OLT ZTE ZXA10 C600

Overview:

ZXA10 C600 is a large-capacity optical access equipment based on the TITAN platform. It meets the full-scenario access needs of ultra-high bandwidth, big video, FMC and network re-architecture, and provides the integration of transmission and access, as well as carrier-class QoS and security

Key features:

- Network Processor (NP) +CLOS switch fabric architecture
- Support control and forwarding planes separate
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- SDN ready, support Netconf/YANG, VXLAN

Access features:

- 272/256 GPON, 10G PON, Any-PON or Combo PON ports
- Three generations of PON technologies and directions in one platform, and two generations PON (GPON and 10G PON) in one card
- Support full services and scenarios access, such as big video, FMC, network re-architecture, etc



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Specifications

1. Characteristics

Hardware Features	
Shelf configuration	• ETSI 21" shelf: 23 slots, IEC19" shelf: 21 slots • 17 slots (21")/15 slots (19") for universal line cards • 2 slots for switch & control cards • 2 slots for power cards • 1 slot for clock synchronization card • 1 slot for FAN module
System capability	• Switching capacity of backplane bus: 14 Tbit/s • Switching and control card: 3.6 Tbit/s • System switching capacity: 7.2 Tbit/s
Uplink interface card	• 16 * 10GE uplink per card • 16 * 10GE uplink per card
Subscriber card density	• GPON card: 16 ports per card • XG-PON card: 16 ports per card • XGS-PON card: 16 ports per card • XG-PON & GPON Combo PON card: 16 Combo PON ports per card • XGS-PON & GPON Combo PON card: 16 Combo PON ports per card • Any-PON card: 16 Any-PON ports per card • 10G-EPON card: 16 ports per card • 10GE P2P card: 16 ports per card • GE/FE P2P card: 24/48 ports per card
Clock synchronization interface	• 2 * 120 Ω BITS clock input interface/1PPS+ToD time input interfaces • 1 * 120 Ω BITS clock output interface/1PPS+ToD time output interface • 1 * out-of-band NM interface • 1 * public/maintenance serial port
PON Features	
GPON	• GPON is compliant to ITU G.984.x • Support up to 1:128 optical split ratio • Support OLS
XG-PON	• XG-PON is compliant to ITU G.987.x and G.988 • Support up to 1:256 optical split ratio • Support OLS • Type B/C optical link protection • Support FEC • Support AES-128
XGS-PON	• XGS-PON is compliant to ITU-T G.9807.1 and G.988 • Support up to 1:256 optical split ratio • Support OLS • Type B/C optical link protection • Support FEC • Support AES-128
Combo PON	• Each port integrates GPON optical module, XGPON/XGS-PON optical module and WDM1r • Support up to 1:128 optical split ratio • Support OLS • Type B/C optical link protection • Support FEC • Support AES-128
L2/L3 Features	
L2 Features	• Access control: MAC filtering, ACL • L2-port: physical Ethernet ports, logical Vports and aggregation ports, support L2 services and TPID configuration • VLAN: 1:1 VLAN, N:1 VLAN, flexible QinQ, VLAN bridge, TLS VLAN, M-VLAN, VLAN reuse • 512K MAC address, MAC address management, permanent MAC, MAC address aging/learning/query/number limit • Uplink protocol: STP/RSTP/MSTP, LACP
L3 Features	• Basic routing: unicast routing forwarding, static route, IP based load balance, ECMP • Dynamic routing: RIPv1/v2, OSPFv2, BGP4, IS-IS v2, Graceful Restart, MD5, etc • DHCPv4: DHCP relay/proxy/snooping, Option 82, Option 60 • L3 interfaces: VLAN L3 routing, Loopback • ARP: ARP protocol, ARP Proxy • IPv6 basic features and ND • Support BFD for IPv4/IPv6 routing protocol， including static/OSPF/ISIS/BGP

