**Huawei GPON OLT Specifications summary:**

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| --- | --- | --- | --- |
| Specification | **MA5600T** | **MA5603T** | **MA5608T** |
| Dimensions (H x W x D) | 447 mm x 490 mm x 275.8 mm | 263 mm x 442 mm x 283.2 mm | 88 mm x 442 mm x 233.5 mm |
| Operating Environment | –25°C to +55°C5% RH to 95% RH | –40°C to +65°C5% RH to 95% RH | –40°C to +65°C5% RH to 95% RH |
| Power | –48V DC power inputDual-power supply protectionOperating voltage range of –38.4V to –72V | –48V DC power inputDual-power supply protectionOperating voltage range of –38.4V to –72V | –48V DC power inputDual-power supply protectionOperating voltage range of –38.4V to –72V |
| Switching Capacity — Backplane Bus | 3.2 Tbit/s  | 1.5 Tbit/s | 720 Gbit/s |
| Switching Capacity — Control Board | 1,920 Gbit/s | 960 Gbit/s | 512 Gbit/s |
| Access Capacity | 64 x 10G GPON256 x GPON768 x GE | 24 x 10G GPON96 x GPON288 x GE | 8 x 10G GPON32 x GPON96 x GE |
| Port Type | Upstream ports: 10 GE optical and GE optical/electrical portsService ports: GPON optical port, P2P FE optical port, P2P GE optical port, and Ethernet optical port |
| System Performance | Layer 2/Layer 3 line-rate forwardingStatic route, RIP, OSPF, and MPLSClock synchronization schemes: BITS, E1, STM-1, Ethernet clock synchronization, 1588v2, and 1PPS + ToDMaximum split ratio of 1:256Maximum logical distance between devices: 60 km |

**Huawei MA5600T OLT:**

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**MA5600T Specifications:**

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| --- | --- | --- |
| **Item** | **MA5600T(ETSI)** | **MA5600T(IEC)** |
| Board configuration | 2 slots for control boards16 slots for service boards1 slot for the universal interface board2 slots for upstream interface boards2 slots for power interface boards. | 2 slots for control boards14 slots for service boards1 slot for the universal interface board2 slots for upstream interface boards2 slots for power interface boards. |
| Switching capacity of the backplane bus | 3.2 Tbit/s |
| Supported control board and its switching capacity | SCUN: 480 Gbit/s in active/standby mode or 960 Gbit/s in load-sharing modeSCUH: 960 Gbit/s in active/standby mode or 1920 Gbit/s in load-sharing modeSCUB: 48 Gbit/sSCUF: 128 Gbit/s |
| System Layer 2 packet forwarding rate | SCUN: 480 Gbit/s in active/standby mode or 960 Gbit/s in load-sharing modeSCUH: 960 Gbit/s in active/standby mode or 1920 Gbit/s in load-sharing modeSCUB: 48 Gbit/sSCUF: 128 Gbit/s |
| Switching/Forwarding delay | Short forwarding delay: The 100 Mbit/s Ethernet port sends the 64-byte Ethernet packets at a delay shorter than 20 μs. |
| BER in full load | BER of a port when the port transmits data in full load < 10 e-7 |
| System reliability specifications | System: redundant configuration.System availability for the typical configuration: > 99.999%Mean time between failures (MTBF): about 45 years. NOTEDue to different network environments and a different board used by devices, the above-mentioned MTBF (45 years) of this is only for reference. The average repair time for field replaceable units (FRUs) is about 2 hours. The preceding values are only for reference. For details, contact the related Huawei engineers. |
| Maximum number of ADSL2+ ports in a subrack | 1024 | 896 |
| Maximum number of VDSL2 ports in a subrack | 1024 | 896 |
| Maximum number of EFM SHDSL ports in a subrack | 512 | 448 |
| Maximum number of TDM SHDSL ports in a subrack | 256 | 224 |
| Maximum number of POTS ports in a subrack | 1024 | 896 |
| Maximum number of ISDN BRA ports in a subrack | 512 | 448 |
| Maximum number of ISDN PRA ports in a subrack | 64 | 56 |
| Maximum number of GPON ports in a subrack | 256 | - |
| Maximum number of 10G GPON ports in a subrack | 128 | - |
| Maximum number of EPON ports in a subrack | 256 | 224 |
| Maximum number of 10G EPON ports in a subrack | 128 | 112 |
| Maximum number of P2P FE ports in a subrack | 768 |
| Maximum number of P2P GE ports in a subrack | 768 | - |
| Maximum number of upstream ports (GE ports in the GIU slot) in a subrack | 8 |
| Maximum number of upstream ports (10GE ports in the GIU slot) in a subrack | 4 |
| Maximum number of upstream ports (PON ports in the GIU slot) in a subrack | 2 (in the active/standby mode) |
| Maximum number of extended subracks connected to a master subrack | 32 |
| Operating environment | Operating temperature (indoor cabinet): 1. A cabinet configured with a subrack: -25°C to +65°C2. A cabinet configured with 2 subracks: -25°C to +55°COperating humidity: 5% RH to 95% RHAtmospheric pressure: 61 kPa to106 kPaAltitude: ≤ 4000 m |

