

Outdoor EoC Master Platform for FTTB

AM344C Series



- HomePlug AV and IEEE 1901 Standard
- ITU-T G984.X and IEEE802.3ah standard
- 1 x GPON ONU module, 1 x HFC Optical Receiver
- 2 x HomePlug AV EoC Master modules
- 4 x RF output configurations
- 35/47, 42/54, 65/87 type High/Low Filter
- 300 Mbps per EOC Master module
- AGC (from -6 to 0dBm)
- CLI, WEB management for ONU module
- WEB, SNMP management for EOC module

The AM344C All-In-One device is designed to provide Internet service to the subscribers' home through existing coaxial access networks. With XPON, EoC, and HFC technology, AM344C meets CATV broadcasting, VOD, and internet service requirements of cable operators for FTTB/FTTC. It combined XPON ONU, EOC master, and Optical Receiver module in one housing.

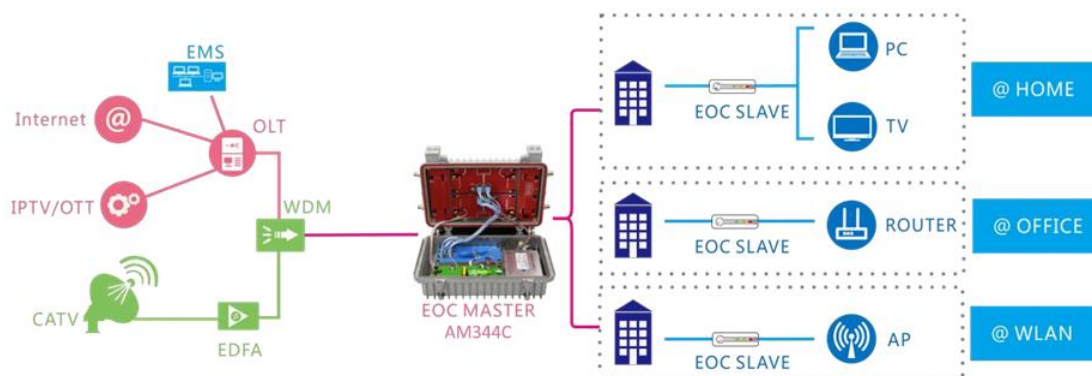
The Optical Receiver module received the optical signal from the Optical Transmitter of HFC network, and the signal processed by the PD, Amplifier, EQ and AGC to a stable RF output. The output level will be up to 104 dBμV (4*RF output). Ethernet data is delivered to ONU through the XPON network form the OLT.

The EoC Master module meets Home-plug AV standards, is designed based on Qualcomm AR7410 chip-set with high anti-jamming capability OFDM technology. It will modulate the Ethernet data into EOC RF signal in the 7.5 MHz to 65 MHz. The EOC signal and CATV signal (87 to 860MHz) can run on one coaxial cable without interference. The EOC Master can provide high speed data service at 600Mbps PHY Layer speed, the MAC Layer throughput is up to 320Mbps.

