OptiXaccess MA5801S-GP16-H2 Product Datasheet

The OptiXaccess MA5801S-GP16-H2 is a compact outdoor blade OLT. It provides 16 GPON ports and can be flexibly deployed at mobile sites to implement fixed-mobile convergence and fast network construction.

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Product Features

High Density with 16 GPON Ports

Provides 16 GPON service ports and works with the GPON optical module to implement GPON access.

Pre-connected Without Splicing

The end-to-end pre-connection makes devices plug-and-play and eliminates the need of fiber splicing.

Light and Compact

The device weighs no more than 15 kg and has a volume of only 12 L. A single person can install the device.

Flexible Deployment

The device can be mounted on a pole or wall, and can be combined with a BBU. One person can deploy one device in 15 minutes.

Application Scenario

Driven by new services such as 4K, virtual reality (VR), home networking, and network cloudification, fiber access becomes an important measure for countries around the world to popularize broadband networks. The fiber access industry is booming. As fiber access nodes continue to move downwards, OLTs are also moving closer to end users, and deployment scenarios become more complex and diversified.

Based on the MA5800, the MA5801S features a distributed architecture and provides multiple FTTx solutions to meet the requirements of cost-effective and efficient network construction. It can be flexibly deployed in fast fixed mobile convergence (FMC), national broadband coverage, and enterprise all-optical campus scenarios.

