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ZTE ZXR10 5950 Series Switch Data Sheet

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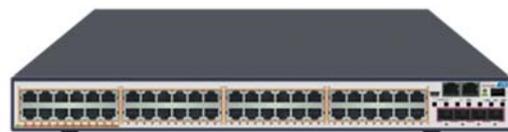
Product Overview

The ZXR10 5950 Series switch is 1RU height all gigabit routing stackable switch for campus access and aggregation scenarios. It provides up to 60 interfaces (48 GE+ 12 10GE). With VSC2.0 (Virtual Switch Cluster), it delivers improved resilience and flexibility. The ZXR10 5950 Series switch supports full IEEE 802.3at Power over Ethernet Plus (PoE+) to fulfill more enterprise access scenarios. Zero-touch provisioning, IEEE 802.3az Energy Efficient Ethernet (EEE) make the network not only easy for maintenance but also low consumption.

The ZXR10 5950 Series switch offers the following switch products:



5950-36TM



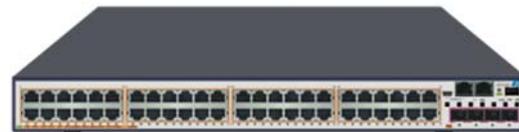
5950-60TM

5950-36TM: 24 Ethernet 10/100/1000M RJ45 electrical ports, 4 10GE SFP+ optical ports and 1 expansion slot, 2 AC/DC/HVDC power supply modules.

5950-60TM: 48 Ethernet 10/100/1000M RJ45 electrical ports, 4 10GE SFP+ optical ports and 1 expansion slot, 2 AC/DC/HVDC power supply modules.



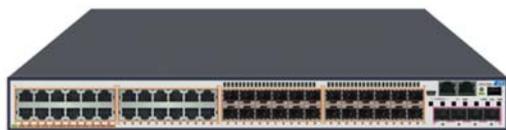
5950-36PM



5950-60PM

5950-36PM: 24 Ethernet 10/100/1000M RJ45 electrical ports (POE/POE+), 4 10GE SFP+ optical ports and 1 expansion slot, 1 fan module, 2 AC/DC/HVDC power supply modules.

5950-60PM: 48 Ethernet 10/100/1000M RJ45 electrical ports (POE/POE+), 4 10GE SFP+ optical ports and 1 expansion slot, 1 fan module, 2 AC/DC/HVDC power supply modules.



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5950-36CM

5950-36CM: 24 GE Combo ports, 4 10GE SFP+ optical ports and 1 expansion slot, 1 fan module, 2 AC/DC/HVDC power supply modules.

The expansion card slot can be equipped with the following expansion cards:

- 2 * 40GE QSFP+ optical ports card
- 2 * 40GE MiniSAS ports VSC stacking card
- 8 * 10GE SFP+ optical ports card
- 8 * GE SFP optical ports card

Product Features

● Powerful Service Bearing Capability

- By supporting rich L2 switching and L3 routing functions and low latency forwarding, The ZXR10 5950 Series switch can bear multiservice including WLAN, Internet, Voice, Video and other data services.
- Support comprehensive L2/L3 Multicast protocols: PIM-SM, PIM-DM, PIM-SSM, MLD, IGMP Snooping, meeting the requirements for IPTV, multi-terminal high-definition video surveillance and other multicast services.
- Support POE/POE+, which delivers customer more flexible service access choice.
- Flexible hardware forwarding table distribution, customers can configure the size of ARP table, MAC table according to actual need, to satisfy more application scenarios.

● Innovative VSC2.0 (Virtual Switch Cluster) Technology

- Support VSC2.0 (Virtual Switch Cluster), which enhances cluster system capacity and port density, simplifies network topology and management.
- Real time hot-standby information synchronization between master and backup master to ensure seamless switchover against network failures, enhancing the network reliability.

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- Stacking bandwidth between the VSC switches can be up to 160Gbps, which can solve the bandwidth bottleneck of VSC and deliver customers a real-time non-blocking VSC system.
- Master and slave in VSC works in 1+N redundancy mode, MAD (Multi-active Detect) technology is used to detect and avoid dual master in VSC system when failure happens. Together with real-time hot-standby and seamless switchover it brings customer a more flexible VSC network.

● Comprehensive IPv6 Features

- Support rich IPv6 unicast routing protocols: IPv6 static routing, RIPng, OSPFv3, IS-ISv6, and BGP4+ and multicast features: MLD v1/v2, MLD snooping, PIMv6, etc.
- Support rich IPv4-to-IPv6 tunnel technologies: IPv6 manual tunnels, 6-to-4 tunnel, ISATAP tunnel and IPv4-compatible automatic tunnels, etc.

