

Huawei SmartAX MA5600T OLT Datasheet



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Overview

Huawei SmartAX MA5600T is the global first OLT which integrates the functionality of aggregation switch and edge router. It can provide high density GPON, 10GPON and Ethernet P2P optical access, triple play service, TDM/ATM/Ethernet leased line services for business customers and high precision clock, and high-density GE/10GE interfaces for cascading remote access equipments. MA5600T helps to simplify network architecture, to improve network reliability and lower TCO essentially.

Models & Appearance

There are three types of frame of MA5600T series product. The large frame has 16 service slots while the middle frame (which named MA5603T) has 6 service slots, the small frame (which named MA5608T) has 2 service slots. The service card and software are all compatible between MA5600T, MA5603T and MA5608T.

MA5600T ETSI

The MA5600T ETSI service subrack provides 23 slots, and has a fan tray at the top.



MA5600T IEC

The MA5600T IEC service subrack provides 21 slots, and has a fan tray at the top.



MA5603T

The MA5603T service subrack provides 13 slots, and has a fan tray at the left.

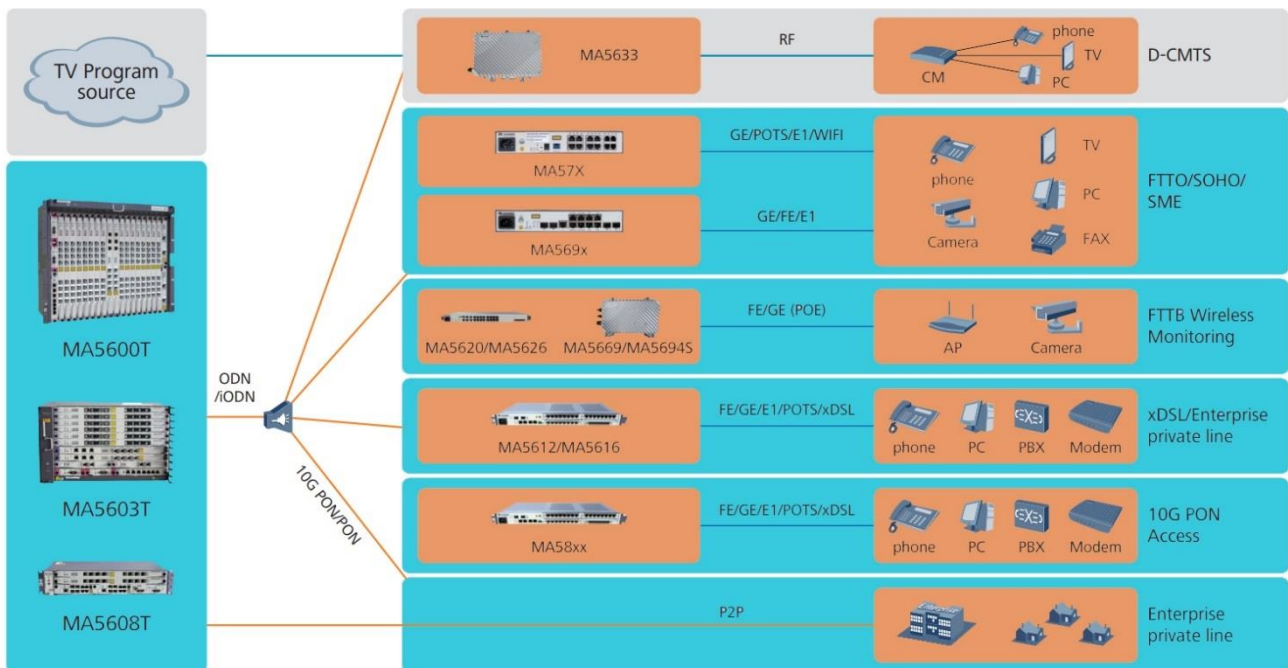


MA5608T

The MA5608T service subrack provides 5 slots, and has a fan tray at the left.