# Appearance

Door closed

Door open
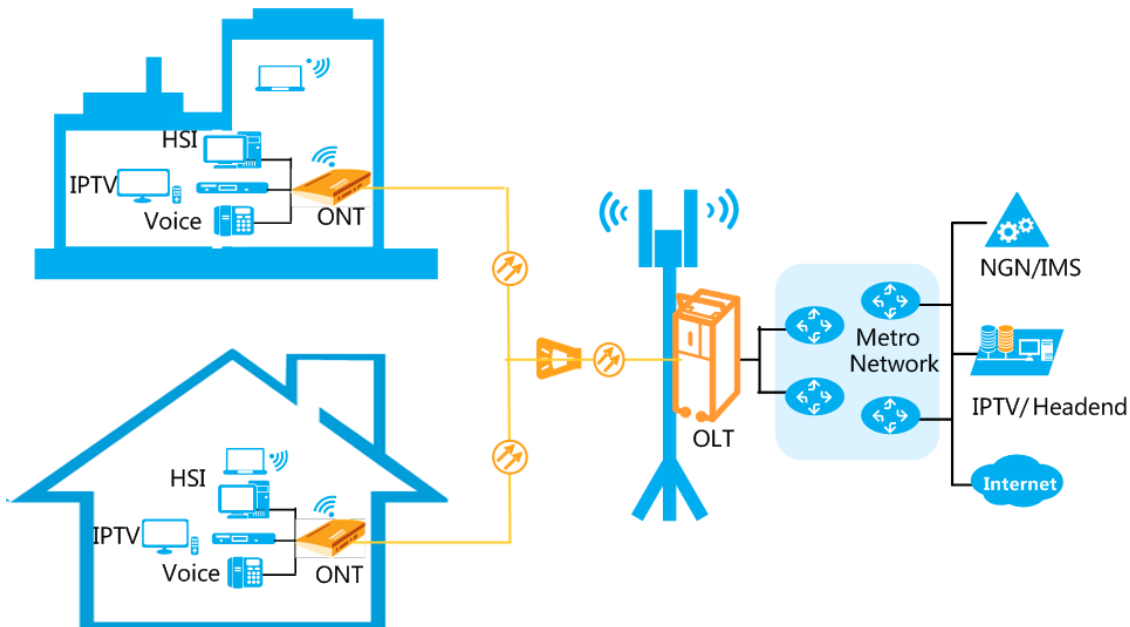
Working Principle
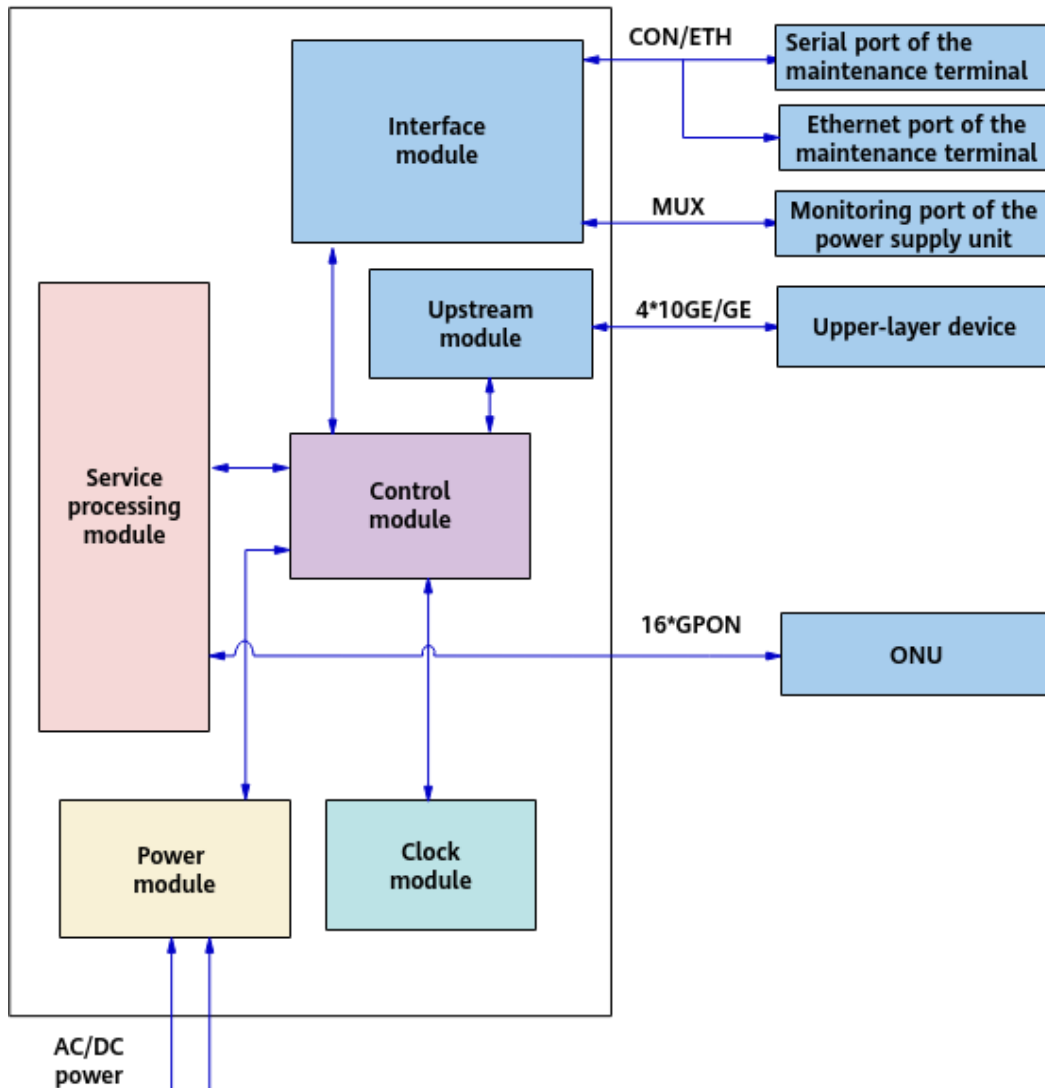
- **Control module**: It is the core of the system control and service switching and aggregation. It can also function as the management and control core of the integrated network management system (NMS).
- **Upstream module**: It can provides four 10GE/GE upstream ports.
- **Service processing module**: It works together with the optical network unit (ONU) to provide GPON access services.
- **Interface module**:   It provides the maintenance network port or serial port, and supports monitoring of power supply unit.
- **Clock module**: It provides clock signals for each functional module of the board.
- **Power module**: It supplies power to each functional module of the board.