● Flexible POE/POE+

- Support POE and POE+ complying with the 802.3at and 802.3af standard to provide power supply for remote devices (including IP phones, WLAN APs, and network cameras) through twisted-pair cables.
- Support forcible power supply and could supply power for PD equipments that not compatible with 802.3af and 802.3at standards if needed.
- Support configuring the POE time range. During the time that doesn't need power supply, power supply can be stopped automatically to save energy.
- Support PD port power detection. If the actual power is greater than the PSE-distributed power, stops providing power supply.
- Support displaying the PSE power supply status and PD power supply status, such as whether power supply is provided, power, level, and temperature.

● Enhanced Reliability, Multi-Dimensional Security

- The ZXR10 5950 Series switch supports ZESR+ Ethernet ring protection and ERPS, which can deliver the fast system recovery from any link or node fault.

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- Support various authentication methods such as 802.1x, Radius, TACACS+. Support CPU overload protection, anti-DDOS, deliver customer a security network.

● Low OPEX , Green for More

- The innovative M-Button delivers instant trouble-shooting by reading indicators on front panel without login via terminal. It helps customer solve some common problems immediately.
- Support IEEE 802.3az EEE (Energy Efficient Ethernet). Via chip-grade power management, interfaces can automatically sleep when no traffic.
- The fan speed can be automatically adjusted by 5 levels in accordance with the temperature inside the switch. It not only saves the power consumption, but also reduces the noise and extends the life cycle of fans.
- Complying with ROHS, WEEE and ISO14001 certification, No plumbum (Pb) in not only product materials but also the whole processing technic. Meanwhile, use re-cycle degradable packing materials, practice green for more.

System Specification

Function and Parameters	5950-36TM	5950-60TM	5950-36PM	5950-60PM	5950-36CM
Dimensions (H*W*D)	43.6mm*442mm*440mm				
Fixed Interface	24 GE RJ45+ 4 10GE SFP+	48 GE RJ45+ 4 10GE SFP+	24 GE RJ45 (POE/POE+) + 4 10GE SFP+	48 GE RJ45 (POE/POE+) + 4 10GE SFP+	24 GE Combo+ 4 10GE SFP+
Expansion Card Slot	1	1	1	1	1
Expansion Card Type	2*40GE QSFP+ card 2*40GE MiniSAS VSC stacking card 8*10GE SFP+card 8*GE SFP card				
Weight	<6.5kg	<7.0kg	<8.0kg	<8.1kg	<8.0kg
Management Port	1 GE MNG, 1 RJ45 Console, 1 Mini USB Console				
AC Power Supply	Rated voltages: 100V~240V,50Hz~60Hz				



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Function and Parameters	5950-36TM	5950-60TM	5950-36PM	5950-60PM	5950-36CM
DC Power Supply	-40V~-72V	-40V~-72V	-38.4V~-72V	-38.4V~-72V	-38V~-60V
HVDC Power Supply	240V/336V	240V/336V	240V/336V	240V/336V	240V/336V
Maximum Power Consumption	<70W	<84W	<800W (POE:720W)	<1,050W (POE:960W)	<76W
Typical Power Consumption	30W	39W	42W	49W	38W
Power Redundancy Pattern	Two independent and swappable power supply module, support AC 1+1, DC 1+1				
Heat Dissipation Pattern	Fan cooling, support multilevel speed regulation				
Heat Dissipation	<196 BTU/h	<235 BTU/h	<224 BTU/h	<252 BTU/h	<213 BTU/h
Working Temperature	Long term working temperature: -10 °C ~ +50 °C Short term working Temperature: -10 °C ~ +55 °C				
Humidity	5%~95%				
Working Altitude	<5,000 meters		<2,000 meters		
MTBF/MTTR	>400,000 hours/ < 30 minutes				
Switching Capacity	288Gbps	336Gbps	288Gbps	336Gbps	288Gbps
Packet Forwarding Rate	216Mpps	252Mpps	216Mpps	252Mpps	216Mpps

Service Specification

Function	The ZXR10 5950 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) Support IEEE 802.3z (1000Base-X) / 802.3ab (1000BaseT) Support IEEE 802.3ae (10Gbase) Support IEEE 802.3ba (40Gbase) Support QinQ, Selective QinQ



