-S Intelligent Full-Service Router**

**ZTE**



Leading 5G Innovations



# ZXR10 M6000-S Intelligent Full-Service Router

## Connecting 5G and Internet of Everything

ZXR10 M6000-S series carrier-class router is ZTE's large-capacity and high-performance full-service router that is dedicated to 5G, big video/VR/AR, Internet of things and cloud computing era. It is the best choice to build national backbone network, MAN, Cloud Data Center, government & enterprise network, longitudinal network. ZXR10 M6000-S series products provide solutions of intelligent and opened SDN networks for operators and enterprise.

ZXR10 M6000-S series have following models: ZXR10 M6000-18S, ZXR10 M6000-8S Plus, ZXR10 M6000-8S, ZXR10 M6000-5S, ZXR10 M6000-3S Plus, ZXR10 M6000-3S.



ZXR10  
M6000-18S



ZXR10  
M6000-8S Plus



ZXR10  
M6000-8S



ZXR10  
M6000-5S



ZXR10  
M6000-3S Plus



ZXR10  
M6000-3S

**ZTE**



## Highlights & Benefits

### High-performance Integrated Platform embraces the 5G Era

- **Large capacity:** 4T platform , ZTE chipsets inside, offer high density of E1~400GE interfaces and flexible networking.
- **Unified service platform:** Integrate business VPN gateway, public broadband service gateway, CGN gateway , one platform offers multiple GWs to reduce investment.
- **Powerful capability for 5G bearing:** Ultra low-latency forwarding with 5us , high-precision clocks with  $\pm 5\text{ns}$ , elastic network slicing etc. to meet the requirements of 5G transport.
- **IPv6 pioneer:** support IPv4/IPv6 dual stack, DS\_Lite, NAT64, IPv6 VPN and tunnel technology to realize smooth evolution from IPv4/v6 dual stack to IPv6 single stack and protect investment .

### SDN/NFV Elastic Evolution

- **SDN opened interfaces:** OpenFlow, Netconf, BGP-LS, BGP FlowSpec, PCEP, GMPLS-UNI etc. Combined with SDN controller to build an intelligent elastic network.
- **EVPN unified control plane :** VxLAN EVPN / MPLS EVPN, simplify network and improve efficiency.
- **Segment Routing:** Centralized control by SDN controller, the intermediate node is stateless, simplify deployment with good scalability and reduce OPEX.
- **Multicast on demand:** multicast BIER( Bit Indexed Explicit Replication )combined with SDN to realize automation, self-service and intelligentize, to provide subscribers with customized and cost-effective video services.
- **Smooth evolution to vBRAS:** high-performance vBRAS-U forwarding plane , make current network fully used and protect investment , help operators to smoothly evolve to a cloud-based MAN.

### All-round protection and Easy O&M

- Innovative big video quality optimization technologies: TCP acceleration, RFC2544 detection, MDI (Media Delivery Index), provide the ultimate service experience for 4K/8K big video users.
- Carrier-class reliability: BRAS/CGN inter-chassis hot-standby technology and failure insensitive enhance user experience.
- Intelligent traffic tuning: Telemetry, BigDNA for real-time traffic analysis and prediction, realize intelligent traffic tuning.



- Efficient maintenance: ElasticNet UME for visualization network management, the visibility of network topology and service status can achieve easy and efficient maintenance.

## Specifications

**Table 1 - Physical Specifications**

Item		ZXR10 M6000-18S	ZXR10 M6000-8S Plus	ZXR10 M6000-3S Plus	ZXR10 M6000-8S	ZXR10 M6000-5S	ZXR10 M6000-3S
Shelf dimension (H×W×D)mm	DC	1819.6x442x	971.5x442	264 x442 x	619.5x442	308.3x442	175x442x6
	AC	634	×634	630	×634	×630	28
Working Voltage	DC	-48V/-60V		-48V			
	AC	110V/220V					
	HVDC	240V/336V			240V		
Output power	DC	2400W		2420W  3600W		2650W	
	AC	3200W		3000W		2675W	
Power supply redundancy		DC: 11+1	DC: 5+1	DC: 1+1	DC: 2+2	DC: 1+1	DC: 1+1
		AC: 8+8	AC: 4+4	AC:  2+2	AC: 3+3   2+2	AC: 1+1	AC: 1+1
Weight (kg)		<357kg	<194kg	<80kg	<127kg	<81kg	<53kg
Number of slots	Slots in total	28	12	5	12	7	5
	Services slots	18	8	3	8	5	3
MPU redundancy		1: 1					
SFU redundancy		7+1	3+1	NA	3+1	1+1	NA
Switch Capacity(bidirectional)		62.6Tbps	27.8Tbps	10.5Tbps	12.4Tbps	7.76Tbps	5.2Tbps
		125.7Tbps	59.3Tbps				