External Ports

Internal ports

Bottom ports
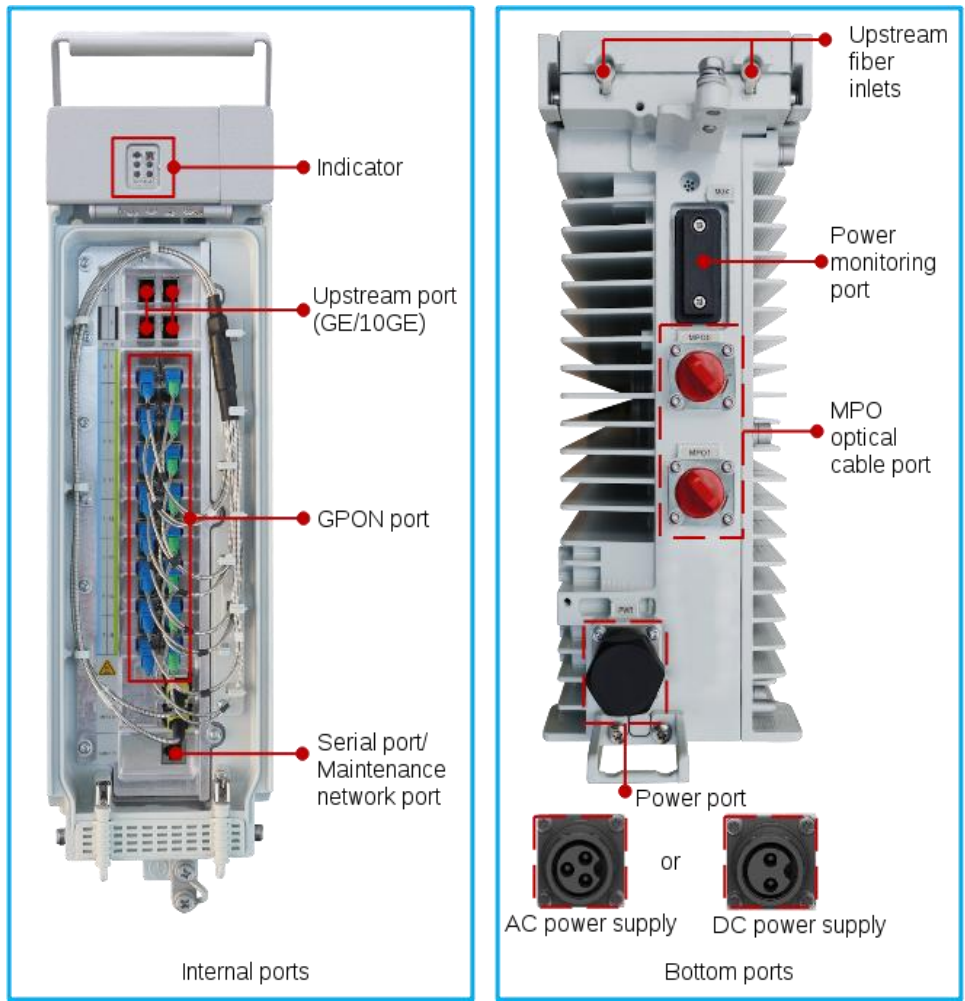
Port Silkscreen	Port Name	Connector Type	Description	Applicable Cables
GE/10GE (0-3)	Upstream port (GE/10GE)	eSFP/SFP+	Provides 4 GE/10GE optical ports for upstream transmission.	LC fiber
PON (0-15)	GPON port	SFP	The GPON ports are pre-connected with fibers before delivery.	SC fiber
CON/ETH	Maintenance serial port/network port	RJ45	RS-232 maintenance serial port or 10/100 Base-T maintenance network port, which can be connected to the serial port or network port of a maintenance terminal.	Network cable
MUX	Power monitoring port	D26	Connects to the COM_ALM port at the bottom of the power supply unit (PSU).	Monitoring cable between the MA5801S and the PSU
MPO (0-1)	MPO optical port	Multi-fiber Push On (MPO)	GPON ports 0-7 correspond to the MPO0 port, and GPON ports 8-15 correspond to the MPO1 port.	8-fiber MPO cable
PWR	Power port	AC power supply:	Connects to an AC or DC	AC power supply: three-

Port Silkscreen	Port Name	Connector Type	Description	Applicable Cables
		RC3SM(S)-II DC power supply: RC2SM(S)	power supply.	core AC power cable DC power supply: two-core DC power cable

Indicators

Silkscreen	Name	Color	Status	Indication
PWR	Indicates the power supply status.	Green	Steady on	The power input is in the normal state.
		-	Off	There is no power input or the power supply is faulty.
RUN/ALM	Indicates the service running	Green	Blinking slowly (on for 1s and then off for 1s)	Services are normal.

