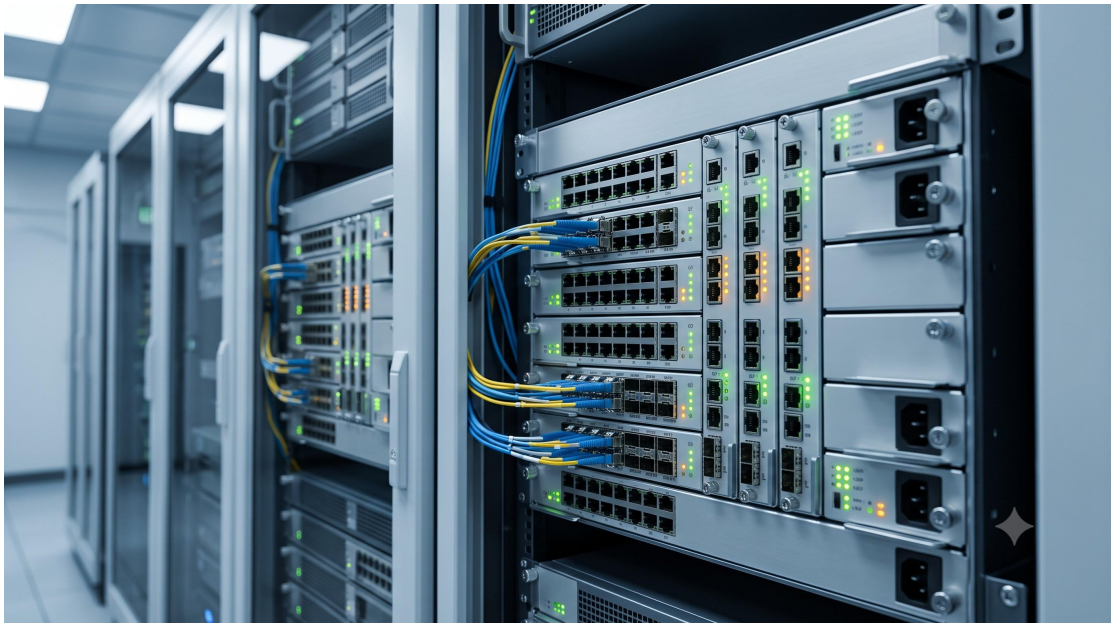
Huawei MA5608T Mini-OLT - Official Technical Overview & Hardware Datasheet

PRODUCT OVERVIEW

The Huawei SmartAX MA5608T is a compact, high-performance Mini-OLT designed to address Fiber-to-the-Premise (FTTP) and deep fiber deployment scenarios where traditional, larger chassis-based OLTs are impractical. As a key component of Huawei's SingleFAN solution, the MA5608T extends carrier-grade features and performance to space-constrained environments, enabling operators to deliver high-bandwidth Triple-Play services and business-class leased lines with maximum efficiency.



HARDWARE ARCHITECTURE & SILICON

The MA5608T features a 2U high, front-access chassis with a modular design,

making it ideal for deployment in outdoor cabinets, building basements, and remote equipment rooms. It is built upon a high-capacity backplane with a switching capacity of up to 720 Gbit/s, ensuring non-blocking performance for all connected services. The system is designed for high reliability with support for dual main control boards (MCUD/MCUD1) in active/standby or load-sharing modes. Each slot supports up to 10 Gbit/s bandwidth in active/standby mode and 20 Gbit/s in load-sharing mode, providing a robust foundation for high-density PON and Ethernet access.

KEY FEATURES & ROUTING LOGIC

- Platform Versatility: Can be deployed as a Mini-OLT supporting GPON, 10G GPON, EPON, and 10G EPON access, or as a Mini-DSLAM for ADSL2+, VDSL2, SHDSL, and POTS services, offering a single, flexible platform for diverse access scenarios.
- High-Density Access: Supports up to 32 GPON/EPON ports, 8 x 10G GPON ports, or 16 x 10G EPON ports in a single chassis, enabling service for up to 2,048 subscribers.
- Carrier-Grade Reliability: Designed with full redundancy for the control and power modules. It supports dual power inputs (AC/DC) and comprehensive network protection mechanisms including Type B/C/D PON protection and Type C dual-homing, ensuring high network availability for mission-critical

services.

- Integrated Routing & Switching: Integrates the functionality of an aggregation switch and edge router, simplifying network architecture. The MCUD control board features a 256 Gbit/s switching capacity and supports IPv4/IPv6 dual-stack, VRF (L3 VPN), and comprehensive QoS mechanisms, including H-QoS.

- Extended Temperature Range: Engineered to operate reliably in harsh environments with a working temperature range of -40°C to +65°C, making it suitable for outdoor and unheated indoor deployments.

- Energy-Efficient Design: Incorporates intelligent fan speed adjustment and the ability to automatically power off idle boards, minimizing operational expenses and supporting green network initiatives.



COMPLIANCE & STANDARDS

The Huawei MA5608T is designed to meet the rigorous standards of global telecommunications networks. Compliance includes, but is not limited to, the following industry standards and certifications:

- UL Listed
- FCC
- NEBS Level 3
- MEF Standards for Carrier Ethernet

TECHNICAL SPECIFICATIONS

Parameter	**Specification**
Form Factor	2U Standard / Modular Chassis, 88.1mm x 442mm x 244.5mm (HxWxD)
Weight (Empty Chassis)	3.55 kg (7.8 lbs)
Switching Capacity (Backplane)	720 Gbit/s
Switching Capacity (MCUD Control Board)	256 Gbit/s (Active/Standby), 512 Gbit/s (Load Sharing)
Maximum Access Ports	32x GPON/EPON, 8x 10G GPON, 16x 10G EPON, or 96x FE/GE

Power Supply Options	Dual Hot-Swappable Redundant: DC -38.4V to -72V, AC 100V to 240V
Maximum Power Consumption (Typical Configuration)	~152 W - 185.5 W
Operating Temperature	-40°C to +65°C
Operating Humidity	5% to 95% RH, non-condensing
Altitude	Up to 4,000 meters
Control Board CPU	MCUD/MCUD1 with integrated 4x GE optical uplinks
MAC Address Table	32,768
IPv4 Routing Table	5,120

The MA5608T is a foundational building block for next-generation FTTx networks, offering a unique combination of compact size, carrier-class performance, and robust reliability for deep fiber and remote access scenarios.

ORDERING SKU INFORMATION

The SmartAX MA5608T chassis is typically ordered as a base unit, populated with the necessary control boards, power supply units, and service interface boards. Key ordering components include:

- Chassis: MA5608T Enclosure

- Main Control Boards: MCUD, MCUD1 (10G uplink option)

- Power Supply Boards: MPWC (DC), MPWD (AC/DC)

- Service Interface Boards: Various GPON, EPON, 10G PON, POTS, and xDSL boards