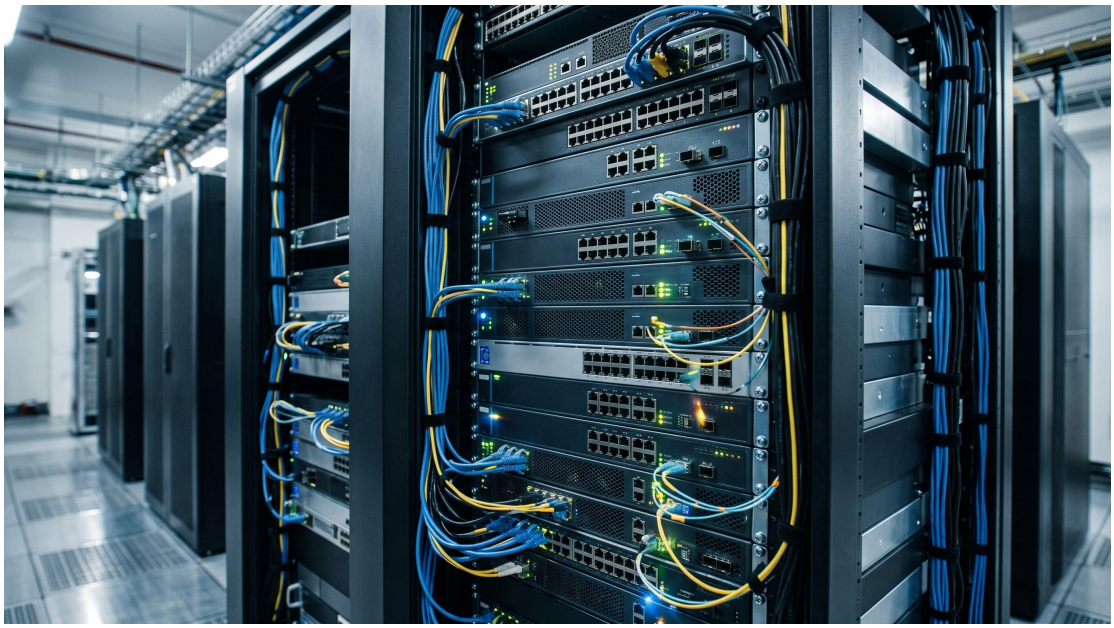
ZXR10 5960-52TD - Official Technical Overview & Hardware Datasheet

EXECUTIVE SUMMARY

The ZXR10 5960-52TD represents ZTE's next-generation high-density aggregation switch platform, purpose-engineered for data center Top-of-Rack and carrier aggregation deployments requiring line-rate packet forwarding and carrier-grade reliability. As a member of the ZXR10 5960 Series, this platform delivers 48 × 10GE SFP+ optical ports alongside 4 × 40GE QSFP+ uplink interfaces, providing a total switching capacity of 1.28 Tbps with 960 Mpps packet forwarding performance. The system occupies a compact 1RU form factor and incorporates a modular dual-power supply architecture, intelligent thermal management, and comprehensive Layer 2/Layer 3 feature set including MPLS VPN, IPv6 dual-stack, and SDN readiness.



HARDWARE ARCHITECTURE & SILICON

The ZXR10 5960-52TD hardware architecture is built around a high-performance switching ASIC optimized for non-blocking, line-rate forwarding across all physical interfaces. The platform employs a fixed-configuration port topology featuring 48 × 10GE SFP+ optical interfaces for server and downstream aggregation connectivity, complemented by 4 × 40GE QSFP+ uplink ports for spine or core layer interconnection. Each 40GE QSFP+ port supports breakout capability to 4 × 10GE, enabling flexible port density scalability without chassis expansion.

The chassis dimension measures 43.6mm (H) × 442mm (W) × 440mm (D), with a maximum weight under 9.0 kg, facilitating single-person installation in standard 19-inch racks. The front panel incorporates an expansion card slot for optional 4 × 1GE SFP, 4 × 1GE RJ45, or 4 × 10GE SFP+ modules, providing deployment flexibility for mixed-speed environments.

