

ZXR10 8900E Series Core Switch

—Complicated Network, Simple choice

Overview

ZXR10 8900E series Core switches are the latest introduced products presented by ZTE with high capacity and performance for the core or aggregation layer of the network. This series is comprised of the following models: ZXR10 8912E, 8908E, 8905E and 8902E. ZXR10 8900E family supports L2/L3/L4 wire speed switching capability, and is mainly positioned at the core or aggregation layer of IP Metro area network, IP Backhaul & FMC network and the campus, E-government and Corporation network.

Advanced Features

Enhanced 480G Switching platform

ZXR10 8900E series is a 480G switching platform switch, and is capable of providing 320G switching capacity per slot.

It provides 48*10G, 8*40G ports per slot and is capable of seamless upgrade.

ZXR10 8900E is ready to provide 100G single interface in the future.

Multi-service Bearing features

ZXR10 8900E can provide rich Metro Ethernet features, e.g. 1588v2, Sync Ethernet, NTP, VPN QoS, MPLS TE, Multicast VPN, IPv6, FCoE, VPLS, VPWS, MPLS L3 VPN. etc.

It can be applied in many mainstream scenarios, e.g. MPLS P/PE, data center/community network/metro core, Active-FTTx, Metro E, IPTV, NGN, 2/3G, IP RAN, LTE Backhaul bearer and IPv4/IPv6 dual-stack multicast scenarios.

Environment-friendly Innovations

ZXR10 8900E supports multiple environmental-friendly innovations, including IEEE 802.3az EEE, Centralized Power management, 5 level intelligent fan system. All these environmental friendly designs can greatly help to cut the power consumption.



Figure 1 ZXR10 8902E/8905E/8908E/8912E

Complete Multicast Support

ZXR10 8900E supports complete L2/L3 multicast protocols, including IGMP Snooping, MLD Snooping, administratively scoped multicast, IGMP v1/v2/v3, PIM-SM, multicast FRR. All these features help to provide advanced video distribution solutions.

Comprehensive IPv6 Features

ZXR10 8900E supports comprehensive IPv6 features, in order to facilitate the operators to migrate their network smoothly from IPv4 network to IPv6 networks. For example, ZXR10 8900E supports all basic IPv6 features such as ICMPv6, ND,SNMPv6, RADIUSv6; ZXR10 8900E supports IPv6 version routing protocols such as OSPFv3,IS-ISv6,BGP4+, PIM-SM for IPv6, MLD snooping; ZXR10 8900E supports multiple tunnel technologies such as 6to4 tunnel, ISATAP tunnel, 6vPE,6PE, etc.

Customer Benefits

Multi-Dimensional Security & Reliability Mechanism Guarantees Ever-online Services

Security related design in ZXR10 8900E can be divided into five aspects, which are secure architecture, secure management and control, secure operating system, secure calculation and secure service.

Secure architecture: Redundant backup design has been put in place for the forwarding control engines. Fast active/standby switchover is supported. Redundant power supply module, fan module and clock module combined to make the switch more robust. What's more, ZXR10 8900E supports intelligent inspection, control, warning and hot-swappable components.

Secure management and control: Independent control, monitoring and forwarding planes guarantee optimized equipment stability.

Secure operating system: support modular service, intelligent dynamical upload, parallel multi-module processing, flexible new service implementation, software-based intelligent hibernating program and non-stop service upgrade.

Secure processing power: Based upon multi-core CPU, ZXR10 8900E provides multi-thread parallel high-performance calculation to guarantee seamless connection of multiple planes.

Secure features: ZXR10 8900E supports L5 H-QoS, NSF, GR for OSPF BGP IS-IS LDP RSVP, LACP, ESRP, ZESS, VRRP+, OAM, BFD for OSPF BGP IS-IS LDP RSVP VRRP VPLS LSP, ECMP, IP FRR, DPI, MPLS OAM and MPLS TE FRR, etc.

Ready for Smooth transition to Cloud-Computing Platform, Saving CAPEX

ZXR10 8900E supports Virtual Switch Cluster (VSC), and VSC is a logical device composed by multiple devices virtually. VSC enhances cluster system capacity and port density, which accordingly enables simple topology and easy management.

8900E will support multiple data center technologies in the future, e.g. FCoE, TRILL and DCB.

The device provides the highest port density in the industry compared with the same level equipments from other vendors. The entire device supports 576*10G ports and 96*40G ports. So it can involve steadily to the main component of the "Cloud" core.

Flexible Interface combinations

ZXR10 8900E series Core switches offer following enhanced line card types: H5/S5/E5. The existing available line cards include: GE electrical/optical interface board, 10GE optical interface board, and 40GE interface board. Users have a wide selection of line card types to choose from, which could help cut the CAPEX a lot.

Efficient OAM Means Enhances Management

ZXR10 8900E supports extremely efficient OAM means to offer better management, for example Ethernet and MPLS OAM for better Qos; High performance BFD for speedy service recovery; Service Quality Analyzer (SQA) for performance monitoring.