**MA5600T Features:**

| **Classification** | **Feature** |
| --- | --- |
| Access features | * 10G GPON access
* GPON access
* P2P access
* ADSL/ADSL2/ADSL2+ access
* VDSL2 access (supporting vectoring)
* ATM SHDSL/EFM SHDSL access
* TDM SHDSL access
 |
| Multicast | * PIM-SSM
* IGMP snooping
* IGMP proxy
* Multicast VLAN management
* Multicast program management
* Multicast user management
* Multicast CAC
* VPLS multicast
 |
| Layer 3 features | * VLAN Layer 3 interface
* ARP
* ARP proxy
* DHCP relay
* DHCP option 60
* Static routing
* RIP dynamic routing
* OSPF dynamic routing
* IS-IS dynamic routing
* BGP dynamic routing
* DHCP proxy
* ECMP
* VRF
* VRRP snooping
 |
| IPv6 | * IPv6 basic feature
* IPv6 QoS
* IPv6 Layer 2 forwarding
* BGP4+
* \*OSPF v3
 |
| Voice service | * VoIP
	+ SIP
	+ H.248
	+ ISDN BRA/PRA access
* FOIP
* MOIP
* POTS voice service
* Issuing voice configurations through OMCI
* R2 PBX access
* H.248/SIP dual upstream transmission
 |
| OAM features | * Remote operation and user management
* Version and data management
* Device exception management
* Service overload control
* ETH OAM(Y.1731)
* RING check
* ANCP
* \*Intelligent site management
* \*Centric Management for GE Remote Extended Subracks in FTTB or FTTC Scenarios
* \*GE upstream commission outside of the site
 |
| Clock features | * BITS access clock synchronization
* Synchronous Ethernet clock
* System internal clock
* Network time synchronization
* Line recovered clock (E1/STM-1/SAToP)
 |
| Control board redundancy | * Load-balancing mode
* Active/Standby mode
 |
| MPLS | * Basic MPLS functions
* MPLS RSVP-TE
* MPLS OAM
* Graceful restart (GR) function of the LDP, RSVP-TE, and PW
* As a P device
* MPLS PW traffic label
* VPLS
 |
| Broadband Layer 2 features | * MAC address management
* MAC address learning
* VLAN attribute management
* Service stream processing
* Layer 2 forwarding policy
* Traffic classification
* VLAN switching policy
* Bridging
 |
| Layer 2 tunnel emulation technology | * TDM PWE3
* ATM PWE3
* ETH PWE3
* Terminating the SAToP service and transmitting the service upstream through the STM-1/E1 port
* Terminating the native TDM service and transmitting the service upstream through the E1/STM-1 port
 |
| QoS | * Priority processing
* Traffic management
* ACL policy
* Congestion management
* HQoS
 |
| Network protection features | * MSTP
* RRPP
* Smart link and monitor link
* Inter-board aggregation
* Ethernet link aggregation (through the LACP protocol)
* BFD
* STM-1 port protection switching
* Redundancy protection
* GPON Type C
 |
| Environment monitoring | * Monitoring parameters: temperature, humidity, water, smoke, MDF, and door status sensor
* Temperature control unit (TCU) management
* Battery online status monitoring and alarm reporting
* SMU power management
 |
| Security | * User security
* System security
* OAM security
* Line security
 |
| System energy conservation | * Energy conservation control
* Energy consumption monitoring
 |