Application Scenarios



Key Features and Benefits

Huawei SmartAX MA5600T provides these benefits:

Convergence and access integration

- Provides super large convergence switching capacity. Specifically, an MA5600T series device supports 3.2 Tbit/s backplane capacity, 1,920 Gbit/s switching capacity, and 512,000 MAC addresses.

- Provides super high-density cascading capability. Specifically, an MA5600T series device supports a maximum of 46 x 10GE or 768 GE services, with no additional convergence switches.

High reliability

- Provides highly reliable networking capabilities and ensures dual-OLT hot backup, remote disaster tolerance, and service upgrades without interruption.
- Provides comprehensive Quality of Service (QoS) functions and supports traffic classification management, priority control, and bandwidth control. The Hierarchical-Quality of Service (H-QoS) function meets various Service Level Agreement (SLA) requirements of commercial customers.
- Provides an End-to-End (E2E) highly reliable design, enabling Bidirectional Forwarding Detection (BFD), Smart Link, Link Aggregation Control Protocol (LACP) redundancy protection and GPON type B/type C line protection in the upstream direction.

Multi-scenario access

- Supports access of multiple E1 private line services, and Native Time-Division Multiplexing (TDM) or Circuit Emulation Services over Packet (CESoP)/ Structure-Agnostic TDM over Packet (SAToP) function.
- Supports the Emulated Local Area Network (ELAN) function and Virtual Local Area Network (VLAN)-based internal traffic exchange, satisfying enterprise and community network application requirements.
- Supports non-convergence access of Internet Protocol television (IPTV) users. One subrack supports 8,000 multicast users and 4,000 multicast channels.

Smooth evolution

- Supports GPON, 10G Passive Optical Network (PON), and 40G PON on a platform, enabling smooth evolution and achieving ultra-bandwidth access.
- Supports IPv4/IPv6 dual stacks and IPv6 multicast, enabling smooth evolution from IPv4 to IPv6.

Energy saving

- Uses special chips for conserving power. Specifically, 16 ports on a GPON board consume less than 73 W of power.
- Supports idle board automatic power-off and intelligent fan speed adjustment, effectively lowering idle board power consumption.

Huawei SmartAX MA5600T provides these key features:

System Performance

- 3.2T bit/s backplane capacity, 960G bit/s switch capacity,

512K MAC addresses

- Line speed L2/L3 switching
- Static route/RIP/OSPF/MPLS
- TDM private line service with Native TDM or CESoP
- BITS/E1/STM-1/Ethernet Synchronization/IEEE

1588v2/1PPS+ToD

GPON Line Card

- 8/16*port per card with pluggable SFP optical module (Class B+ or Class C+ are optional)
- Up to 1:128 splitting ratio
- Bidirectional FEC
- ONU-based and queue-based traffic shaping
- Rogue ONT detection and isolation
- Type B / Type C protection and Type C dual-homing
- Optical power meter (can support ± 1 dB precision)
- eOTDR (1:8 splitting ratio)

10G GPON Line Card

- 4*port per card with pluggable XFP optical module
- Up to 1:128 splitting ratio (N1)
- Bidirectional FEC
- Rogue ONT detection and isolation
- Type B / Type C protection and Type C dual-homing

- Coexist with GPON

Ethernet P2P Line Card

- 48 port per card with CSFP optical module, 768 ports per shelf
- Port-based and queue-based traffic shaping
- Single fiber double direction access, 100Mbit/s or 1000Mbit/s per port
- DHCP Option 82 relay agent and PPPoE relay agent
- Ethernet OAM
- Ethernet synchronization

Product Specifications

Appearance	MA5600T	MA5603T	MA5608T
(W/D/H) mm	490×275.8×447	442×283.2×263	442×233.5×88
Operating Environment	Temperature: -25°C to +55°C Relative Humidity (RH): 5% to 95%	Temperature: -40°C to +65°C RH: 5% to 95%	Temperature: -40°C to +65°C RH: 5% to 95%
Power Parameter	Supports -48 V DC power input, dual-power supply protection, and working voltage range of -38.4 V to -72 V.	Supports -48 V DC power input, dual-power supply protection, and working voltage range of -38.4 V to -72 V.	Supports DC and AC power supply modes, and dual-power supply protection. Provides battery for power backup when AC power is used.
Cabinet	Indoor: N63E-22, N66E-18 Outdoor: F01D500	Indoor: N66E-18 Outdoor: F01D500, F01S300	Indoor: N63E-22 Outdoor: F01S200