Product Architecture

All available line card types include GE electrical/optical port cards, 10GE and 40GE optical port cards can be found in the table below:

Interface Module	Type and Quantity of Ports
E1GF24A	24 ports of GE (SFP)
H2GF24D	24 ports of GE (SFP)
H2GF48D	48 ports of GE (SFP)
H2GT48D	48 ports of GE (RJ45)

Interface Module	Type and Quantity of Ports
H2XF8D	8 ports of 10GE (SFP+)
S1XF12A	12 ports of 10GE (SFP+)
S1XF48A	48 ports of 10GE (SFP+)
S1LQ6L2A	8 ports of 40GE (6 QSFP , 2 CFP)

Model	Switching Capacity	Forwarding Capacity	LIC Slot	Redundant Hardware
8912E	5.12Tbps	3840Mpps	12	Yes
8908E	5.12Tbps	3840Mpps	8	Yes
8905E	3.2Tbps	2400Mpps	5	Yes
8902E	1.28Tbps	960Mpps	2	Yes

Applications and Services

The ZXR10 8900E enables service providers to offer the multiple services on converged network architecture, including FTTH, HSI, IPTV,L2/L3VPN,2G/3G/LTE service, etc. Two of the typical application cases are listed below:

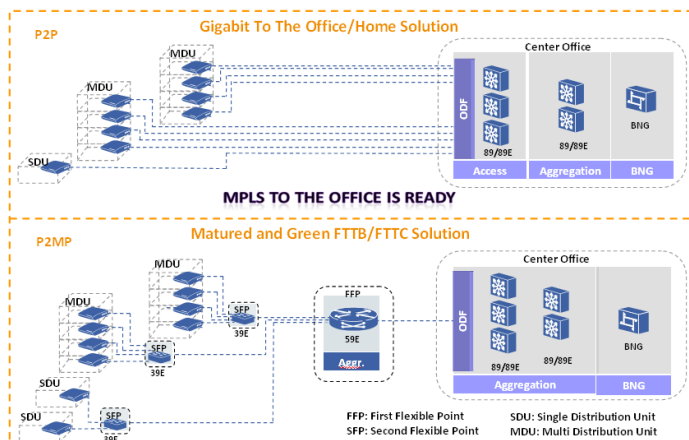


Figure 2 ZXR10 8900E Application in E-FTTx

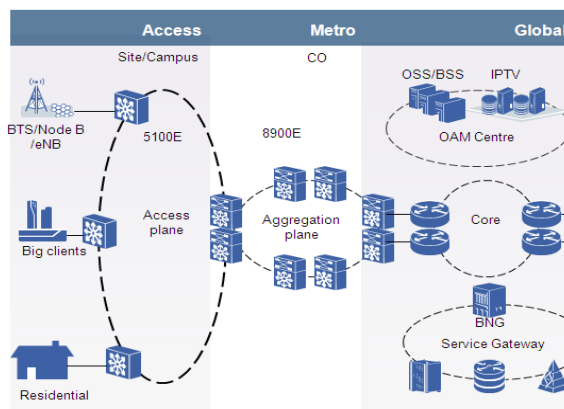


Figure 3 ZXR10 8900E Application in Metro Ethernet

Technical Specification

Technical Specification	8912E	8908E	8905E	8902E
L2 protocol support	IEEE 802.3, IEEE 802.3u, IEEE 802.3z, IEEE 802.3x and IEEE 802.1p, etc. STP, MSTP/RSTP, VLAN, QinQ, ESRP			
Advanced features	802.1ag,802.3ah,Y.1731,MPLS OAM, 96k 3.3ms cc . HQoS for Ethernet/MPLS L2 VPN/MPLS L3 VPN,SQA(Service Quality Analyzer). Sync Ethernet, IEEE 1588v2, GPS,BITS.			
Routing protocols	RIP1/2,OSPF, BGP, IS-IS, RIPng, BGP4+, OSPFv3, IS-ISv6, 6to4 tunnel and 6PE			
Service features	MPLS VPN, RSVP-TE, OSPF-TE, ISIS-TE, MPLS-TE, FRR, PBT, NAT,NAT log, Multicast, Bandwidth control, 802.1x, RADIUS, DHCP Relay , DPI, FW etc.			
Performance	4M IPv4 RIB, 512K IPv4 FIB, 512K MAC, 256K ACL			
Physical dimensions (H*W*D)	755*442*450 mm	577*442*450 mm	440*442*450 mm	175*442*450 mm
Maximum Weight	65kg	50kg	38kg	22kg
Power supply (DC/AC)	AC : 100V~240V, 50Hz ~60Hz; DC: -57V~-40V			
Maximum Power	1850W	1300W	850W	350W
MTBF/MTTR	200000 hours/30 minutes			
Noise	<70 dB			
Operating Environment Requirement	Temperature:-5℃~+45℃; Humidity:10%~90% (non-condensing)			

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