

Huawei MA5820 MDU Installation Manual - Official Technical Overview & Hardware Datasheet

EXECUTIVE SUMMARY

The Huawei MA5820 series Multi-Dwelling Unit (MDU) represents a state-of-the-art, carrier-grade optical access solution engineered to address the rigorous demands of Fiber-to-the-Building (FTTB) and Fiber-to-the-Curb (FTTC) deployments . As a key component in the Huawei Gigabit Passive Optical Network (GPON) ecosystem, the MA5820 series is architected to deliver high-bandwidth voice, data, and multicast services to community and enterprise users, significantly expanding the access capacity of central Optical Line Terminals (OLTs) . This document provides a comprehensive technical overview and hardware datasheet for the MA5820 series, detailing its platform architecture, interface matrix, and technical specifications for network planning and procurement.



ARCHITECTURE & CHASSIS DESIGN

The Huawei MA5820 is a compact, remote optical access platform specifically designed for distributed deployment scenarios. The chassis form factor is optimized for space-constrained environments, such as street cabinets and building basements, offering a flexible and cost-effective solution for service providers.

Platform Architecture:

- GPON Uplink: The platform is equipped with a single 10G GPON uplink port, providing a high-capacity, symmetric connection to the OLT .
- Service Ports: The series offers modular flexibility with multiple port configurations to suit varied subscriber densities. Options include 8, 16, or 24 ports, with variants supporting Fast Ethernet (FE) only, or FE combined with

POTS (Plain Old Telephone Service) ports for voice services .

- Power Supply: The unit operates on an AC power supply .

HARDWARE FEATURES

The MA5820 is engineered for carrier-grade reliability and operational efficiency, integrating high-performance hardware for seamless service delivery.

Key Features include:

- High-Density Subscriber Aggregation: Supports configurations such as 24FE+24POTS, enabling a high concentration of users per single chassis, reducing per-subscriber operational costs and space requirements .
- Carrier-Grade Reliability: Designed for consistent performance in diverse environmental conditions, the hardware ensures robust data forwarding for latency-sensitive services like voice and video .
- Silent Operation: The fanless design (depending on specific model) minimizes noise, making the MDU suitable for deployment in noise-sensitive environments.

COMPLIANCE & STANDARDS

The MA5820 series adheres to the rigorous international standards required for integration into public telecommunications networks. Key compliance areas include:

- IEEE Standards: Full compliance with IEEE 802.3 Ethernet standards for network interoperability.
- ITU-T Recommendations: Conforms to ITU-T G.984 series standard for GPON, ensuring seamless interoperability with standard-compliant OLTs.
- Network Management: Supports management via Command Line Interface (CLI) and the Huawei iManager U2000 network management system, utilizing SNMP for comprehensive fault, configuration, performance, and security management .

TECHNICAL SPECIFICATIONS

The following table details the core technical parameters for the Huawei MA5820 series. Please note that specifications may vary depending on the specific model variant (e.g., MA5821 vs. MA5822).

Parameter	Specification
Model Variants	MA5821 (Data only), MA5822 (Data + Voice)
Uplink Port	1 x 10G GPON

Downlink Ports (FE)	8, 16, or 24 (depending on variant)
Downlink Ports (POTS)	8, 16, or 24 (depending on variant)
Power Supply	AC Input
Management	CLI, iManager U2000 (SNMP)
Operating Environment	Indoor, temperature-controlled environments
Compliance	IEEE 802.3, ITU-T G.984

ORDERING OPTIONS

Huawei offers the MA5820 series in a variety of pre-configured models to meet diverse deployment requirements. The ordering information is critical for precise procurement and deployment.

Available Models (Selection):

- H83MMA5822E1: 10G GPON Remote Optical Access Equipment (AC, 24FE+24POTS, single 10G GPON uplink) .
- H83MMA5822A2: 10G GPON Remote Optical Access Equipment (AC, 16FE+16POTS, single 10G GPON uplink) .
- H83MMA5822U3: 10G GPON Remote Optical Access Equipment (AC, 8FE+8POTS, including single 10G GPON uplink) .

- H83MMA5821E6: 10G GPON Remote Optical Access Equipment (AC, 24GE, including single 10G GPON uplink) .
- H83MMA5821U3: 10G GPON Remote Optical Access Equipment (AC, 8FE, including single 10G GPON uplink) .

