Mini Node
Deep Fiber
FTTH Solution

AON120D Series

- Video Overlay for FTTH/PON network
- 1550 nm CATV wavelength
- 1310/1490 nm PON wavelength
- -15 dBm to +2 dBm optical receiving range
- 76 dBµV RF output power with AGC range
- LED indicators
- Low Power Consumption
- Compact form factor

AON120D Series FTTH mini node supports Video Overlay application over FTTH optical fiber access network. It operates on 42 MHz to 1006 MHz RF bandwidth, with high output power up to 76 dBµV (AGC). AON120D has low power consumption and optional built-in WDM to support PON signal pass-through. It is part of ACT's Deep Fiber and FTTH solution, which helps operators provide superior video services in a FTTH PON network architecture.

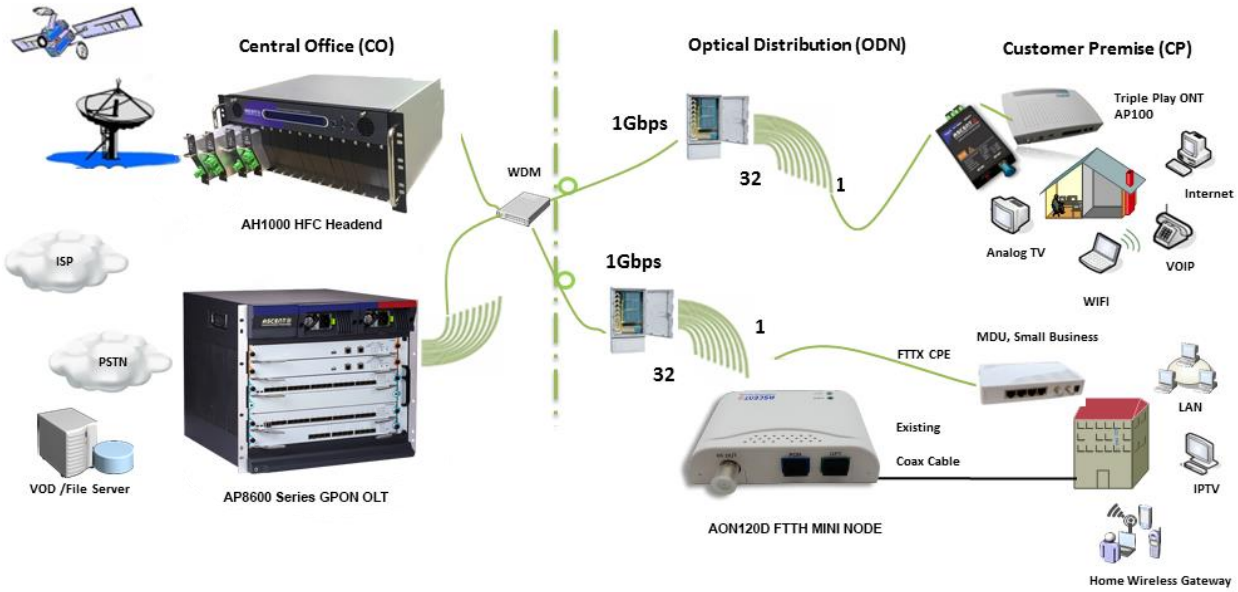
The AON120D Mini Node adopts high sensitivity optical receiver and specially designed low noise matching circuit. The mini node provides high output and is installed at the subscriber premises, suitable for advanced FTTx, high density MDU, SMB, or hospitality market applications. The AON120 mini node is designed with built in WDM optical passive, which will pass the 1310/1490nm data wavelength to the ONU/ONT CPE device.

With the extremely compact housing, modular design, AON120 mini node provides the flexible configuration for MSOs to deliver advanced video services to their customer. This fiber deep product series improve overall network performance, and offer sufficient bandwidth for new application demand.

Key Features

- 1002MHz RF Spectrum for superior video services
- Small form factor and low power consumption
- 1550 nm CATV wavelength
- 1310/1490 nm PON wavelength
- Wide optical receiving range: -15 dBm to +2 dBm
- Optical AGC to keep constant output level in different optical input power
- RF output level: 76±2dBuV in AGC range
- LED indicator for optical power and power supply
- Powered directly using the power adaptor
- Compact enclosure fits easily in CPE, ONU housing or network termination boxes
- Special heat dissipation design

Application Diagram



Specifications

Item	Description
CATV Wavelength	1550 nm to 1560 nm
PON Wavelength	1310/1490 nm
Optical Input Power	-15 dBm to +2 dBm
Optical AGC Range	-8 dBm to +2 dBm
CATV Optical Input Port	SC/APC, LC/APC
PON Optical Reflect Port	SC/APC, LC/APC
RF Connector	Imperial F-type
Frequency	258 MHz to 1006 MHz
Flatness	≤±1.25 dB
RF Output Level (in AGC range)	76 dBμV ± 2 dBμV
Output RF resistance	75 Ω
Output Return Loss	≤-18 dB
C/N[1]	≥43 dB
C/CSO[1]	≥60 dB
C/CTB[1]	≥60 dB
MER[2]	≥36 dB
Power Supply Voltage	100 V_{AC} to 240 V_{AC} (power supply adaptor)
Input Voltage	+12 V_{DC}
Power Dissipation	≤3 W
Operating Temperature	-10 °C to +55 °C
Dimensions (L×W×H)	95 mm × 70 mm × 24 mm

Notes:

1. -9 dBm Optical input power, 60 PAL channels
2. -10 dBm to +2 dBm optical input power, 256QAM

Ordering Information

AON120D Series FTTH Mini Node Ordering Information

AON120D-	X-	X-	XX-	XX-	XX-	X

	RF Bandwidth
A	1002 MHz
B	1218 MHz

	Output Power
AG	76dBuV @-8~2dBm
MG	82dBuV @-2dBm

	Power Adaptor
00	None (RF Powering)
01	Australia
02	China
03	Continental Europe
04	North America

	WDM
0	No WDM Filter (1550/1310/1490 all pass)
F	WDM Filter (1550 pass) w/o PON Port
W	WDM (1550 pass) w PON Port (1310/1490)

	Optical Connector
AS	SC/APC
LA	LC/APC
US	SC/UPC

	Customization
0	Default Standard Model
T	DVB-T Application

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