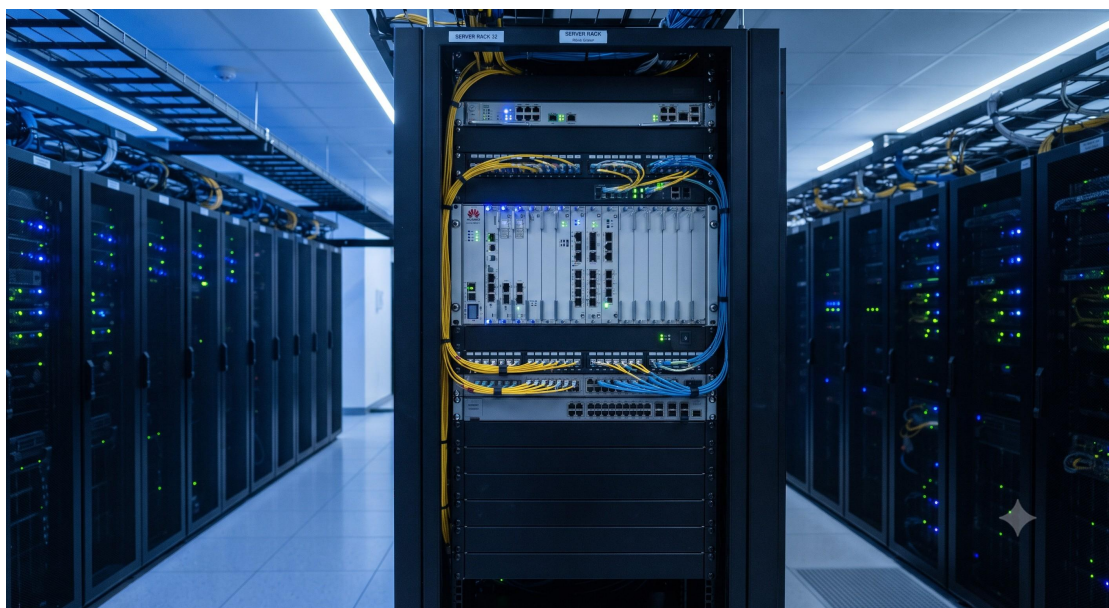


SmartAX MA5608T Compact Equipment Factsheet and Port Matrix

SMARTAX MA5608T COMPACT EQUIPMENT FACTSHEET AND PORT MATRIX

EXECUTIVE SUMMARY

The Huawei SmartAX MA5608T is a high-performance, 2U high compact box-type Optical Line Terminal (OLT) designed for the SingleFAN access solution. It is engineered to address the challenges of small-capacity FTTx deployment scenarios, including remote township coverage, limited equipment room space, and scarce backbone fiber resources . By enabling a maximum PON coverage distance of up to 100 km when paired with a central OLT and supporting up to 2000 subscribers, the MA5608T offers a cost-effective and rapid deployment solution for carriers .



SYSTEM ARCHITECTURE AND CHASSIS DESIGN

The MA5608T features a compact 2U high, 19-inch rack-mountable chassis, facilitating seamless integration into standard telecom racks . Its architectural design emphasizes high reliability and investment protection through full compatibility with service boards used in larger MA5600T series OLTs, thereby reducing operator inventory costs .

The system is engineered for high availability, supporting dual main control board and dual power supply redundancy . It incorporates advanced protection mechanisms, including Type B, Type C, and Type D PON protection, as well as Type C dual-homing, to ensure service continuity for high-reliability applications .

HARDWARE FEATURES AND CAPACITY

Despite its compact size, the MA5608T delivers substantial access capacity and performance. It serves as a versatile platform, functioning as either a mini-OLT or a mini-DSLAM. As a mini-OLT, it supports GPON, 10G GPON, EPON, and 10G EPON access modes, enabling a smooth evolution to next-generation PON technologies .

- * ****High-Density Ports:**** The system supports up to 32 GPON/EPON ports or 96 FE/GE downlink ports .
- * ****Upstream Connectivity:**** It provides flexible upstream options, including 10 GE optical and GE optical/electrical ports .
- * ****Switching Capacity:**** The backplane bus provides a switching capacity of up to 720 Gbit/s, with the control board delivering up to 512 Gbit/s, ensuring non-blocking performance for demanding services .

ENVIRONMENTAL AND PHYSICAL SPECIFICATIONS

The MA5608T is designed to operate reliably in a wide range of environmental conditions, making it suitable for deployment in uncontrolled environments such as outdoor cabinets and street-side enclosures .

TECHNICAL SPECIFICATIONS

Parameter	Specification
Form Factor	2U Chassis (19-inch rack-mountable)
Dimensions (H x W x D)	88 mm x 442 mm x 233.5 mm
Backplane Bus Switching Capacity	720 Gbit/s
Control Board Switching Capacity	Up to 512 Gbit/s
Maximum GPON/EPON Ports	32

Maximum 10G GPON Ports	8
Maximum 10G EPON Ports	16
Maximum FE/GE Downlink Ports	96
Upstream Ports	10 GE optical and GE optical/electrical ports
Power Supply	DC: -38.4V to -72V, 1+1 Redundant
Operating Temperature	-40°C to +65°C
Redundancy	Dual Main Control Boards, Dual Power Supplies

OPERATIONAL SPECIFICATIONS

- * **Form Factor:** 2U, 19-inch rack-mountable chassis .
- * **Dimensions (H x W x D):** 88 mm x 442 mm x 233.5 mm .
- * **Operating Temperature:** -40°C to +65°C .
- * **Operating Voltage (DC):** -38.4V to -72V .
- * **Redundancy:** Supports dual main control boards and dual power supply modules .
- * **Access Capacity:** Up to 32x GPON/EPON or 8x 10G GPON/16x 10G EPON .
- * **Backplane Bus Switching Capacity:** 720 Gbit/s .

- * **Control Board Switching Capacity:** Up to 512 Gbit/s .
- * **Uplink Ports:** 10 GE optical and GE optical/electrical ports .

DEPLOYMENT TOPOLOGIES AND MANAGEMENT

The MA5608T is a key component in Huawei's SingleFAN solution, designed for efficient FTTx network buildouts. It is commonly deployed in a topology with a MikroTik or similar core router, where it aggregates traffic from multiple ONUs via a splitter . The device supports both in-band and out-band network management, utilizing protocols like SNMP V3 for secure integration with network management systems such as the U2000 . Commissioning involves a structured process covering hardware checks, power supply verification, and interconnection testing to ensure stable and reliable operation .