QoS Features
• Queue & scheduling mechanism: SP, WRR/DWRR, and SP+WRR • DSCP labeling and relabeling • Traffic statistics • H-QoS • Stream classification, rate limiting, shaping and priority setting • Congestion Avoidance: tail drop, color based RED, WRED • Configuration of CIR/PIR/CBS/PBS/CM, TrTCM (Two Rate Three Color Marker)
Network Slice
• Supports exclusively occupying the PON card and the P2P Ethernet card • Supports exclusively occupying the PON port and Ethernet physical port • Supports sharing PON port by multi-slices and assignment based on ONU • Supports the same user access/uplink /Ethernet convergence/Multicast/IP convergence/QoS/Security functions as the traditional OLT

MPLS	
MPLS basic function	• Label distribution using LDP • Label distribution mode configuration – DU/DoD • Label retention mode – Liberal/Conservative • Label control mode – Independent/ Ordered • LDP Extension for Inter - Area LSP • Explicit null configuration (PHP control) • Graceful Restart • MD5 encryption on LDP session
PWE3 basic function	• Dynamic PW • PW type configuration negotiation – ETH • VCCV configuration negotiation • Control word enable negotiation • PW ingress MPLS TC to AC VLAN CoS mapping • PW egress AC VLAN CoS to MPLS TC mapping • PSN VLAN on network side inherits CoS from MPLS label and AC VLAN
L2VPN - Ethernet VPLS/VPWS service	
1:1 PW redundant protection	
MPLS OAM	

Security Features	
Network security	• Broadcast/multicast flooding rate limitation • Downstream ARP filtering • Forwarding panel protocol packet rate limit • DHCP anti-spoofing • Anti-DoS attacking • ARP/IP anti-spoofingIP Source Guard • Basic ACL and IPv6 ACL
Service security	• DHCP service security • MAC address anti-drifting • Port isolation: Uplink port/ User port • Broadcast packets separation based on VLAN
System security	• L4 port disable • CPU protocol packet rate limit and scheduling

OAM Features
• Management protocol and interface: CLI, Telnet/SSHv2, SNMP v1/v2/v3, IGMP/MLD proxy/snooping model, alarm and performance model • Performance statistic and diagnosis • Remote firmware download and upgrade • Environment detecting, control and alarm • Ethernet OAM: 802.1ag • System fault auto-recovery and performance detection
Multicast
• IGMP snooping, proxy, router (v1/v2/v3) • MLD v1/v2 • MVLAN: 4K Multicast VLAN • Multicast snooping/proxy, router modes • Enabling and disabling protocols globally or based on VLAN • ASM/SSM mode based on IGMPv3 and MLDv2 • Less than 20 ms channel zapping delay • SCB multicast forwarding and L3 multicast forwarding • PIM-SM, PIM-SSM

VxLAN	
Basic VxLAN functions	• PIM-SM, PIM-SSM • Learning/aging MAC and VTEP IP • Multiple AC type: port (PON port, vport), S-Vlan, SVlan+C-Vlan • Support IPv6 • VTEP port associated IGMP • ARP suppression
Configuration function	• VLAN configuration • Status reporting • Information Query • Static MAC Configuration • ARP suppression Configuration

Environment

- Operating temperature: -40 ℃ ~ 65 ℃ for overall unit
- Starting up temperature: ≥ -25℃
- Operating humidity: 5% ~ 95%, non-condensing
- Altitude: ≤ 4000 m
- Air pressure: 70 kPa~106 kPa

Power Supply

Working voltage: -48 V (±20%), or -60 V (±20%)

Dimensions

- 21" shelf: 486.1 mm (H) * 535 mm (21”) (W) * 288.5 mm (D)
- 19" shelf: 486.1 mm (H) * 482.6 mm (19”) (W) * 288.5 mm (D)
- 21" Empty shelf: 21 kg, full configuration: < 58 kg
- 19" Empty shelf: 18 kg, full configuration: < 52 kg