Item		ZXR10 M6000-18S	ZXR10 M6000-8S Plus	ZXR10 M6000-3S Plus	ZXR10 M6000-8S	ZXR10 M6000-5S	ZXR10 M6000-3S
Interface type		400GE, 200GE, 100GE, 50GE, 40GE, 25GE, 10GE, GE/FE, STM-N POS, E1/CE1			100GE, 40GE, 10GE, GE/FE, STM-N POS, E1/CE1		
Hot Swapping		MPU, SRU, SFU, PFU, PIC, power and fan modules support hot swapping					
MTBF		>400000hr					
MTTR		<0.5hr					
Reliability		>99.999%					
Heat dissipation	Fan Tray	12	2	2	5	3	2
	Fan	34	22	4	10	6	4
	Fan Speed Control	Linear Regulation	Linear Regulation	Linear Regulation	Linear Regulation	Linear Regulation	Linear Regulation
Operating Conditions	Temperature	-5 ~ 45°C					
	Humidity	5%~90%					
	Altitude	<5000m					
Storage Conditions	Temperature	-40 ~ 70°C					
	Humidity	0%~95%					
	Altitude	<5000m					

**Table 2 – Service Features**

Service features		ZXR10 M6000-S
L2 service	Ethernet	Static MAC, Dynamic MAC, SuperVLAN, Smart Group, VLAN, QinQ
	POS	HDLC, PPP
	E1/CE1	PPP, FR, ML-PPP, CES
Unicast	IPv4 unicast	ARP/ARP Proxy, Static Route, Policy Based Routing (PBR), RIPv1/v2, OSPFv2, IS-ISv4, BGP-4, ECMP
	IPv6 unicast	Static Routing for IPv6, DNS Client v4/v6, Policy Based Routing for IPv6 (PBRv6), RIPng, OSPFv3, IS-ISv6, BGP-4+, ECMPv6
Multicast	IPv4 multicast	Static Multicast, IGMP Snooping/Proxy, IGMP v1/v2/v3, PIM-DM/SM/SSM, MSDP, MBGP, Multicast VPN, controllable multicast, Policy Based Route (PBR) for Multicast, Graceful Restart for PIM, multicast load sharing



# Leading 5G Innovations



Service features		ZXR10 M6000-S
	IPv6 multicast	Static Multicast, MLDv1/v2, PIM-DM/SM/SSM, SSM-Mapping, MBGP
IPv4/IPv6 tunnel technology		6in4, 6to4, 4in6, GRE
MPLS & Traffic Engineering	MPLS VPN	VPLS, H-VPLS, VPWS, MS-PW, Inter-AS MPLS L2VPN, Inter-AS MPLS L3VPN option A/B/C, VRF Policy Routing, 6PE/6vPE, VxLAN EVPN, MPLS EVPN
	EVPN	VxLAN EVPN, MPLS EVPN, EVPNv6
	MPLS-TE	OSPF TE, IS-IS TE, RSVP-TE, DS-TE, Inter-AS/Area TE, TE FRR
5G features		Flexible network slicing: FlexE, logic router
		High-precision clock
		Low latency forwarding
BRAS		IPoEv4/v6, PPPoEv4/v6, IP Host, L2TP, VxLAN access, AAA and multi-server hot standby
		MDI (Media Delivery Index) and video service TCP acceleration
CGN		NAT444, DS-Lite, NAT64, 6RD, NAT LOG, NAT ALG and CGN hot standby
SDN		OpenFlow, Netconf, VxLAN gateway, Segment Routing, BGP-LS, BGP Flowspec, PCEP, Telemetry, GMPLS-UNI, BIER multicast
vBRAS (NFV)		vBRAS-U (vBRAS high-performance forwarding plane) and TTGW (Tunnel Termination Gateway)
High Availability (HA)		BFD, IEEE 802.1ag CFM, IEEE 802.3ah EFM, ITU-T Y.1731, SQA, RFC 2544 / Y.1564, TWAMP
		NSF for IGP/BGP/LDP/RSVP/PIM, IP FRR, LDP FRR, TE FRR for IP/VPN/VLL/VPLS, VPN FRR, PW Redundancy, VRRP
		BRAS&CGN fusion inter-chassis hot standby
Security features		ACL, uRPF, MAC address filtering, TCP Control, port mirroring/traffic mirroring, SSHv2, Netflow, broadcast storm suppression, MD5 protocol encryption, IPSec
O&M		ElasticNet UME, CLI, RMON, NTP, Console / Telnet / SSH
		SNMP v1/v2c/v3, FTP/SFTP/TFTP, Telemetry, Syslog,
		Netflow v5/v8/v9/IPFIX



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