**MA5600T Boards Descriptions:**

| **Board Type** | **Board** | **Full Name** | **Function** |
| --- | --- | --- | --- |
| Control board | H801SCUH | Super Control Unit Board | * System control and management unit
* Local and remote maintenance
* Active/standby switchover
* Load balancing
* Ethernet synchronization
* Built-in 2GB CF card
* GE/10GE/20GE channel to the service board
* Environmental monitoring parameters
* Supports the function of reading the temperature and the high-temperature alarm.
* Four SFP GE/10GE ports for upstream transmission or cascading
 |
| H801SCUN | super control unit board | * System control and management unit
* Local and remote maintenance
* Active/standby switchover
* Load sharing
* GE or 10GE channel to the service board
* Environmental monitoring parameters
* H801CKMC daughter board
* Four GE upstream optical ports with the SFP optical module
 |
| Upstream interface board | H801GICK | 2-port GE optical interface board | * Upstream transmission and cascading
* Two SFP GE optical/electrical ports (auto-adaptation)
* Ethernet clock synchronization
 |
| H801X2CS | 2-port 10GE upstream interface board | * Two 10GE upstream ports
* 10GE synchronous Ethernet
 |
| Universal interface board | H801CITB | combo interface transfer board | * Input and output of external alarms
* Two BITS inputs (this function requires the support of an H801BITSB daughter board)
 |
| Power interface board | H801PAIC | power board | * One -48 V power input
* Current filtering and transient high voltage protection for input power
* Under-voltage detection, input power detection (whether exists or not), and fault detection
* Alarm, board type signal, and presence signal reporting
* ALARM indicator
 |
| Service board | GPON interface board | H802GPBD | 8-port GPON OLT interface board | * Eight GPON SFP ports (one-fiber bi-directional port)
* A maximum of 128 ONTs for each GPON port
* Class B+ and class C+ optical modules
* Received signal strength indicator (RSSI) detection and controlled optical signal transmission of the optical module
* Temperature query and board power-off in case of a high temperature
 |
| H805GPBD | 8-port GPON OLT interface board | * Eight GPON SFP ports (one-fiber bi-directional port)
* A maximum of 128 ONTs for each GPON port
* Class B+ and class C+ optical modules
* Received signal strength indicator (RSSI) detection and controlled optical signal transmission of the optical module
* ONU-based shaping
* Temperature query and board power-off in case of a high temperature
 |
| Combo board | H85BCVME | 48-port VDSL2&POTS combo board | * 48-channel VDSL2 and POTS access service
* Built-in splitter
* Configurable impedance for the POTS port; working with the built-in splitter to support 600-ohm or 900-ohm impedance
* Port protection
* Polarity-reversal accounting, and pulse accounting
* Balanced ringing (unbalanced ringing is not supported)
* POTS metallic loop test (MELT)
* Single-ended loop test (SELT) and dual-ended loop test (DELT)
* ITU-T G.711, ITU-T G.723.1, and ITU-T G.729 codec
* ITU-T T.30 fax and ITU-T T.38 fax
* G.992.1 Annex A/B, G.992.2 Annex A, G.992.3 Annex A/B/L(RE-ADSL2)/M/J, and G.992.5 Annex A/B/M/J
* VDSL2 8a, 8b, 8c, 8d, 12a, 12b, and 17a profiles
* G.INP physical layer retransmission
* VLAN based user bridging
 |
| SPU board | H801SPUB | service processing unit board | * 10 Gbit/s (unidirectional 10 Gbit/s, bidirectional 5 Gbit/s) MPLS switching capability
* One 10GE attachment unit interface (XAUI) to each control board
* Active/standby switchover of the control boards
 |
| Voice board | H802EDTB | 16-port T1 service board | * 16 channels of E1/T1 access services
* Independent upstream and downstream transmission of each channel of E1/T1 clock signals
* Configuration of the Tx clock source of an E1/T1 port
* Specifying the line clock of an E1/T1 port as the system clock source
* Timeslot binding
* TDM PWE3 service
* CPE mode
 |
| P2P interface board | H802OPGD | 48-port GE/FE optical interface board | * 48 (CSFP) or 24 (SFP) channels of GE/FE P2P optical access services
* Cascading and aggregation of DSLAMs or MxUs
* Synchronous Ethernet clock issuing
* Two-channel one-fiber bi-directional CSFP, one-channel two-fiber bi-directional SFP, and one-channel one-fiber bi-directional SFP optical modules
 |
| H802OPGE | 48-port GE/FE optical interface board | * 48 (CSFP) or 24 (SFP) channels of GE/FE P2P optical access services
* Cascading and aggregation of DSLAMs or MxUs
* Synchronous Ethernet clock issuing
* Two-channel one-fiber bi-directional CSFP, one-channel two-fiber bi-directional SFP, and one-channel one-fiber bi-directional SFP optical modules
* 1588v2
* Jumbo frame
 |
| Ethernet service access board | H801ETHB | Ethernet service access board | * Ethernet upstream transmission
* Ethernet cascading
* Eight SFP GE optical modules
* Intra-board aggregation
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