FTTX Mini Node Deep Fibre Solution

AON121 Series

- **Video Overlay for FTTH/PON network (GPON/ XGS PON)**
- **1002MHz or 1218 MHz RF Spectrum**
- **RF Output up to 83 dBµV**
- **Compact Housing**
- **Suitable for Home or MDU**
- **Optional PON Pass-Through Port**
- **Low Noise Circuit**
- **Low Power Consumption**
- **Single Fiber WDM option**
- **LED Status Indicators**

AON121 Series FTTH mini node supports Video Overlay application over FTTH optical fiber access network. It operates on 1218MHz RF bandwidth, with high output power up to 83 dBµV (AGC). AON121 has low power consumption and optional built-in WDM to support PON signal pass-through. It is part of ACT Deep Fiber and FTTH solution, which helps operators provide superior video services in a FTTH PON network architecture.

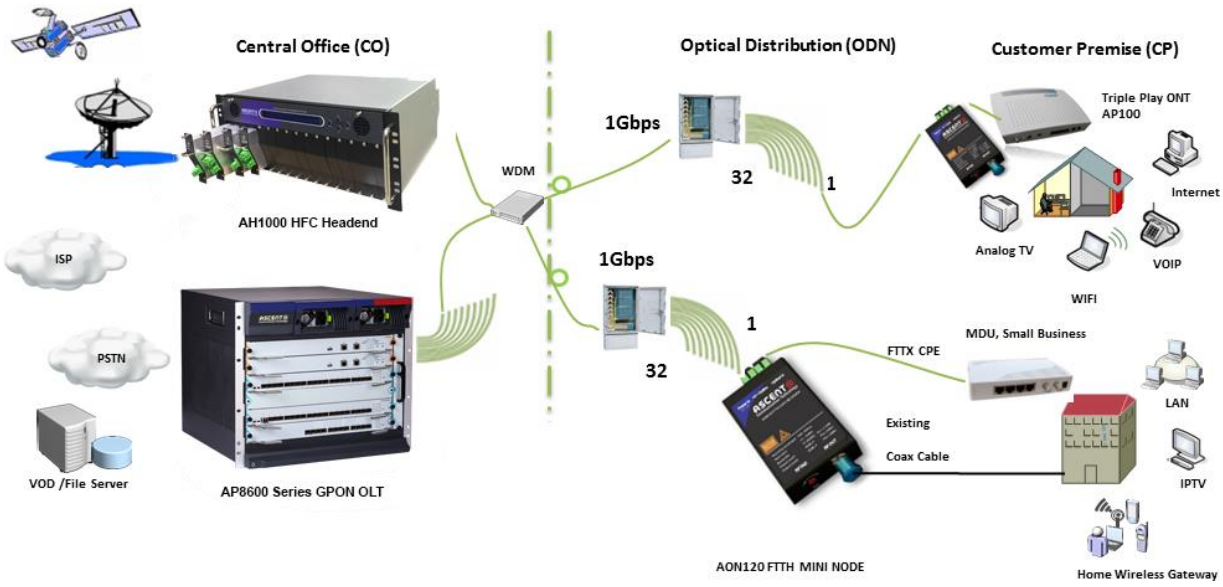
The AON121 Mini Node adopts high sensitivity optical receiver and specially designed low noise matching circuit. The mini node provides high output and is installed at the subscriber premises, suitable for advanced FTTx, high density MDU, SMB, or hospitality market applications. The AON121 mini node is designed with built in WDM optical passive, which will pass the GPON 1310/1490nm and XGS PON 1270/1577nm data wavelength to the ONU/ONT CPE device.

With the extremely compact housing, modular design, AON121 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

- 1002 or 1218 MHz RF Spectrum for superior video services
- Small form factor and low power consumption
- Low noise circuit (3.5 % modulate, -10 dBm receive, CNR ≥ 42dB)
- High output power up to 83 dBµV for MDU application
- Excellent linearity at wider optical receiving range +2 dBm to -20 dBm
- Flatness less than ±1.0 dB in the range of 47 MHz to 1218 MHz
- Metal shell, supply safeguards to opto-electrical sensing device
- Optional built-in WDM provides PON pass-through capability in a FTTH optical passive network
- Powered directly using the power adaptor
- The compact enclosure fits easily in CPE, ONU housing or network termination boxes

Application Diagram



Specifications

AON121 FTTH Deep Fibre Mini Node

Downstream Specifications (Receiver)	
CATV Wavelength Range	1540 nm to 1560nm(with WDM filter)
PON Pass Wavelength	1310/1490nm
Optical Input Power	-20 dBm to +2 dBm (AGC: -10dBm to 0 dBm)
	-10dBm to 0 dBm (1550 nm LED Green)
	>0 dBm (1550 nm LED Red Flash)
	<-10 dBm or no input power (1550 nm LED stay Red)
Optical Return Loss	45 dB (typ.)
WDM IL(optional)	<-0.8dB
Responsivity	≥ 0.9 A/W @ 1550 nm
RF Bandwidth	47 MHz to 1002 MHz, 1218 MHz
Output Level	83dBμV @ -10 dBm to 0 dBm (AGC)
Output Level Adjustment	0 dB to 20dB
RF Flatness	±1.0dB (47 MHz to 1218MHz)
RF Return Loss	≥14 dB
RF Input Impedance	75 Ω
RF Connector	F-Female
Link Performance	
CNR	42.0 dB (-10 dBm input, 96 NTSC, +3.5% OMI)
CTB	-57 dBc
CSO	-57 dBc
MER	38 dB (-10 dBm input, 96 NTSC)
General Specifications	
Optical Connector	SC/APC, SC/UPC, LC/PC
Operating Temperature	-20 °C to 50 °C
Storage Temperature	-40 °C to 85 °C
Power Supply	+12 V DC
Operating Relative Humidity	5 % to 95 %
Power Consumption	≤2 W
Dimensions (W × D × H)	48 mm × 88 mm × 22 mm
Weight	0.4 kg
Ship Weight	5 kg (Packed in carton boxes of ten units)

Ordering Information

AON121 Series FTTH Mini Node Ordering Information

AON121-	X-	X-	XX-	XX-	XX-	XX-	X

	RF Bandwidth
A	1002 MHz
E	1218 MHz

	Optical Input Power
AG	10 to 0dBm
MG	-20 to 2dBm

	OPT. Input Connector
AS	SC/APC
LA	LC/APC
US	SC/UPC

	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)
X	XGS WDM (1550 pass) w PON Port (1310/1490, 1270/1577

	PON Connector
	No PON Conn
AS	SC/APC
LA	LC/APC
US	SC/UPC

	Customization
0	Default Standard Model
T	DVB-T Application

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