

# ZXA10 C300 Optical Access Platform - Official Technical Overview & Hardware Datasheet

## EXECUTIVE SUMMARY

The ZTE ZXA10 C300 is a carrier-grade Optical Line Terminal (OLT) platform that sets the benchmark for next-generation optical access networks. As the world's first future-proof, high-capacity optical access platform, it is engineered to meet the stringent demands of mass fiber roll-outs while delivering exceptional economic efficiency. This unified platform supports a comprehensive array of access technologies, including GPON, EPON, P2P, and 10G EPON, ensuring a seamless evolutionary path to future standards like NG-PON2. Designed for high-density, high-availability service delivery, the ZXA10 C300 provides a robust foundation for HSI, VoIP, TDM, IPTV, and mobile backhaul services. This document provides a detailed technical overview and hardware datasheet for the ZXA10 C300, highlighting its architectural design, key hardware features, and comprehensive technical specifications.



## ARCHITECTURE & CHASSIS DESIGN

The ZXA10 C300 is a highly modular, chassis-based platform built on a fully redundant 400Gbps backplane, delivering up to 20Gbps of throughput per service slot . It is available in two industry-standard chassis configurations to suit diverse central office environments:

- 19-Inch (IEC) Chassis: Occupies 21 slots and is designed for standard 19-inch equipment racks .
- 21-Inch (ETSI) Chassis: Occupies 23 slots and is designed for wider 21-inch ETSI racks, offering increased capacity .

Both chassis share a common architectural philosophy, with clearly defined functional zones for power, main control, service, uplink, and public interface

cards. The system incorporates a sophisticated cooling mechanism with a 1U fan tray that uses forced-air exhaust. Fan speed is dynamically adjusted based on real-time temperature monitoring, optimizing acoustic performance and extending the operational lifespan of the equipment .

## HARDWARE FEATURES

1. High-Performance Switching Fabric: At the heart of the ZXA10 C300 is a high-reliability, non-blocking switching architecture. The system can be configured with two main control cards (SCXL/SCXM) operating in a 1:1 redundancy mode for maximum system availability .

2. Universal Service Slots: The platform features universal line card slots, providing exceptional deployment flexibility. A single slot can accommodate a variety of service cards, including PON (GPON/EPON), P2P, and TDM interface cards .

3. Comprehensive Interface Portfolio: The ZXA10 C300 offers a complete range of interfaces for any access network scenario:

- Subscriber-Side Interfaces: Supports high-density GPON and EPON cards with up to 8 ports per card, as well as 16-port P2P cards and 4-port 10G EPON cards .

- Network-Side Interfaces (Uplinks): Provides a variety of uplink options, including 4x10GE, 4/8/16xGE, and TDM uplinks such as STM-4/OC-12 and STM-1/OC-3 .

4. Advanced Redundancy & Reliability: The chassis supports power supply redundancy (1+1) and optical link protection (Type B and Type C), ensuring carrier-grade reliability for critical services .



## COMPLIANCE & STANDARDS

The ZXA10 C300 is engineered to meet the most rigorous industry standards and certifications, ensuring interoperability and operational excellence in global telecom networks.

- PON Standards: Fully compliant with IEEE 802.3ah (EPON), ITU-T G.984.x (GPON), and IEEE 802.3av (10G EPON) .
- Layer 2/Layer 3 Features: Supports a full suite of Layer 2 and Layer 3 protocols, including 802.1Q VLAN, 802.1ad (QinQ), STP/RSTP/MSTP, link aggregation (802.3ad), and static/dynamic routing .
- Quality of Service: Implements comprehensive QoS mechanisms with 8 queues per port, advanced scheduling algorithms (SP, WRR, SP+WRR), and DiffServ to guarantee service differentiation for voice, video, and data .
- Environmental: The system is designed to operate reliably in a wide range of environmental conditions, adhering to strict temperature and humidity specifications for central office equipment.

## TECHNICAL SPECIFICATIONS

Parameter	Specification
Chassis Form Factor	19-inch (21 slots) / 21-inch (23 slots)

Switching Capacity	400 Gbps (Redundant Backplane)
Per-Slot Throughput	20 Gbps
Power Supply	1+1 Redundant, -48V DC or AC
Operating Temperature	-5°C to +45°C
Operating Humidity	5% to 95%, non-condensing
GPON Port Density (Max)	128 ports per chassis (16 slots x 8 ports)
EPON Port Density (Max)	128 ports per chassis (16 slots x 8 ports)
Uplink Interface Options	4x10GE, 4/8/16xGE, STM-4/OC-12, STM-1/OC-3

## ORDERING OPTIONS

The ZXA10 C300 is available in a highly configurable modular form. The main ordering options are based on the chassis type (19-inch or 21-inch) and the specific line cards and accessories required for the deployment.

- Chassis: 19-inch (21-slot) or 21-inch (23-slot) chassis with integrated backplane.
- Main Control Cards: SCXL or SCXM switch and control boards for system

management and switching.

- Line Cards: A variety of GPON (e.g., 4-port, 8-port), EPON (e.g., 4-port, 8-port), P2P, TDM, and 10G EPON cards.
- Uplink Cards: Ethernet uplink cards (e.g., 4xGE, 4x10GE) and TDM uplink cards.
- Power Supply Units: 1+1 redundant AC or DC power supply modules.
- Accessories: Fan trays, cable management kits, and blank panels.

For detailed product ordering information, including specific part numbers and configurations, please contact your ZTE sales representative.

[IMAGE\_2]