Configuration	control board: 2 Service board: 16 Universal Interface board: 1 Upstream interface board: 2 Power interface board: 2	control board: 2 Service board: 6 Universal Interface board: 1 Upstream interface board: 2 Power interface board: 2	control board: 2 Service board: 2 Power interface board: 1
MTBF	≈45 years	≈45 years	≈45 years
Switching Capacity of the Backplane Bus	3.2Tbit/s	1.5Tbit/s (H801MABO) 2Tbit/s (H802MABO)	720Gbit/s
Switching Capacity of the Control Board	SCUN/SCUK: 480Gbit/s (Standby mode), 960Gbit/s (Load-sharing mode) SCUH: 960Gbit/s (Standby mode), 1920Gbit/s (Load-sharing mode) 960Gbit/s	MCUD/MCUD1: 128Gbit/s (Standby mode), 256Gbit/s (Load-sharing mode)	-
Access Capacity	<ul style="list-style-type: none"> • 128*10G GPON • 256*GPON • 768*GE/FE 	<ul style="list-style-type: none"> • 48*10G GPON • 96*GPON • 288*GE 	<ul style="list-style-type: none"> • 8*10G GPON • 32*GPON • 96*GE
Maximum uplink port (GIU)	<ul style="list-style-type: none"> • 4*GE • 4*10GE 	<ul style="list-style-type: none"> • 4*GE • 4*10GE 	-

Basic Ordering Information

SKU	Description
Subracks	
MA5600T-ETSI	Huawei SmartAX MA5600T ETSI version, supports 23 board slots, 3.2Tbit/s switching capacity

MA5600T-IEC	Huawei SmartAX MA5600T IEC version, supports 23 board slots, 3.2Tbit/s switching capacity
MA5603T	Huawei SmartAX MA5600T IEC version, supports 13 board slots, 1.5Tbit/s (H801MABO) 2Tbit/s (H802MABO) switching capacity
MA5608T	Huawei SmartAX MA5608T, supports 5 board slots, 720Gbit/s switching capacity
Boards	
H801SCUH	Huawei SmartAX MA5600T Super Control Unit Board
H801SCUV	Huawei SmartAX MA5600T Super Control Unit Board
H801SCUN	Huawei SmartAX MA5600T Super Control Unit Board
H801MCUD	Huawei SmartAX MA5600T Control Unit Board (GE Uplink)
H801MCUD1	Huawei SmartAX MA5600T Control Unit Board (GE/10GE Uplink)
H801SCUK	Huawei SmartAX MA5600T Super Control Unit Board
H806GPBH	Huawei SmartAX MA5600T 8-port Advanced GPON OLT Interface Board
H807GPBH	Huawei SmartAX MA5600T 8-port Advanced GPON OLT Interface Board
H801GPMD	Huawei SmartAX MA5600T 8-port Advanced GPON OLT Interface Board
H805GPFD	Huawei SmartAX MA5600T 16-port GPON OLT Interface board
H801XGBD	Huawei SmartAX MA5600T 8-port XG-PON OLT Interface board
H802XGBC	Huawei SmartAX MA5600T 4-port XG-PON OLT Interface Board
H801SPUF	Huawei SmartAX MA5600T Multifunctional Service Process Board
H801ETHB	Huawei SmartAX MA5600T Ethernet Service Access Board