KEY FEATURES & ROUTING LOGIC

HIGH-DENSITY AGGREGATION CAPABILITY

- Fixed configuration: 48×10GE SFP+ + 4×40GE QSFP+ in 1RU form factor
- 40GE ports support 4×10GE breakout for granular bandwidth allocation

- Optional expansion card slot for 1GE/10GE mixed-speed interfaces

CARRIER-GRADE RELIABILITY

- Dual modular power supply: AC 1+1, DC 1+1, or mixed AC/DC 1+1 redundancy

- Dual redundant fan modules with intelligent speed adjustment (5 levels based on internal temperature)

- MC-LAG (Multi-Chassis Link Aggregation) for device-level redundancy without peer requirements

- ZESR/ZESS ring protection with <50ms switchover time

ADVANCED ROUTING & MPLS

- Full MPLS L2/L3 VPN support with LDP and LDP FRR

- MCE (Multi-VPN Instance CE) for VPN instance isolation without MPLS overhead

- IPv4/IPv6 dual-stack with RIP, OSPF, ISIS, BGP and respective v6 variants

- IPv6 Ready Phase 2 Gold Medal certification

DATA CENTER OPTIMIZATION

- VXLAN and EVPN for large-scale Layer 2 overlay networking

- TRILL for loop-free multipath Layer 2 fabric without STP

- DCB (Data Center Bridging) with PFC, ETS, and DCBX negotiation

- Front-to-back or back-to-front airflow field-selectable via fan module orientation

COMPLIANCE & STANDARDS

The ZXR10 5960-52TD complies with major international standards including IEEE 802.1Q (VLAN), 802.1ad (QinQ), 802.1w (RSTP), 802.1s (MSTP), 802.3ad (LACP), 802.3ae (10GBase-X), and 802.3ba (40GBase-X). The platform holds RoHS, WEEE, and ISO14001 environmental certifications, with lead-free manufacturing processes throughout. IPv6 Ready Phase 2 Gold certification confirms full protocol compliance for next-generation IP deployments.

TECHNICAL SPECIFICATIONS

The following specification matrix presents the verified hardware and performance parameters for the ZXR10 5960-52TD aggregation switch platform.

Parameter	**Specification**
Form Factor	1RU fixed configuration
Dimensions (H×W×D)	43.6mm × 442mm × 440mm
Weight (maximum)	≤9.0 kg

Fixed Ports	48 × 10GE SFP+ optical + 4 × 40GE QSFP+ optical
Expansion Slot	1 slot (4×1GE SFP / 4×1GE RJ45 / 4×10GE SFP+)
Switching Capacity	1.28 Tbps
Packet Forwarding Rate	960 Mpps
Power Supply	Dual modular: AC 1+1, DC 1+1, or mixed AC/DC 1+1
AC Input	100-127V / 200-240V, 50-60Hz
DC Input	-38V to -72V
HVDC Input	240V / 336V
Maximum Power Consumption	<310W
Typical Power Consumption	<191W
Fan Modules	2 × hot-swappable, redundant, intelligent speed control
Airflow Direction	Front-to-back or back-to-front (fan module selectable)
Operating Temperature	-5°C to +45°C (long-term), -5°C to +50°C (short-term)
Operating Humidity	10% to 90% (non-condensing)
MTBF	>300,000 hours
MTTR	<30 minutes

Management Ports	1×RJ45 Console, 1×Mini USB Console, 1×GE Combo MNG, 1×USB

ORDERING SKU INFORMATION

Base Platform SKU: ZXR10 5960-52TD (48×10GE SFP+ + 4×40GE QSFP+)

Expansion Options:

- 4×1GE SFP interface card

- 4×1GE RJ45 interface card

- 4×10GE SFP+ interface card

Power Module Options:

- AC power module (100-127V/200-240V, 50-60Hz)

- DC power module (-38V to -72V)

- HVDC power module (240V/336V)

Transceiver Compatibility: Standard 10GE SFP+ and 40GE QSFP+ optics per MSA specifications. 40GE ports support 4×10GE breakout cables.