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Function	The ZXR10 5950 Series Switch
	Support Port mirroring, Traffic mirroring Support PVLAN Support GVRP Support LLDP
L3 Features	Support IPv4 routing protocols, such as Static routing, Policy based routing , RIP, OSPF, BGP, and IS-IS Support DHCP server/ relay/proxy, DHCP snooping Support IPv6 routing protocols, such as Static routing, Policy based routing , RIPng, OSPFv3, IS-ISv6, and BGP4+
Multicast	Support IGMP v1/v2/v3, IGMPv1/v2/v3 snooping Support PIM-SM, PIM-DM, PIM-SSM Support administratively scoped multicast/ IPTV, MVR Support MLD v1/v2, MLD snooping, PIMv6
QOS	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, DWRR, SP+WRR Support congestion avoidance mechanisms, such as WRED and tail drop Support policing/shaping based on port
PoE	Support POE (IEEE 802.3 af) Support POE+ (IEEE 802.3 at)
Security	Support L2-L4 ACL Support standard ACL,MAC ACL, L2 ACL, extended ACL, mixed ACL, VLAN 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 v1.0/v2.0 server Support CPU anti-attack Support STP Root Guard, BPDU guard Support URPF Support RIP/OSPF/BGP MD5 encryption checking

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Function	The ZXR10 5950 Series Switch
Reliability	Support 1+1 redundancy power supply Support Hot plugging Support LACP Support ZESR/ZESR+(ZTE Ethernet Switch Ring) Support ERPS Support VRRP, VRRPv3, VRRPE Support GR for OSPF/BGP/IS-IS
Equipment Management	Support CLI, Telnet, SSH, Local and remote (Radius/Tacacs+) authentication of user Support SNMP v1/v2/v3 Support Mirroring Support RMON Support NTP Support Syslog, Sflow
Enhanced Features	Support M-BUTTON Support Zero-touch deployment

Application Scenario

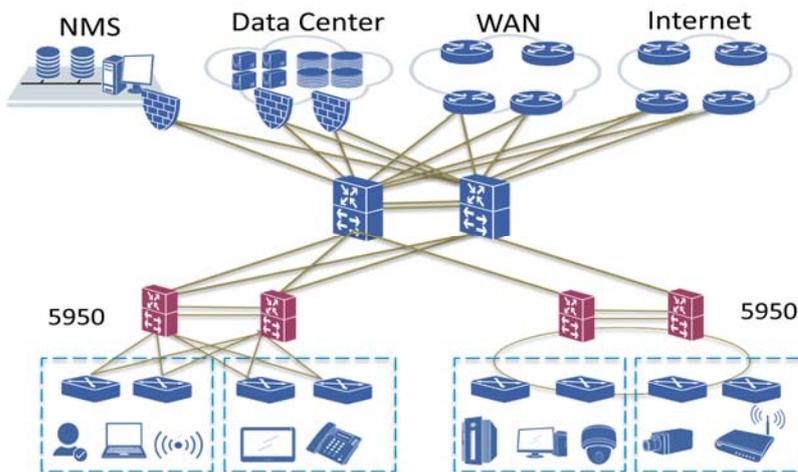
● Access and Aggregation in Campus Network

The ZXR10 5950 Series switch supports VSC2.0 and POE/POE+; they can be applied in multiple scenarios including campus access and aggregation. Below is an example of campus application.

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Order Information

Mainframe

5950-36TM	5950-36TM Switch (1*Expansion Card, 2*Power Supply Module)
5950-60TM	5950-60TM Switch (1*Expansion Card, 2*Power Supply Module)
5950-36PM	5950-36PM Switch (1*Expansion Card, 1* Fan Module, 2*Power Supply Module) (POE/POE+)
5950-60PM	5950-60PM Switch (1*Expansion Card, 1* Fan Module, 2*Power Supply Module) (POE/POE+)
5950-36CM	5950-36CM Switch (1*Expansion Card, 1* Fan Module, 2*Power Supply Module)

Expansion card

59-2L-SK	2*40GE MiniSAS VSC Stacking card
59-2L-SF	2*40GE QSFP+ optical ports expansion card
59-8XG-SF	8*10GE SFP+ optical ports expansion card
59-8GE-SF	8*GE SFP optical ports expansion card

Power Module

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59-PWR-AC50	5950-PM AC/HVDC Power Module
59-PWR-DC50	5950-PM DC Power Module
59-PWR-AC20	5950-CM AC/HVDC Power Module
59-PWR-DC20	5950-CM DC Power Module
59-PWR-AC10	5950-TM AC/HVDC Power Module
59-PWR-DC10	5950-TM DC Power Module

Fan Module

59-FAN	5950 Fan Module
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