SmartAX MA5616

The SmartAX MA5616 (the MA5616 for short) is an industry-leading remote multi dwelling unit (MDU) launched by Huawei, which supports flexible configurations and provides broadband services on Fiber To The Building (FTTB) and Fiber To The Curb (FTTC) networks. The MA5616 is a box-type device measuring 2-U high and 19-inch wide and providing two GPON or GE uplink ports and ADSL2+, VDSL2, SHDSL, POTS, ISDN, FE and GE ports. The MA5616 features a high access density, high processing capability, high reliability, easy maintenance, environment-friendlily and energy conservation, and future-oriented architecture design and can be used in corridors, cabinets, indoor, and outdoor usage scenarios.
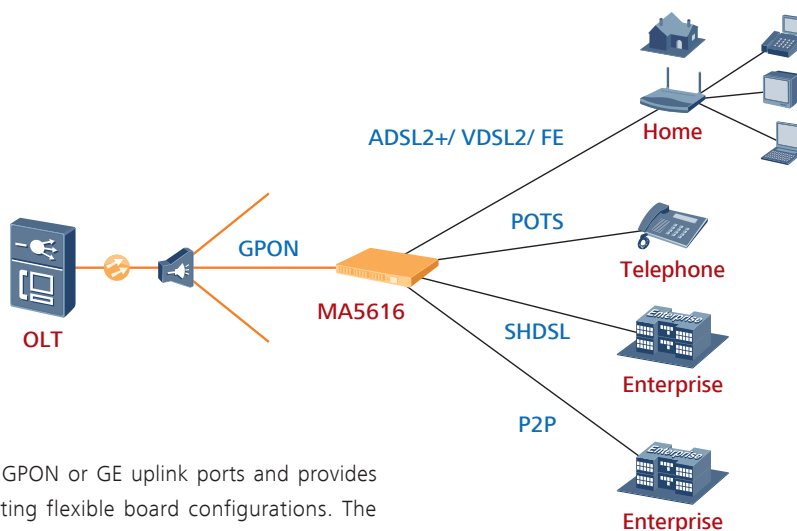
Appearance

MA5616 (CCUB control board)

MA5616 (CCUC control board)

Usage Scenario

The MA5616 provides two GPON or GE uplink ports and provides multiple services by supporting flexible board configurations. The MA5616 provides broadband, voice, and video services through ADSL2+/ VDSL2/FE boards, voices service through POTS boards, leased line services through SHDSL or P2P boards.

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Highlights

- High access density: The MA5616 supports a maximum of 256 POTS users, 128 ADSL2+ users, 192 VDSL2 users, or 64FE users. The MA5616 supports 128 POTS users and 128 ADSL2+ users simultaneously by using a combo board.
- Flexible configurations: Service boards are slot compatible and different types of ports can be configured flexibly, improving the actual configuration ratio and meeting different customer requirements.
- Support for the combo board to improve the access density, reduce the space of the equipment room, and simplify cable routing complexity.
- Support for the P2P optical access board (4GE+4FE) to provide high bandwidth for valued customers.
- Support for 48-V backup power (lead-acid batteries and LiFePO4 batteries).
- Operable IPTV services: Strong service switching capability, packet forwarding capability, and high integration (data exchange and user management) enable the MA5616 to have carrier-class multicast operation capability.
- Perfect voice features, supporting basic services (voice service, fax service, and modem service) and supplementary services (three-way calling, call waiting, call transfer, calling line identification presentation, and calling number restriction).
- Plug-and-play (PnP) service provisioning: The MA5616 allows remote issuing of configuration. A management channel and service channel are created after the MA5616 is powered on and registers successfully. Manual onsite configuration is not required.
- Efficient management and maintenance: free of field software commissioning, remote acceptance, remote upgrade and patch installation, and remote fault location.
- High reliability: The MA5616 supports the working temperature from -40°C to 65°C, 6 kV lightning protection, and corrosion-proof design of boards.
- Prudent security measures: The MA5616 meets security requirements of telecom services to ensure system and user security.
- Environment-friendly and energy conservation: The MA5616 uses a highly effective power supply system to reduce system power consumption. It uses an intelligent fan system that adjusts the rotating speed to reduce power consumption when the system is idle. It uses high-performance chipset to reduce chipset power consumption. It uses POTS short-loop design to reduce port power consumption in short distances.
- Future-oriented architecture design: The MA5616 provides corresponding service boards to quickly meet operators' network and service requirements in the future without any modification.

