

ZXR10 ZSR V2 Router Software Configuration Guide - Official Technical Overview & Hardware Datasheet

PRODUCT IDENTIFICATION

The ZXR10 ZSR V2 Series represents ZTE Corporation's next-generation intelligent integrated multi-service router portfolio, purpose-built for the rigorous demands of modern carrier-grade and enterprise network infrastructures. This document serves as the comprehensive software configuration guide and technical datasheet for the ZXR10 ZSR V2 platform, detailing its system architecture, software subsystems, hardware specifications, and advanced feature set. The ZXR10 ZSR V2 is an evolution of the intelligent multi-service routing concept, integrating advanced routing, switching, wireless, security, VPN, and broadband user access management functions into a single, high-performance platform . Designed for versatility, it addresses a broad spectrum of deployment scenarios, including network aggregation, secure enterprise internet access, data center connectivity, and mobile office solutions .



SYSTEM HARDWARE TOPOLOGY

The ZXR10 ZSR V2 Series features a modular chassis design across its product family, offering flexible configurations to meet varying port density and performance requirements. The portfolio includes the compact ZXR10 1800-2S for space-constrained environments, the mid-range ZXR10 2800-4 for enterprise branch offices, and the high-performance ZXR10 3800-8 for aggregation and core applications .

The cornerstone of the platform's performance is its advanced hardware architecture, which strictly separates the control plane and forwarding plane. The system is powered by a high-performance, multi-core CPU on the Main Processing and Forwarding Unit (MPFU). These cores are logically partitioned, with dedicated cores for forwarding operations and separate cores for control

plane tasks, ensuring that routing protocol processing and network management do not impact packet forwarding performance .

Key hardware features include:

- * ****Modular Architecture:**** Models like the ZXR10 2800-4 and 3800-8 feature modular slots for Flexible Interface Cards and Advanced Interface Modules, allowing for granular customization of interfaces (e.g., 10GE, GE/FE, E1/CE1, OC-3/STM-1 POS/CPOS) .
- * ****Forwarding & Control Plane Separation:**** This design philosophy ensures high availability and stability by isolating critical control functions from data traffic, preventing network disruptions .
- * ****Integrated Wireless Capability:**** Several models (e.g., ZXR10 1800-2S(W), 2800-3E(G)) are embedded with wireless modules supporting 3G/LTE, WEP, WPA/WPA2, and WAPI encryption, enabling seamless wired-wireless integration for flexible branch connectivity .

DATA & CONTROL PLANE CAPABILITIES

The ZXR10 ZSR V2 is equipped with a robust and modular software architecture designed to deliver a comprehensive suite of networking protocols and services. The software is structured into several key subsystems, ensuring scalability, reliability, and feature richness .

- * ****Routing Protocols:**** The platform supports a comprehensive array of IPv4 and IPv6 routing protocols, including:

- * ****OSPFv1/v2/v3:**** Support for Open Shortest Path First across both address families.

- * ****IS-ISv4/v6:**** Robust support for Intermediate System to Intermediate System routing.

- * ****BGP4/BGP4+:**** Full support for Border Gateway Protocol for inter-domain routing.

- * ****RIP/RIPng:**** Support for Routing Information Protocol for smaller network deployments .

- * ****MPLS & VPN:**** The ZXR10 ZSR V2 is a powerful MPLS and VPN edge platform, supporting a full suite of technologies:

- * ****MPLS:**** LDP, RSVP-TE for traffic engineering.

- * ****L2/L3 VPN:**** Comprehensive support for both Layer 2 and Layer 3 VPN services.

- * ****IPSec VPN:**** Robust encryption capabilities with support for commercial and national cryptographic algorithms, ensuring secure site-to-site and remote access connectivity.

- * ****DMVPN, GETVPN, L2TP, GRE:**** Support for a variety of VPN deployment models to suit diverse network requirements .

- * **IPv6 Transition Mechanisms:** The platform is fully equipped for the evolution to IPv6, supporting dual-stack, manual and automatic 6to4 tunnels, 6PE, and NAT-PT to facilitate a smooth migration path .

- * **Security Services:** The ZXR10 ZSR V2 provides carrier-grade security features:

- * **Stateful Firewall:** Integrated firewall capabilities for perimeter protection.

- * **Control-Plane Security:** Advanced features for classifying control-plane packets, implementing multi-level rate limiting, scheduling, and protocol whitelisting to mitigate DDOS, ARP, and other network-layer attacks .

- * **High Availability & Manageability:**

- * **Redundancy:** Support for 1+1 power supply redundancy on modular models and link backup (via VRRP, interface backup, and 3G/LTE failover) ensures high network availability .

- * **Intelligent Management:** The platform supports CLI, WEB GUI, SNMP, and NETCONF for comprehensive management and integration with SDN controllers .

TECHNICAL SPECIFICATIONS

Parameter	Specification
Form Factor	1RU, 2RU, and 3RU Chassis Options
Switching Capacity	Up to 600 kpps forwarding rate on high-end models
Power Supply	1+1 Redundant AC/DC Options
Operating Temperature	-5°C to 45°C
Key Interface Support	10GE, GE/FE, E1/CE1, OC-3/STM-1 POS/CPOS

OPERATIONAL SPECS MATRIX

The following section provides detailed hardware and environmental parameters for the ZXR10 ZSR V2 product family .

| Parameter | ZXR10 1800-2S | ZXR10 2800-4 | ZXR10 3800-8 |

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| ****Form Factor**** | 1RU Chassis | 2RU Chassis | 3RU Chassis |

| ****Dimensions (HxWxD)**** | 43.6 x 380 x 200 mm | 88.1 x 442 x 200 mm | 132.0 x 442 x 200 mm |

| ****Interface Types**** | GE/FE, E1/CE1, Sync/Async Serial | 10GE, GE/FE, E1/CE1,

Sync/Async Serial, OC-3/STM-1 POS/CPOS | 10GE, GE/FE, E1/CE1, Sync/Async

Serial, OC-3/STM-1 POS/CPOS, OC-12/STM-4 POS, OC-48/STM-16 POS |

| ****Power Supply**** | AC: 110V/220V, DC: -48V/-60V | AC: 110V/220V, DC:

-48V/-60V, HVDC: 240V | AC: 110V/220V, DC: -48V/-60V, HVDC: 240V |

| ****Operating Temperature**** | -5°C to 45°C | -5°C to 45°C | -5°C to 45°C |

| ****Operating Humidity**** | 5% to 90% | 5% to 90% | 5% to 90% |

| ****Embedded Wireless**** | Yes (on -W variant) | Yes (on -G variant) | Optional via
Module |

REGULATORY COMPLIANCE

The ZXR10 ZSR V2 Series is engineered and tested to meet stringent global regulatory and environmental standards. The platform is compliant with RoHS directives, ensuring lead-free manufacturing and minimizing environmental impact .

