



Leading 5G Innovations

Leading 5G Transport

——ZTE 5G Flexhaul Product ZXCTN 61V5 Series





Requirements and challenges for 5G transport networks

In the 5G era, there are higher requirements for bandwidth, latency, and number of connections. 5G also poses corresponding challenges for the transport network:

- 3G, 4G, and 5G networks coexist, the network architecture is complex, and bandwidth requirements are huge.
- Strict latency requirements

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- Ubiquitous connection
- Differentiated service requirements

As the leader of the 5G era, ZTE innovatively proposes the 5G Flexhaul transport solution to address the challenges brought by 5G.

ZXCTN 61V5 Product

The ZXCTN 61V5 is the latest 5G Flexhaul transport product of ZTE. It takes the packet as the core, supports 100GE, 50GE, 25GE, 10GE, GE and other interfaces to satisfy different networking requirements of 3G/4G/5G. It also provides ultra-large bandwidth, ultra-low latency, massive connection and network slicing functions and supports midhaul/backhaul unified transport. The ZXCTN 61V5 has strong survivability and scalability in network deployment and technology evolution, avoiding selection troubles caused by uncertainties such as technology selection and network evolution, and effectively protecting customer investment.

ZXCTN 61V5 include: ZXCTN 6120H-A, ZXCTN 6120H-B, ZXCTN 6120H-C, ZXCTN 6180H-A, ZXCTN 6180H and ZXCTN 6190H.



ZXCTN 6120H-A



ZXCTN 6120H-B









ZXCTN 6120H-C



ZXCTN 6120H-S



ZXCTN 6180H-A



ZXCTN 6180H



ZXCTN 6190H





Highlights and customer values

• Meet 3G/4G/5G bandwidth requirements and applied to wireless, enterprise customer and other transport scenarios

The ZXCTN 61V5 provides multiple bandwidths such as 100GE/50GE/25GE/10GE/GE to support various transport scenarios such as midhaul/backhaul, enterprise customer access and other transport scenarios, greatly facilitating the planning, provisioning, O&M and optimization of the entire network.

ZXCTN 61V5 has several access device types that provides a large number of service interface slots and a wealth of interface line cards. It allows a device to flexibly access various services and constantly meets the bandwidth evolution requirements.

• Packet as the core and ultra-low latency to build an packet transport network for 5G services

The ZXCTN 61V5 solves the problem of uncontrollable IP latency in the industry and effectively meets the low latency requirement of 5G. It supports two modes on the forwarding plane: fast forwarding and ordinary forwarding. The data forwarding mode can be selected according to the service type. The time-sensitive service can take the fast forwarding mode. At the PE node adding and dropping services, the service processing latency is reduced by one order to several us from 30us of the traditional packet device. With the innovative FlexE solution and the L1 electrical-layer direct connection, the intermediate P node allows the node pass-through close to "zero delay" and the forwarding latency of less than 1us, providing a powerful guarantee for new services and the new network architecture.

Service isolation and network slicing to fulfill differentiated needs of different services

5G services will be characterized by diversification and differentiation. KPI varies with services in a transport network. The ZXCTN 61V5 introduces the FlexE technology on the forwarding plane to implement flexible bandwidth allocation and service isolation. Through flexible resource configuration, the product can meet differentiated requirements of 5G scenarios. Different types of services are allocated with different resources on the control plane to make full use of network resources, improving network utilization while meeting differentiated requirements of various services.



5G Flexhaul Scenario

Physical Network Layer



The key technologies such as FlexE, low delay forwarding, high precision clock, network slicing are provided to meet the key requirements of 5G network, such as ultra large bandwidth, ultra low delay, flexible networking, and so on, to protect the user's 5G network.

ZTE



Specifications

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Models	ZXCTN	ZXCTN	ZXCTN	ZXCTN	ZXCTN	ZXCTN	ZXCTN					
	6120H-A	6120H-B	6120H-C	6120H-S	6180H-A	6180H	6190H					
Physical Specifications												
Switching Capability	160Gbps	160Gbps	320Gbps	1Tbps	480Gbps	640Gbps	800Gbps					
Interface Type	10GE/GE	10GE/GE/ FE/E1	100GE/50 GE/25GE/ 10GE/GE/ FE	100GE/50G E/25GE/10 GE/GE/FE	100GE/50 GE/25GE/ 10GE/GE/ FE/E1	100GE/50 GE/25GE/ 10GE/GE/ FE/E1	100GE/50 GE/25GE/ 10GE/GE/ FE/E1					
Service Slots	1U fixed device	1U fixed device	1U fixed device	1U fixed device	6	8	14					
Typical power consumption	80W	80W	130W	230W	300W	300W	350W					
Dimension	442*43.6* 220	442*43.6* 220	442*43.6*2 70	442*43.6*2 70	442*130.5 *199	442*142* 199	442*220*1 99					
Access Capacity	18*10GE/ GE(o)+14 *GE(o)	18*10GE/ GE(o)+2G E(o)+4*GE /FE(e)+16* E1	2*100GE/5 0GE/40GE +4*25GE/1 0GE+12*1 0GE/GE+4 *GE/FE(0) +4*GE/FE(e)	4*100GE/50 GE/40GE+8 *25GE/10G E+14*25GE /10GE/GE+ 10*10GE/G E/100M	100GE: 2 50GE: 4	100GE: 4 50GE: 8	100GE: 6 50GE: 12					
Weight	<4kg	<4kg	<5kg	<5kg	<15kg	<18kg	<28kg					
Service Features												

5G new Feature

- Segment Routing, EVPN, PCEP and Telemetry
- FlexE, low-latency forwarding, high-precision clock and network slicing. (Not include 6120H-A/6120H-B/6120H-BL)

L2 Feature

 Vlan, MAC management, Storm suspression, QinQ, Port mirroring, ARP, MSTP, LLDP, DHCP relay, Link Aggregation Group

L3 Feature

- L3 interfaces based on VLAN /VCG/Qx/DCC
- IPv4 unicast, ECMP, ICMP, TCP, UDP, VRRP
- Static routes, BGP, IS-IS, OSPF

MPLS and MPLS-TP

- MPLS/MPLS-TP tunnels, MPLS label processing
- LDP, LDP extensions, RSVP-TE
- MPLS L2 VPN, MS-PW, VPWS, VPLS, H-VPLS
- Seamless MPLS

QoS

- Classification, traffic policing, congestion control, queue scheduling, shaping
- TD, WRED, SP, WRR/DWRR, SP+WRR/DWRR

OAM

- BFD
 - MPLS-TP OAM (based on Draft-bhh-mpls-tp-oam-y1731-06)
- ITU-T Y.1731 OAM, IEEE 802.1ag, IEEE 802.3ah

Reliability







Models	ZXCTN	ZXCTN	ZXCTN	ZXCTN	ZXCTN	ZXCTN	ZXCTN	
	6120H-A	6120H-B	6120H-C	6120H-S	6180H-A	6180H	6190H	
 IP FRR MPLS LSP 1:1 protection, FRR MPLS-TP LSP linear protection, Wrapping protection, Dual-homing, Dual Node Interconnection LAG Synchronization Synchronous Ethernet IEEE 1588v2 time synchronization, frequency recovery Adaptive clock recovery, Retiming SQM RFC2544/Y.1564 TWAMP 								





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