Features

Features	CCUB control board	CCUC control board
GPON	ITU G.984-compliance	ITU G.984-compliance
	8 T-CONTs	32 T-CONTs
	128 GEM ports	1000 GEM ports
Broadband	4K VLANs, supporting QinQ and stacking VLANs	4K VLANs, supporting QinQ and stacking VLANs
	4K MAC addresses, supporting VMAC	4K MAC addresses, supporting VMAC
	VLAN switching	VLAN switching
	Conversion from PPPoA to PPPoE and from IPoA to IPoE	Conversion from PPPoA to PPPoE and from IPoA to IPoE
	802.1p, supporting PQ and WRR flow control, and ACL	802.1p, supporting PQ and WRR flow control, and ACL
Voice	SIP and H.248	SIP and H.248
	ISDN BRA port	ISDN BRA port
	POTS short-loop design	POTS short-loop design
ADSL2+	Compliance with ITU-T G992.1 to G992.5, and T1.413	Compliance with ITU-T G992.1 to G992.5, and T1.413
	Annex M	Annex M
	ADSL2+ bonding (2-wire, 4-wire, 6-wire, or 8-wire)	ADSL2+ bonding (2-wire, 4-wire, 6-wire, or 8-wire)
VDSL2	G993.2-compliance	G993.2-compliance
	8a, 8b, 8c, 8d, 12a, 12b, 17a, and 30a profiles	8a, 8b, 8c, 8d, 12a, 12b, 17a, and 30a profiles
	2-wire VDSL2 bonding	2-wire VDSL2 bonding

Features	CCUB control board	CCUC control board
SHDSL	G991.2-compliance	G991.2-compliance
	G.SHDSL.Bis, supporting ATM and PTM	G.SHDSL.Bis, supporting ATM and PTM
	EFM bonding (2-wire, 4-wire, 6-wire, or 8-wire)	EFM bonding (2-wire, 4-wire, 6-wire, or 8-wire)
Multicast	IGMPv2 and IGMPv3	IGMPv2 and IGMPv3
	IGMP proxy and IGMP snooping	IGMP proxy and IGMP snooping
	A maximum of 1024 configurable multicast programs in the system A maximum of 256 multicast users A maximum of 16 concurrent multicast programs for each user	A maximum of 1024 configurable multicast programs in the system A maximum of 256 multicast users A maximum of 16 concurrent multicast programs for each user
Security	PPPoE+ and DHCP option82	PPPoE+ and DHCP option82
	Static and dynamic MAC address binding	Static and dynamic MAC address binding
	Anti-MAC and anti-IP spoofing; source MAC address and IP address filtering	Anti-MAC and anti-IP spoofing; source MAC address and IP address filtering
	Anti-DoS attack and firewall	Anti-DoS attack and firewall
Maintenance and management	SNMPv1, SNMPv2, and SNMPv3	SNMPv1, SNMPv2, and SNMPv3
	Telnet and SSHv2	Telnet and SSHv2
	Remote and batch pre-deployment	Remote and batch pre-deployment
	Remote upgrade and monitoring	Remote upgrade and monitoring

Specifications

Dimensions (H×W×D)	88.1mm×442mm×245mm	88.1mm×442mm×245mm
Network-side port	The MA5616 supports the following configurations: • 1*GPON + 1*GE • 2*GE	The MA5616 supports the following configurations: • 1*GPON + 1*GE • 2*GE
User-side port	The MA5616 provides four slots and the following 10 service boards: • 24-channel VDSL2 board (17a, over POTS, built-in SPL) • 24-channel VDSL2 board (17a, over POTS, external SPL) • 24-channel VDSL2 board (17a, over ISDN, external SPL) • 16-channel VDSL2 board (30a, over POTS, built-in SPL) • 32-channel ADSL2+ board (built-in SPL) • 32-channel combo board (32 × POTS + 32 × ADSL2+) • 64-channel POTS board • 32-channel POTS board • 8-channel ISDN board • 16-channel G.SHDSL board (supporting ATM and PTM)	The MA5616 provides four slots and the following 13 service boards: • 24-channel VDSL2 board (17a, over POTS, built-in SPL) • 24-channel VDSL2 board (17a, over POTS, external SPL) • 24-channel VDSL2 board (17a, over ISDN, external SPL) • 16-channel VDSL2 board (30a, over POTS, built-in SPL) • 32-channel ADSL2+ board (built-in SPL) • 32-channel combo board (32 × POTS + 32 × ADSL2+) • 64-channel POTS board • 32-channel POTS board • 8-channel ISDN board • 16-channel G.SHDSL board (supporting ATM and PTM) • 16-channel FE (electrical) board • P2P board with 4 GE (combo of optical port and electrical port) + 4 FE (optical port) • 48-channel VDSL2 board (17a, over POTS, external SPL, supporting MELT)

Operating temperature	-40°C to 65°C; startup at -25°C	-40°C to 65°C; startup at -25°C
Humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)
Heat dissipation mode	Providing fans for heat dissipation. The rotating speed can be automatically adjusted.	Providing fans for heat dissipation. The rotating speed can be automatically adjusted.
Power supply	AC: 220 V/110 V DC: -48 V	AC: 220 V/110 V DC: -48 V
Backup power	Support for 48-V backup power Support for lead-acid batteries and LiFePO4 batteries	Support for 48-V backup power Support for lead-acid batteries and LiFePO4 batteries
Weight	4.8 kg (empty chassis) 7.2 kg (full configuration)	4.8 kg (empty chassis) 7.2 kg (full configuration)