<u>H802OPGE</u>	Huawei SmartAX MA5600T 48-port GE/FE Optical Interface Board-Support 1588v2/SyncE-Used for Ethernet Aggregation, P2P Enterprise Access and Mobile Backhual
<u>H801PRTA</u>	Huawei SmartAX MA5600T Power Transfer Board
<u>H801PRTE</u>	Huawei SmartAX MA5600T Power Transfer Board
<u>H801PRTG</u>	Huawei SmartAX MA5600T Power Transfer Board
<u>H801MPWC</u>	Huawei SmartAX MA5600T Double DC power Board
<u>H801MPWD</u>	Huawei SmartAX MA5600T AC Power Board, Power Backup
<u>H801MPWE</u>	Huawei SmartAX MA5600T Single DC power Board
<u>H801TOPA</u>	Huawei SmartAX MA5600T TDM Traffic Over PSN Board
<u>H801TOPB</u>	Huawei SmartAX MA5600T TDM Traffic Over PSN Board
<u>H801CITD</u>	Huawei SmartAX MA5600T Combo Interface Transfer Board
<u>H801FCBB</u>	Huawei SmartAX MA5600T ETSI fan tray(FCBB)-MA5600T
<u>H801FCBI</u>	Huawei SmartAX MA5600T ETSI fan tray(FCBI)-MA5600T
<u>H801FCBH</u>	Huawei SmartAX MA5600T IEC fan tray(FCBH)-MA5600T
<u>H801FCBI</u>	Huawei SmartAX MA5600T MA5603T fan tray(FCBI)
<u>H831FCBB0</u>	Huawei SmartAX MA5600T MA5608T fan tray
<u>H805VDSA</u>	Huawei SmartAX MA5600T 24-port VDSL2 over POTS Service Board
<u>H805VDSF</u>	Huawei SmartAX MA5600T 24-port VDSL2 over POTS Service Board
<u>H805ADIF</u>	Huawei SmartAX MA5600T 32-port ADSL2+ over ISDN Service Board

<u>H808ADIF</u>	Huawei SmartAX MA5600T 32-port ADSL2+ over ISDN Service Board
<u>H808ADLE</u>	Huawei SmartAX MA5600T 32-port ADSL2+ over POTS Service Board,with 600 ohm Real Impedance Splitter
<u>H805ADLF</u>	Huawei SmartAX MA5600T 32-port ADSL2+ Service Board
<u>H808ADLF</u>	Huawei SmartAX MA5600T 32-port ADSL2+ over POTS Service Board
<u>H805VDTF</u>	Huawei SmartAX MA5600T 24-port VDSL2 over ISDN Service Board
<u>H805VDRD</u>	Huawei SmartAX MA5600T 24-port VDSL2 over POTS Service Board
<u>H805VDMF</u>	Huawei SmartAX MA5600T 48-port VDSL2 over POTS Service Board
<u>H80BVDMF</u>	Huawei SmartAX MA5600T 48-port VDSL2 over POTS Service Board
<u>H805ADPD</u>	Huawei SmartAX MA5600T 64-port ADSL2+ over POTS Service Board
<u>H807ADPD</u>	Huawei SmartAX MA5600T 64-port ADSL2+ over POTS Service Board
<u>H80BADPE</u>	Huawei SmartAX MA5600T 64-port ADSL Service Board
<u>H807ADPE</u>	Huawei SmartAX MA5600T 64-port ADSL Service Board
<u>H808ADPM</u>	Huawei SmartAX MA5600T 64-port ADSL Service Board
<u>H807ADPM</u>	Huawei SmartAX MA5600T 64-port ADSL Service Board
<u>H80BVDPE</u>	Huawei SmartAX MA5600T 64-port VDSL2 Service Board,with 600 ohm Real Impedance Splitter
<u>H80BVDPM</u>	Huawei SmartAX MA5600T 64-port VDSL2 over POTS Service Board
<u>H801SCUB</u>	Huawei SmartAX MA5600T Super Control Unit Board
<u>H802SCUB</u>	Huawei SmartAX MA5600T Super Control Unit Board

