ZXR10 5900E Series Easy-Maintenance MPLS Routing Switch

Change Start Now

Overview

As fixed and mobile networks are converging and services are developing, operators are constantly putting greater demands on the operation and maintenance of their networks, to simplify network management, and to make it more efficient. Operators want to cut the operating costs of the network through simple yet efficient n methods. Besides that, with further development of the Internet terminal, requirements of Super High Speed Internet are ever-increasing, Gigabits interfaces are necessary in the aggregation node, even in access node. Giga-To-The-Home and Gigabits Ethernet to the desktop has become the trend. ZTE 5900E switch is a good choice to meet these demands.

Features

ZXR10 5900E series MPLS Easy-Maintenance switch adopts high-speed ASIC forwarding chips. It supports complete family of Ethernet protocols, complete L3/MPLS protocols, efficient QOS priority mechanisms and flexible management mechanisms. With high-density GE ports, it provides the required access and aggregation features of GE interface for IP Metro Ethernet, campus networks and IP RAN.

ZTE's 5900E Series Switch also focuses on the Last-mile Unattended Center Office (LUCO) and adopts design principles specifically to optimize the operational experience for maintenance staff, by providing easy management features. ZTE's 5900E Switch includes: ZXR10 5916E, ZXR10 5928E, ZXR10 5928E-FI and ZXR10 5952E.

EasyAlarm

Alarm input and output interfaces are introduced in 5900E for monitoring physical information, by detectors for temperature (overheating sensor), humidity (water penetration) infrared detector (unauthorized access), and power breakdown warning.

EasyPower

Dual independent and hot-swappable power modules ensure highest level customer networks reliability. Moreover, it greatly reduces the time to fix equipment problems and the number of backup switches.

EasySpace

With only 220mm depth, ZXR10 5900E switch can be installed in 300mm deep rack or 600mm-deep rack in back-to-back pattern.

5900E Easy-Maintainence Series

Figure 1. ZXR10 5916E

Figure 2. ZXR10 5928E

Figure 3. ZXR10 5928E-FI

Figure 4. ZXR10 5952E

With tight architecture, all cables are accessible from front panel, which greatly saves operator's investment in equipment room.

EasyButton

In order to ease operation pressure, the Mode Switching Button (M-button) was developed. By pressing a simple button, the network administrator can obtain the following information in just some seconds: CPU usage, memory usage, uplink and downlink bandwidth of the network, whether there is a port blocked in the ring-topology or not, port link rate, where is the network storm taken, whether the port has learnt the user MAC address or not, whether the connectivity to network management server is good or not. Moreover, CRC Errors can be displayed to show the physical status of line fiber or cable. M-button is a ZTE's patent technology and is widely adopted in ZTE E series switch families.

EasyManager

With ZTE powerful network management system NetNumen N31 or Easy manager in place, the ZTE 5900E series Switch allows fetching its own software and configuration automatically. ZTE network management system also supports network topology discovery, digital optical module diagnose, VLAN, service label and subscriber's IP address distribution and the MAC/port binding automatically. All these can significantly relief stresses for network operation and maintenance. In addition, abundant reports provide vital information for the operational staff to gather statistics and conduct analysis about the network resources.

EasyOAM

Powered by Dual-Core, 750MHz 32-bits MIPS CPU while one of which is designated upon OAM features, ZTE 5900E series switch supports checking OAM links at 10ms interval. So that, when 3 OAM messages are lost, the switch over be triggered, and the end-to-end 50ms carrier-class switchover is guaranteed.

EasyUpdate

The operator could hot swap the subcard to support optical interface or RJ-45 interface to meet the flexible access node interface requirements. Besides that, the uplink slot supports 4 GE colored SFP cad, 4 GE RJ-45 or 4 XGE SFP+ card to provide better flexibility.

