FTTx P2MP GEPON ONU Gateway

AP100C Series

- **IEEE802.3ah PON**
- **1GE Uplink, GE or FE Data Port (1/2/4/8/24 FE)**
- **Triple Play ONU (4FE, 2POTs, 1CATV)**
- **Up to 64 ONUs per OLT Port**
- **Flexible Auto Provision Schemes**
- **QoS and 128-bit AES**
- **Web Interface and SNMP Management**

ACT AP100C ONU is a series of IEEE203.ah compliant high performance EPON optical residential gateway. It offers MSOs and Services Providers with advanced triple play (high speed internet, VOIP, IPTV or traditional CATV) services in Fibre to The Home or Business (FTTH & FTTB) networks.
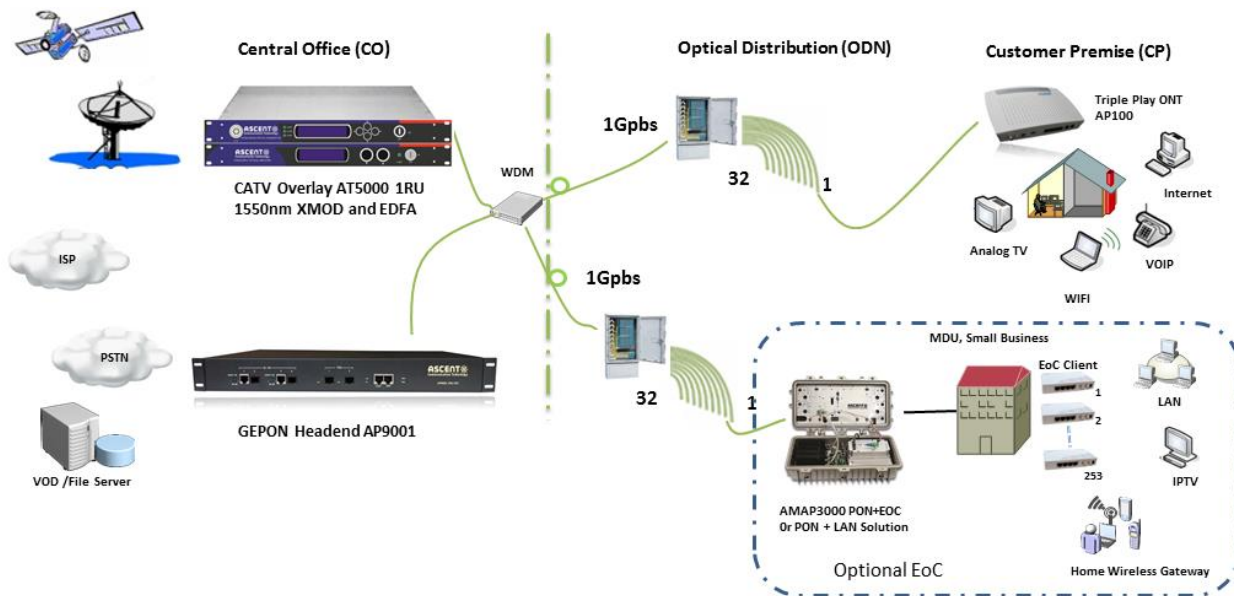
The AP100C series ONUs are designed to operate in a shared PON fiber architecture and supports with up to 64 homes under one PON OLT port. It includes several base models: AP102C, AP104C, AP108C, AP124C with many selectable options to offer CATV RF, Single or Dual WAN fibre ports or WIFI services.

The AP100C series provides high quality and robust services to allow operators to expand their existing networks and services quickly. Combined with ACT AP9000 Headend GEPON OLT platform, the AP100C can provide ultimate end-to-end FTTX solution in offering advanced Video, Voice, and Data services.

Key Features

- FTTX GEPON P2MP Residential Gateway for Fiber-to-the-Home application

- Optimize the service performance as well as utilization of limited IP resource for service providers

- Compliance with IEEE802.3ah GEPON, supports up to 64 GEPON ONU devices, 32 with CATV Overlay

- 1 ports 10/100Mbps, 1 ports 10/100/1000Mbps and 1 port 1000Mbps uplink

- Deliver high speed internet, VoIP and IPTV and traditional CATV services (optional)

- VoIP Residential Gateway with optional IEEE 802.11b/g/n draft Wi-Fi module

- CATV module (862MHz) supports Automatic Gain Control (AGC) to maintain constant RF output, which can be turned on/off by Network Operator through Web Management software

- Integrated WEB Management for easy configuration and service

- Flexible Auto Provision Schemes reduce the OPEX of device maintenance for service providers

- SNMP power down trap to rapidly identify network fault due to power outage and reduce truck rolls