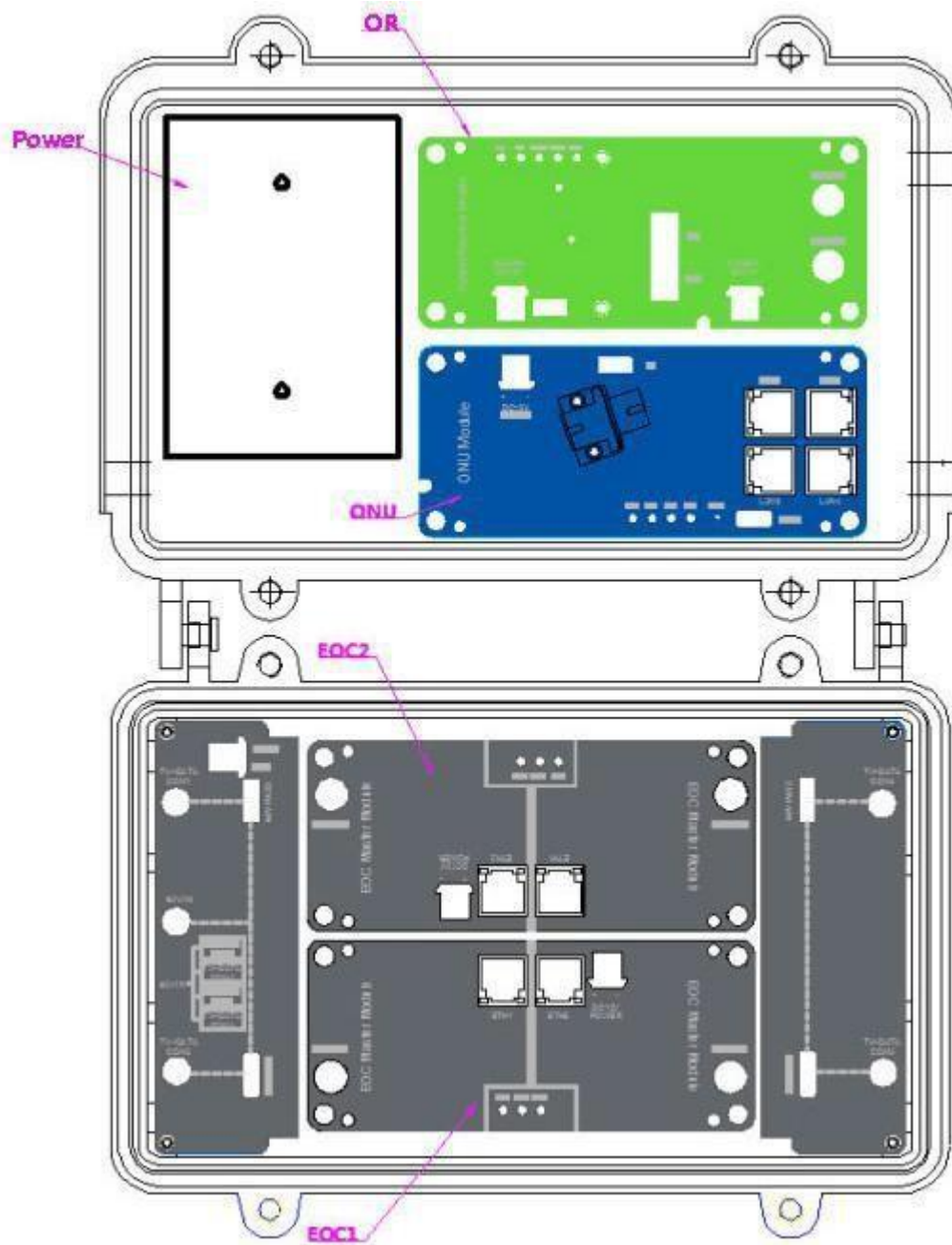
Key Features

- Configurations available with 1 GPON ONU module
- Configurations available with 2 HomePlug AV EoC Master modules
- Configurations available with 1 HFC Optical Receiver
- RF output configurations with 4 outputs
- Line Power (from 90 to 264 VAC) or Cable Line Power (60VAC) optional
- 35/47, 42/54, 65/87 type High/Low Filter optional to meet your network
- Supports higher RF output: 104dBμV
- AGC (from -6 to 0dBm) function for stable RF output
- Supports data throughput of greater than 300 Mbps per EOC Master module
- Supports Max link loss greater than 85 dB (40Mbps throughput in lab)
- Recommend 40 dB to 50 dB link loss for about 300 Mbps throughput
- CLI, WEB management for ONU module
- WEB, SNMP management for EOC module
- Optical Receiver status monitor and control by PON system
- 019C Housing, aluminum alloy die casting shaping
- Line Power 60AC feed in and out
- Complies with ITU-T G984.X and IEEE802.3ah standards
- Complies with HomePlug AV international standards and IEEE 1901 Standard

Application Diagram



Internal Structure Diagram



Specifications

AM344C All-in-One Item

Parameter	Unit	Description	Note
Main Functional Module Configuration	ONU	1 * XPON ONU	
	EOC Master	2*EOC Master	
	CATV	1* CATV Optical Receiver	
External Interface	Fiber Port	5/8" type, 2 port, for Fiber Optic Pigtail input	
	COM Port	F-Type female, 4 output port for mixed EOC and CATV signal	
	Power Input Port	Power cord with China plug Mains Powered (90-264VAC) version	
Uplink	Broadcast CATV	1*CATV optical, SC/UPC	
	Ethernet Data	1*EPON/GPON adaptive optical, SC/UPC	

