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ZTE ZXR10 2900E Series Switch Data Sheet

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ZTE



Product Overview

The ZXR10 2900E series switches are the superior layer 2 switches presented by ZTE. With innovative "easy" concept incorporated in every detail, ZXR10 2900E series switches bring users the ultimate efficiency, cutting the maintenance costs of the network through simple yet efficient methods. The ZXR10 2900E provides enhanced layer 2 threat defense capabilities to mitigate network attacks. Multiple measures like bi-direction ACL, dynamic ARP inspection, MAC/IP/port automatic binding after 802.1X authentication help enterprises to better secure their networks.

The ZXR10 2900E Series switch offers following switch products:



2910E



2910E-PS

2910E: 8 Ethernet 10/100M RJ45 electrical ports, 2 GE Combo ports, fixed AC/DC power supply.

2910E-PS: 8 Ethernet 10/100M RJ45 electrical ports (POE/POE+), 2 GE Combo ports, fixed AC power supply.



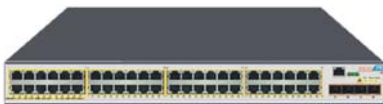
2928E



2928E-PS

2928E: 24 Ethernet 10/100M RJ45 electrical ports, 2 GE Combo ports and 2 GE SFP optical ports, fixed AC/DC power supply.

2928E-PS: 24 Ethernet 10/100M RJ45 electrical ports (POE/POE+), one expansion slot, 2 AC/DC power supply modules.



2952E

2952E: 48 Ethernet 10/100M RJ45 electrical ports, 4 GE SFP optical ports, fixed AC/DC power supply.

The expansion card slot can be equipped with one of following types of cards:



- 4 FE SFP ports card
- 4 GE SFP ports card
- 4 GE RJ45 ports card

Product Features

- **Smart VLAN Support**

- ZXR10 2900E series switches not only support 1:1 VLAN mapping, but also support N: 1 VLAN mapping. VLAN aggregation thus can be realized at the access layer, increasing the efficiency of VLAN utilization.
- ZXR10 2900E also supports other VLAN features, including port-based VLAN, subnet VLAN, Protocol-based VLAN, Super VLAN, QinQ and flexible selective QinQ. Network administrator can distinguish user and service effectively and apply different strategies thereafter.
- ZXR10 2900E supports voice VLAN, which means the automatic assignment of dedicated VLAN and QoS strategy to voice equipments, thus enabling the voice traffic to enjoy high priority.

- **Improve Video Bearing Capabilities**

- Multicast service is the profitable point of many operators. ZXR10 2900E fully supports L2/L3 multicast, including IGMP snooping, Filtering, Proxy and Fastleave, MVR (Multicast VLAN Registration) and PIM-SM to facilitate the deployments of these services.
- Besides that, ZXR10 2900E series products support IPTV, which means they are capable of providing rich CAC (channel access control) rules.
- Multicast Qos are also supported to minimize the risks of delay, jitter of the multicast traffic. The time needed to get new user on-line is very short.



- **IPv6 Features**

- ZXR10 2900E supports IPv6 features, including Telnet v6, Ping V6, ICMPv6, ND, MLD Snooping, IPV6 ACL and DHCP V6 Snooping to facilitate the deployment of these services.

- **Intelligent Power Over Ethernet**

- All the electrical access interfaces of ZXR10 2910E-PS and 2928E-PS support POE and POE+, which go in line with 802.3af and 802.3at standards, and are compatible with PD equipments that doesn't support 802.3af and 802.3at. For POE, the power output per single interface can reach 15.4W; For POE+, the power output per single interface can reach 30W. ZXR10 2900E supports assigning POE time-ranges and assigning the maximum POE output for specific interfaces, in time periods that doesn't need power output, the POE function can be turned off, saving energy for the customer.
- ZXR10 2910E-PS and 2928E-PS support negotiating POE power through LLDP-MED; once the needed power is bigger than the output power, alarms will be generated and sent to the OAM centre.

- **PPPoE+ and VBAS**

- PPPoE+ and VBAS (Virtual Broadband Access Server) are two very useful measures to provide user circuit identification means in user access network.
- When acting as a L2 switch or L2 switch and enabled with PPPoE+ or VBAS, ZXR10 2900E can insert user circuit information into the packets so the BRAS can have the detailed user location info for future billing/control/ACL implementation purposes.

- **Enhanced Reliability**

- ZXR10 2900E series switches support Ethernet smart ring protection function, which goes in line with RFC3619 and ITU.T G.8032 standard. Ethernet smart ring protection can be implemented in both close ring and open ring topology; Multiple instances can be configured in order to realize load-balancing. The switchover time can be kept below 50ms.