Silkscreen	Name	Color	Status	Indication
	status.	Green	Blinks green quickly (0.25s on and 0.25s off)	A program is being loaded.
		Orange	Blinking	A high-temperature alarm has been generated.
		Red	Steady on	Services are faulty.
		Red	Blinking (on for 0.25s and off for 0.25s)	Services are starting.
GE/10GE (0-3)	Indicates the link/data status.	Green	Steady on	A connection is set up on the port.
		Green	Blinking	Data is being transmitted.
		-	Off	No connection is set up on the port.

Product Specifications

Item	Description
Dimensions (H x W x D)	400mm×300mm×120mm
Weight	About 15 kg
Power supply mode	• DC power supply • AC power supply
Rated voltage	• DC power supply: –48 V to –60 V • AC power supply: 100–240 V
Maximum input current	• DC power supply: 4 A • AC power supply: 1.5 A
Protection rating	IP65
Surge protection level	AC power port: 20 kA in difference and common modes DC power port: 10 kA in differential mode and 20 kA in common mode
Operating temperature	–40°C to +50°C (with solar radiation) ; minimum startup temperature: –25°C
Operating humidity	5% RH to 95% RH
Atmospheric pressure	70 kPa to 106 kPa
Altitude	Below 4000 m **NOTE** The air density varies with the altitude, which affects the heat dissipation capability of devices. Therefore, the operating temperature of the device changes with the altitude.
System forwarding capacity	140 Gbit/s
MAC addresses	32768
Connected ONTs	1024
IPv4 routing table	8192

Item	Description
IPv6 routing table	4096
ARP table	16384
GE/10GE upstream ports	4
Service ports	16 GPON
Maximum distance difference between two ONUs under the same PON port	40 km
System reliability specifications	System availability for the typical configuration: > 99.999%
	Mean time between failures (MTBF): about 68 years
	NOTE
	Due to different network environments and different boards used by devices, the preceding MTBF (68 years) of the MA5801S is only for reference. The preceding values are only for reference. For details, contact the related Huawei engineers.
Power consumption	Static Power Consumption:
	• DC power supply: 50 W
	• AC power supply: 51 W
	Typical Power Consumption:
	• DC power supply: 85 W
	• AC power supply: 88 W
	Maximum Power Consumption:
	• DC power supply: 90 W
	• AC power supply: 94 W
	NOTE
	The power consumption of the device is calculated based on the following conditions:
	• Static power consumption: 25°C, no optical module in any optical port, and no service running.
	• Typical power consumption: 25°C, 4 x 10GE upstream transmission, 16 x GPON ports, full service configuration, and full traffic.
	• Maximum power consumption: 50°C, 4 x 10GE upstream transmission, 16 x GPON ports, full service configuration, and full traffic.

Functions and Features

Layer 2 features	QoS
VLAN+MAC forwarding	Traffic classification
SVLAN + CVLAN forwarding	Priority processing
PPPoE+	trTCM-based traffic policing
DHCP option82	WRED
Layer 3 features	Traffic shaping
Static route	HQoS
RIP/RIPng	PQ/WRR/PQ+WRR
OSPF/OSPFv3	ACL
IS-IS	**IPV6**

BGP/BGP4+	IPv4/IPv6 dual stack
ARP	IPv6 L2 and L3 forwarding
DHCP relay	DHCPv6 relay
VRF	**System reliability**
Multicast	GPON type B/type C protection
IGMP v2/v3	ERPS (G.8032)
IGMP Proxy/Snooping	MSTP
MLD v1/v2	**Aggregation**
MLD Proxy/Snooping	Aggregation management
VLAN-based IPTV multicast	
PIM-SSM and PIM-SM	

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