XPON ONU Item

Parameter	Unit	Description	Note
EPON/GPON			
Standard compliance		EPON: IEEE802.3ah GPON: ITU-T G.984.X	
Optical Interface		EPON: 1 * EPON 1000BASE-PX20+ GPON: 1 * GPON CLASS B+	
Transmission Rate	Gbps	EPON: 1.25 downstream/upstream GPON: 2.488/1.244 downstream/upstream	
Transmission Distance	Km	EPON: 20@1:64 GPON: 20@1:128	
Optical Fiber Type		Single Mode, Single Fiber	
Wavelength	nm	Upstream 1310, Downstream 1490	
Optical Power Tx	dBm	EPON : 0 to +4(1000BASE-PX20+) GPON : +0.5 to +5(Class B+)	
Indicator	dBm	EPON: -27 (1000BASE-PX20+) GPON: -28 (Class B+)	
Network Management	Management Mode	PWR: Power up or down PON: ONU registered LOS: Optical Link Status SYS: system work indicator	
	Function	Status monitor, Configuration management, Alarm management, Log management	

Optical Receiver Item

Parameter	Unit	Description	Note
Optical Specifications			
Wavelength	nm	1550±10	
Optical Power Input Range	dBm	-10 to +2	
Recommend Optical Power Input Range	dBm	-6 to 0	
Optical Input Return Loss	dB	>45	

Item	Parameter	Unit	Description	Note
RF Specifications	Bandwidth	MHz	45 to 860	
	Flatness	dB	$\leq \pm 1.5$	
	Nominal RF Output Level	dBuV	104	
	Impedance		75 Ohm	
	Return Loss	dB	≥ 14	
	CNR	dB	≥ 51	1
	CSO	dBc	≥ 60	1
	CTB	dBc	≥ 60	1
Optical and Temperature AGC	Stability of RF Level under Optical AGC	dB	$\leq \pm 1$	
	AGC Scope	dBm	-6 to 0	
LED Indicator	Indicator Description		TV1: Status of Output 1 of optical receiver module TV2: Status of Output 2 of optical receiver module OPT-M: Optical power is nominal OPT-L: Optical power is abnormal PWR: Power Supply Status	

Note:

1. CNR, CSO, CTB parameter testing environment is in 1550nm directly modulation transmitter, optical input -1dBm, OMI=3.2%, 59CH PAL-D signal load.

EoC Master

Item	Parameter	Unit	Description	Note
Interface	Inband Management Port		1 * 10/100/1000M auto-negotiation, RJ45	
LED Indicator	LED Indicator		PWR: Power Supply Status CAB1: CABLE Link Status indicator1 CAB2: CABLE Link Status indicator2	
Performance Parameters	RF Parameters	Frequency Band	MHz	7.5 to 65
		RF Output Level	dBuV	115 $\pm$ 5@4 RF output port
		Receive Sensitivity	dBuV	45
	Transmission		Mbps	PHY Layer: 600 Throughput on MAC Layer: 320
	Modulation Mode			OFDM2690 carriers, 4096/1024/256/64/16/8 QAM, QPSK, BPSK, ROBO
	Working Mode			TDMA/CSMA
Standard	Encryption Mode			AES-128
	EoC Standard			IEEE P1901(Draft) , HomePlug AV
	Ethernet Standard			IEEE 802.3, IEEE 802.3x, IEEE 802.3u IEEE802.1P, IEEE802.1Q
Software	Network Management			WEB, CLI, SNMP
	Software Features			VLAN, QOS, Bandwidth Control, Broadcast storm limitation

Physical Features

Item	Parameter	Unit	Description	Note
Physical Features	Power Supply	Line Power	V	90 to 264 AC
		Cable Power	V	60 AC optional
	Power Consumption		W	<80
	Net Weight	kg		3.7
	Environment Attribute	Working Temperature		-20 to 65
		Storage Temperature		-40 to 85
		Working Humidity		10% to 90% non-condensing
		Storage Humidity		10% to 90% non-condensing

Ordering Information

AM344C Series All in One Outdoor EoC Ordering Information

AM-344C	108-	XX-	X-	XX-	XX-	X															
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