EasyGreen

ZTE 5900e switch uses industry-leading 40nm and 65nm chip. In addition, the latest IEEE 802.3az EEE dynamic power consumption control technology is adopted. ZTE switch makes sure that our products always comply with RoHS, WEEE standards.

EasySync

ZXR10 5928E, 5928E-FI switch supports IEEE 1588V2, Sync Ethernet clock synchronization and GPS in/out services. ZXR10 5900E clock module, while equipped in the second power supply dock of 5928E/5928E-FI, could provide the high reliable and high precision clock solution by Stratum-2 clock holdover capability.

Customer Benefits

Enhanced Service Level Agreements (SLA)

ZXR10 5900E's EasyOAM features can help Operators generate more revenue by offering SLAs guaranteed services. These SLAs extend QoS contracts previously available only for Fast Ethernet, Gigabit Ethernet to new and advanced broadband data services such as Committed Information Rate (CIR), Peak Information Rate (PIR), Traffic Latency, and the Rate of Package of Lost.

Future Proofed

While increasing the bandwidth of the new service portfolio, the ZXR10 5900E extends service providers' investment in legacy network equipment by scaling its capacity as customer demands grow, without forklift upgrades. With significant high-density and high-speed capabilities, ZXR10 5900E's EasyUpdate features provide rapid service deployment and hardware hot-swap and update to meet the future service and QoE requirement.

CapEx Reduction

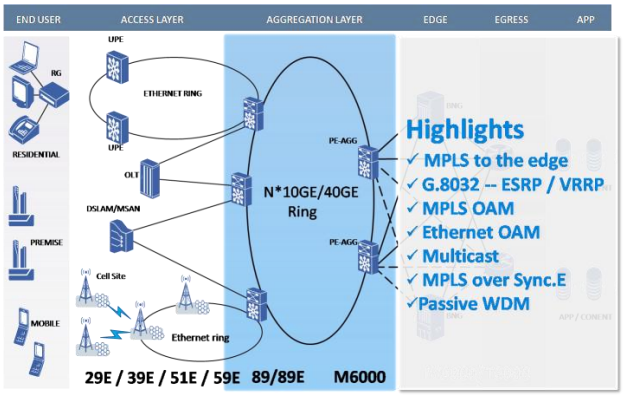
Benefiting from EasyClcok, the Service providers provide not only fixed service such as High Speed Internet, Voice, IPTV and VoD, but the mobile service. ZXR10 5900E provides a consolidated network infrastructure, to transform the multiple overlay networks to an unified bearer networks, which cut the Capital Expenditures (CapEx) by reducing the total number of network elements.

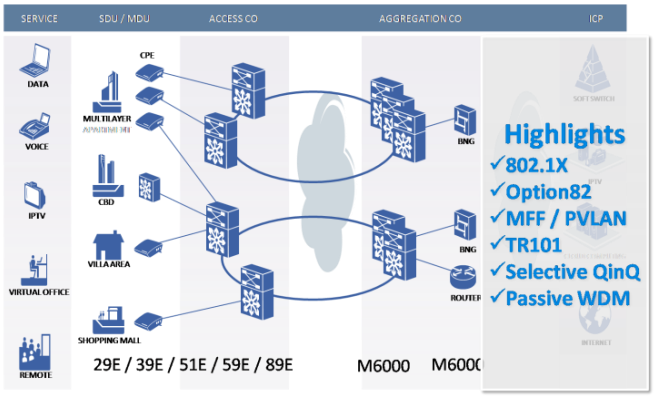
OpEx Reduction

ZTE Innovative ZXR10 5900E focuses on Easy Maintenance to reduce the operators' stress on the networks elements, especially in the Unattended Center Office (UCO). The features of EasyManager might reduce the time for the operator to introduce new service to market to keep the most profit. ZTE Corporation pays the sustained effort on the-cutting-edge technology and innovation to further cut down the OpEx of the networks.