- ZESS (ZTE Ethernet Smart Switch) and LACP (Link Aggregation Control Protocol) can help guarantee the reliability of the uplink connection.
- With technologies like DHCP snooping and IP source guard, user validity can be guaranteed; DAI (dynamic ARP inspection) function can help effectively mitigate the influence caused by ARP attacks.
- 2900E supports MFF (MAC forced forwarding), L2 separation and L3 inter-communication can be realized;
- Network traffic monitoring technologies including mirroring (SPAN and RSPAN) and sFlow are all supported, further enhancing the security of the network.
- **Easy-Security**
 - ZXR10 2900E supports rich security related measures to ensure the customer can have a robust network.
 - With egress ACL, important access terminals can be protected with fewer configurations, users don't have to configure ingress ACL on each access interface.
 - After user passed 802.1X authentication, the MAC/IP/port relationship can be automatically frozen, so that future MAC/IP spoofing attacks can be prevented.
 - With DAI (Dynamic ARP inspection) function and IP/MAC binding, the DOS attacks would be effectively restricted;
 - Traffic mirroring/analyzing functions like SPAN, RSPAN and sFlow help network administrator better understand network running status.
 - 2900E supports SSL and can act as a SSL server
- **Easy-Maintenance**
 - The innovative M-Button function enables the network administrator to fetch important equipment information including port/memory/CPU status in case of network problems, enabling instant trouble-shooting, and thus reducing OPEX to the utmost extent.



- GVRP VLAN Registration Protocol can help network administrators reduce network configuration workloads and easily deploy large amounts of VLAN in complicated networking environment. ZXR10 2900E series switches support the implementation, distribution, registration and transmission of VLAN attribute in dynamic GVRP pattern, which can simplify VLAN configuration management, and reduce network interconnection problems caused by inconsistent configuration.
 - ZXR10 2900E series switches support Zero Configurations, which means the switch can automatically download software images and configurations, enabling plug and play and drastically reducing maintenance cost.
 - Two software image files can be stored for backup purpose.
- **Green**
 - Following green and eco-friendly design philosophy, ZXR10 2900E helps the customers save energy and reduce power consumption from all the aspects of design:
 - No fan (2910E/2918E/2952E).
 - The product adopts the advanced chip technology, so the power consumption of the main chip is reduced up to 20%.
 - The materials used during the product life span of 2900E completely meet RoHS and WEEE standards.

System Specification

Specification	2910E	2910E-PS	2928E	2928E-PS	2952E
FE Density	8FE RJ45	8FE RJ45 (POE/POE+)	24FE RJ45	24FE RJ45 (POE/POE+)	48FE RJ45 ports
GE Density	2 GE Combo	2 GE Combo	2 GE SFP + 2 GE Combo	-	4 GE SFP
Extension Card Slot	-	-	-	1	-
Extension Card	-	-	-	4FE SFP/4 GE	-



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Specification	2910E	2910E-PS	2928E	2928E-PS	2952E
Support				SFP/4 GE RJ45	
POE	-	POE+ 30W POE 15.4W	-	POE+ 30W POE 15.4W	-
Switching Capacity	5.6 Gbps	5.6 Gbps	12.8 Gbps	12.8 Gbps	17.6 Gbps
Packet Forwarding Rate	4.2 Mpps	4.2 Mpps	9.6 Mpps	9.6 Mpps	13.2 Mpps
MAC Table	16K				
VLAN	4K				
Maximum Power Consumption (100% load with POE)	<11W	<270W (POE 240W)	<16W	<760W (POE 720W)	<27W
AC Power Supply	100V~240V, 50Hz~60Hz				
DC Power Supply	-48V	-	-48V	-48V	-48V
Heat Dissipation Pattern	Fanless	Fan cooling	Fanless	Fan cooling	Fanless
Heat Dissipation	<37 BTU/h	<368 BTU/h	<78 BTU/h	<162 BTU/h	<931 BTU/h
Environment Parameter	Working temperature: -5°C~+50°C, humidity: 20%~90%				
Dimensions (H*W*D, mm)	43.6*340*220	43.6*340*220	43.6*442*220	43.6*442*440	43.6*442*220
Weight	<2.8 kg	<3.0 kg	<3.0 kg	<6.4 kg	<3.4 kg