<u>H802SHGM</u>	Huawei SmartAX MA5600T 32-port SHDSL.bis Service Board
<u>H80BCVME</u>	Huawei SmartAX MA5600T 48-port VDSL2&POTS Combo Board
<u>H80BCAME</u>	Huawei SmartAX MA5600T 48-port ADSL&POTS Combo Board
<u>H806CAME</u>	Huawei SmartAX MA5600T 48-port ADSL&POTS Combo Board
<u>H806CCPE</u>	Huawei SmartAX MA5600T 64-port VDSL2&POTS Combo Board
<u>H80DCCPE</u>	Huawei SmartAX MA5600T 64-port VDSL2&POTS Combo Board
<u>H80DCSPE</u>	Huawei SmartAX MA5600T 64-port SuperVector&POTS COMBO Board
<u>H802GPFDP</u>	Huawei SmartAX MA5600T 16-port GPON OLT Interface board
<u>H801SPUC</u>	Huawei SmartAX MA5600T Uplink Board-Support HQoS Function-Used for Open Access or Wholesale to Multi-RSPs
<u>H806VPEA</u>	Huawei SmartAX MA5600T 384 Channels(64*6) Vector Centralized Processing Board
<u>H806VPEF</u>	Huawei SmartAX MA5600T SuperVector Centralized Processing Board
<u>H806VPGA</u>	Huawei SmartAX MA5600T 384 Channels(64*6) Vector Centralized Processing Board
<u>H80AVDPD</u>	Huawei SmartAX MA5600T 64-port VDSL2 over POTS Service Board
<u>H80BVCMM</u>	Huawei SmartAX MA5600T 48-port VDSL2 Over POTS Subscriber Board, with Melt, with Vector
<u>H80BVDQM</u>	Huawei SmartAX MA5600T 64-port VDSL2 over ISDN Service Board
<u>H80AVCPD</u>	Huawei SmartAX MA5600T 64-port VDSL2 Over POTS Subscriber Board
<u>H80DVCPD</u>	Huawei SmartAX MA5600T 64-port VDSL2 Over POTS Subscriber Board, with Vectoring
<u>H80AVCPM</u>	Huawei SmartAX MA5600T 64-port VDSL2 Over POTS Subscriber Board, with Melt

<u>H80DVCPM</u>	Huawei SmartAX MA5600T 64-port VDSL2 Over POTS Subscriber Board, with Melt, with Vectoring
<u>H806VCPE</u>	Huawei SmartAX MA5600T 64-port VDSL2 Service Board,with 600 ohm Real Impedance Splitter
<u>H80DVCPE</u>	Huawei SmartAX MA5600T 64-port VDSL2 Over POTS Subscriber Board, with 600 ohm Real Impedance Splitter, with Vectoring
<u>H80DSDMM</u>	Huawei SmartAX MA5600T 48-port VDSL2 Over POTS Subscriber Board, with Melt, with Vectoring
<u>H80DSDMM1</u>	Huawei SmartAX MA5600T 48-port VDSL2 Over POTS Subscriber Board, with Melt, with Vectoring
<u>H80DSDPM</u>	Huawei SmartAX MA5600T 64-port VDSL2 Over POTS Subscriber Board, with Melt, with SuperVector
<u>H80AATRB</u>	Huawei SmartAX MA5600T 32-channel foreign exchange office (FXO) service board, providing direct access services
<u>H80BASPB</u>	Huawei SmartAX MA5600T 64-port VoIP subscriber board, providing 64 channels of VoIP POTS access services
<u>H80CASPB</u>	Huawei SmartAX MA5600T 64-port VoIP subscriber board, providing 64 channels of VoIP POTS access services.
<u>H802DSRD</u>	Huawei SmartAX MA5600T 32-port ISDN digital subscriber board, providing 32 channels of ISDN access services
<u>H802EDTB</u>	Huawei SmartAX MA5600T 16-channel TDM SHDSL access services and 16-channel E1 and V.35 access services
<u>H808ASPB</u>	Huawei SmartAX MA5600T 64-port VoIP subscriber board, providing 64 channels of VoIP POTS access services

[H809ASPB](#)

Huawei SmartAX MA5600T 64-port VoIP subscriber board, providing 64 channels of VoIP POTS access services

Where to Buy

Want to buy this series of products? please contact:

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- Fax: +852-3050-1066 (Hong Kong)
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Sources

<https://support.huawei.com/enterprise/en/access-network/smartax-ma5600t-pid-18133>