Applications Scenario

With lots of Easy features, ZXR10 5900E show its value in many operator scenarios, such as: MPLS to edge, super high speed internet access, broadband high-reliability aggregation/access, IPTV, NGN, 2/3G IP RAN and LTE Backhaul. Furthermore, it also proves capability to act as the aggregation and access switch in large or medium-size business network, IPv6 aggregation/access switch.





Product Architecture

ZXR10 5900E has following four switch types: 5916E, 5928E, 5928E-FI and 5952E. All 5900E series switches provide 1 FE management port, 1 Console port and one alarm in/out port. The service interface combinations of these four switches are listed below:

5916E: 12*GE electrical + 4*GE/10GE optical uplink
5928E-FI: 24*GE optical + 4*GE/10GE optical uplink
5928E: 24*GE electrical + 4*GE/10GE optical uplink
5952E: 48*GE electrical/optical + 4*GE/10GE optical uplink

	5916E	5928E	5928E-FI	5952E
Power Slot	2	2	2	2
Clock Slot	-	1	1	-
Fan Slot	-	-	-	1
Fixed GE RJ45	12	24	-	-
Fixed GE SFP	-	-	24	-
Ext. Slot	1	1	1	1+1+4

	GE RJ45	GE SFP	10GE SFP+
RS-59EC-4XG-SFP+	-	-	4
RS-59EC-4GE-SFP	-	4	-
RS-59EC-4GE-RJ45	4	-	-
RS-5952E-MCS-SF (5952E)	-	16	-
RS-5952E-MCS-RJ (5952E)	16	-	-
RS-59EC-8GE-SFP (5952E)	-	8	-
RS-59EC-8GE-RJ45 (5952E)	8	-	-

Technical Specification

Specifications	5916E	5928E	5928E-FI	5952E
L2 Protocol	IEEE 802.3, IEEE 802.3u, IEEE 802.3z, IEEE 802.3x; STP, MSTP, RSTP; VLAN, QinQ, Selective QinQ; ITU-T G.8031, G.8032			
L3 Protocol	Controllable Multicast, PIM-SM/DM/SSM and IGMPv1, v2, v3; RIP1/2, OSPF, BGP, IS-IS; RIPng, BGP4+, OSPFv3 and IS-ISv6.			
MPLS	MPLS, H-VPLS, MPLS L2/L3 VPN, 6vPE, MPLS-TE			
OAM	IEEE 802.3ah, 802.1ag, Y.1731, MPLS OAM			
Clock synchronization	N/A	IEEE 1588 V2, Sync. E, GPS in/out, 2M BITS in/out	IEEE 1588 V2, Sync. E, GPS in/out, 2M BITS in/out	N/A
Security Feature	CPU anti-attack (virus) and overload/rhythm protection, virus feature identification filtering, STP root guard, BPDU and APR attack guard, uRPF, IS-IS/ OSPF/RIPv2/BGPv4 MD5 cryptogram checking, IP source guard			
Management Interface	RS232, Local Command Line(CLI), Remote Telnet, Standard SNMP, NetNumen N31, Cluster Management(ZGMP), SSHv2.0, Local and Remote Authentication of User			
Physical Dimensions (H×W×D)/mm	43.6×442×220			88.1×442×220
Maximum Weight	<3.8kg	<4.8kg	<4.8kg	<10 kg
Power Supply	AC : 100V~240V, 50Hz ~60Hz; DC: -57V~-40V			
Maximum Power	<45W	<63W	<64W	<122W
Typical Power	36W	42W	49W	63W
MTBF/MTTR	>100,000 hours/<30 minutes			
Operating Environment	Temperature:-5℃~+50℃; Humidity:10%~90% (non-condensing)			
Certificate of Certification	CE, FCC, UL, CB, IRAM, C-tick, RoHS, WEEE, MEF 9&14, IPv6 Gold, EANTC Interoperability Test, Secure End-user Connection(SEC)			

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