Application Diagram

Specifications

AP100C FTTx EPON Residential Gateway

Fast Ethernet Ports	1 x 10/100Mbps + 1 x 10/100M/1000Mbps on RJ45, full/half-duplex, auto-negotiation, auto MDI/MDIX
VOIP Ports (optional)	VoIP FXS RJ-11 x 2 (Optional with 4FE)
CATV RF Output (optional)	CATV Coaxial F Connector (Optional with 4FE)

Optical Interface Specification

Data TX Wavelength	1310 nm
Data RX Wavelength	*1490 nm*
CATV Wavelength	1200 to 1620 nm
CATV Optical Input	*-8dBm ~ -2dBm @ 1550nm (typical -5dBm)*
Data RX Sensitivity	*< -27 dBm @ 1490 nm*
Data TX Output	*-1dBm to 4dBm @ 1310 nm*
Data Line Speed Uplink	*1000Mbps net payload, Packet Loss <1*10E-12*
Typical Link Range	*1 km to 20 km*
Optical Connector	SC/APC for single fibre with CATV, SC/PC for single fibre w/o CATV LC/APC & LC/PC for dual fibre with CATV

CATV Link Performance

CATV RF output	> 80dBuV (RX: -8 to 0dBm)
RF Bandwidth	45 to 870MHz
RF flatness	±1 dB
RF return loss	16 dB Typical
CNR	46dB
CSO / CTB	-58dBc / -58dBc
VOIP Specification	SIP V2 (G.711, G.729, G.723.1)
DHCP	Option 66 & 67 with auto-provisioning
RF Bandwidth	45 to 870MHz

General Specifications

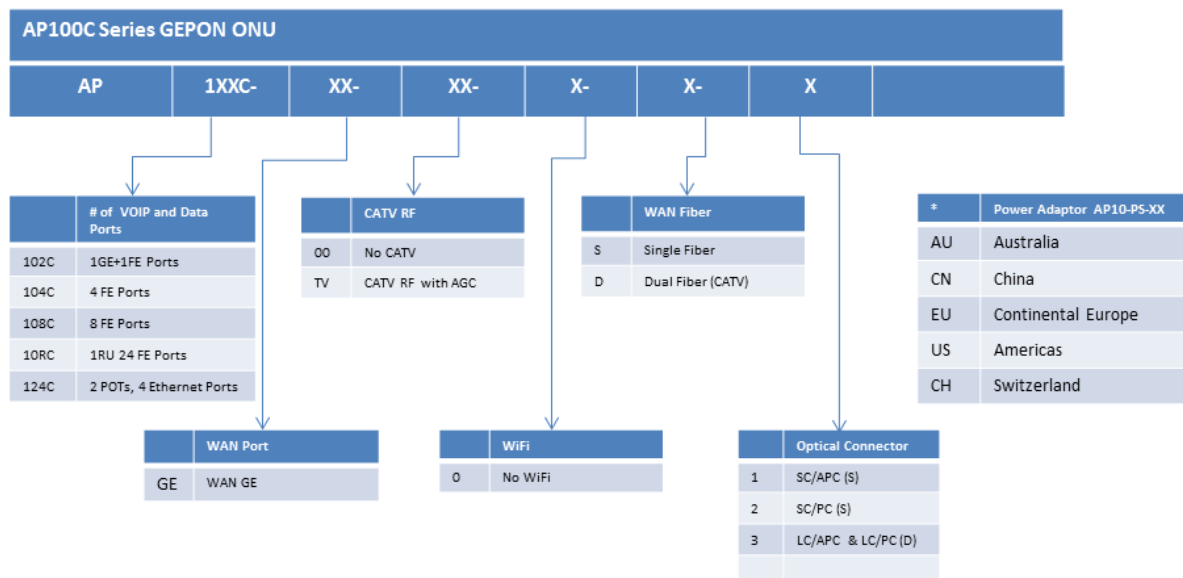|	
Operating Temp, °C	0 to 50
Storage Temp, °C	-40 to 85
Power Supply	100 to 240 VAC or 12V/1.5A DC
Operating relative humidity, %	5 to 95
Power Consumption W	<12 (from wall)
Dimensions (W x D x H)	137x 112 x 36mm (AP102C)
Weight, kg	0.4 kg (shipping)

Ordering Information

AP100C Series GEPON ONU						
AP	1XXC-	XX-	XX-	X-	X-	X

# of VOIP and Data Ports	
102C	1GE+1FE Ports
104C	4 FE Ports
108C	8 FE Ports
10RC	1RU 24 FE Ports
124C	2 POTs, 4 Ethernet Ports

CATV RF	
00	No CATV
TV	CATV RF with AGC

WAN Fiber	
S	Single Fiber
D	Dual Fiber (CATV)

*	Power Adaptor AP10-PS-XX
AU	Australia
CN	China
EU	Continental Europe
US	Americas
CH	Switzerland

WAN Port	
GE	WAN GE

WiFi	
0	No WiFi

Optical Connector	
1	SC/APC (S)
2	SC/PC (S)
3	LC/APC & LC/PC (D)

* Power Adaptor order separately

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