Service Specification

Function	The ZXR10 5250 Series switch
L2 Features	Support IEEE 802.1p (COS), IEEE 802.1q (VLAN) Support IEEE 802.1d (STP)/ 802.1w (RSTP)/ 802.1s (MSTP) Support IEEE 802.3ad (LACP), Static Trunk Support IEEE 802.3z (1000Base-X) / 802.3ab (1000BaseT) Support Voice VLAN



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Function	The ZXR10 5250 Series switch
	<ul style="list-style-type: none"> Support QinQ, Selective QinQ Support PVLAN Support Port mirroring, Traffic mirroring Support GVRP Support LLDP
L3 Features	<ul style="list-style-type: none"> Support IPv4 Static routing Support DHCP Snooping, DHCP Relay, DHCP Option82 Support DHCPv6 Snooping
Multicast	<ul style="list-style-type: none"> Support IGMPv1/v2/v3 snooping Support CAC (channel access control), MVR (Multicast VLAN Registration) Support MVR Support MLD Snooping
QoS	<ul style="list-style-type: none"> Support traffic classification based on Layer 2 headers, Layer 3 protocols, Layer 4 protocols, and 802.1p priority Support 8 hardware-based queues per port Support queue scheduling algorithms, such as SP, WRR, SP+WRR Support congestion avoidance mechanisms, such as WRED and tail drop Support policing/shaping based on port
PoE	<ul style="list-style-type: none"> Support POE (IEEE 802.3 af) Support POE+ (IEEE 802.3 at)
Security	<ul style="list-style-type: none"> Support standard ACL, VLAN ACL, Link ACL, extended ACL, mixed ACL, IPv6 ACL Support time-range ACL configuration, Bidirectional ACL Support 802.1x authentication and 802.1x server Support MAC authentication Support AAA/ RADIUS and TACACS+ authentication for login users Support SSH Support CPU anti-attack Support STP Root Guard, BPDU guard Support URPF
Reliability	<ul style="list-style-type: none"> Support redundancy power supply Support LACP Support ZESR/ZESR+(ZTE Ethernet Switch Ring), ITU.T G.8032



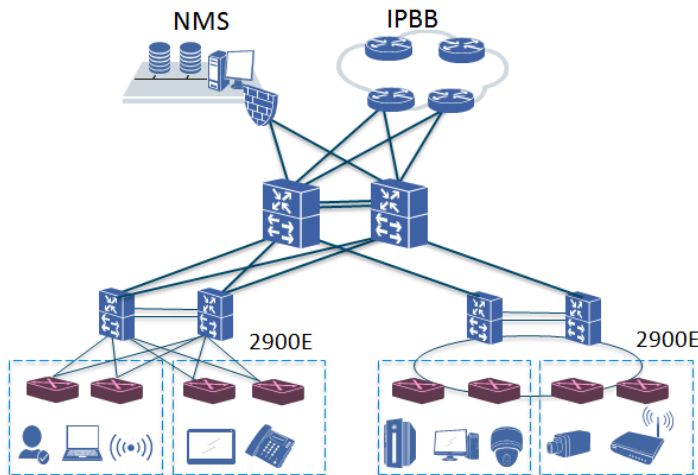


Function	The ZXR10 5250 Series switch
Equipment Management	Support CLI, Telnet, SSH, Local and remote (Radius/Tacacs+) user authentication Support out-band management interface Support SNMP v1/v2/v3 Support Mirroring, RSPAN Support RMON Support WEB management Support NTP Support Syslog, Sflow Support Easy Manager zero-configuration and fast in-batch inspection tool Support Dying gasp power-off alarm
Enhanced Features	Support M-BUTTON Support Zero-touch deployment

Application Scenario

- **Access in Enterprise Network**

The ZXR10 2900E Series switch supports various L2 features and POE/POE+, it can be applied in multiple scenarios including enterprise access and FE to desktop scenario. Below is an example of enterprise application as an access switch.





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Order Information

Mainframe

2910E-AC	2910E AC Base (Fixed AC Power Supply)
2910E-DC	2910E-PS DC Base (Fixed DC Power Supply)
RS-2910E-PS-AC	2910E-PS AC Base (Fixed AC Power Supply)
RS-2928E-AC	2928E AC Base (Fixed AC Power Supply)
RS-2928E-DC	2928E DC Base (Fixed DC Power Supply)
RS-2928E-PS	2928E-PS Base (2*Power Supply Module)
RS-2952E-AC	2952E AC Base (Fixed AC Power Supply)
RS-2952E-DC	2952E DC Base (Fixed DC Power Supply)

Power Module

RS-29EC-PWR-AC50	AC Power Module for 2928E-PS
29EC-PWR-DC50	DC Power Module for 2928E-PS

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