FTTX Mini Node Deep Fibre Solution

AON120 Series

- Video Overlay for FTTH/PON network (GPON/ XGS PON)
- 1218MHz RF Spectrum
- RF Output up to 82dBµV
- 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

AON120 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 82 dBµV (AGC). AON120 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.

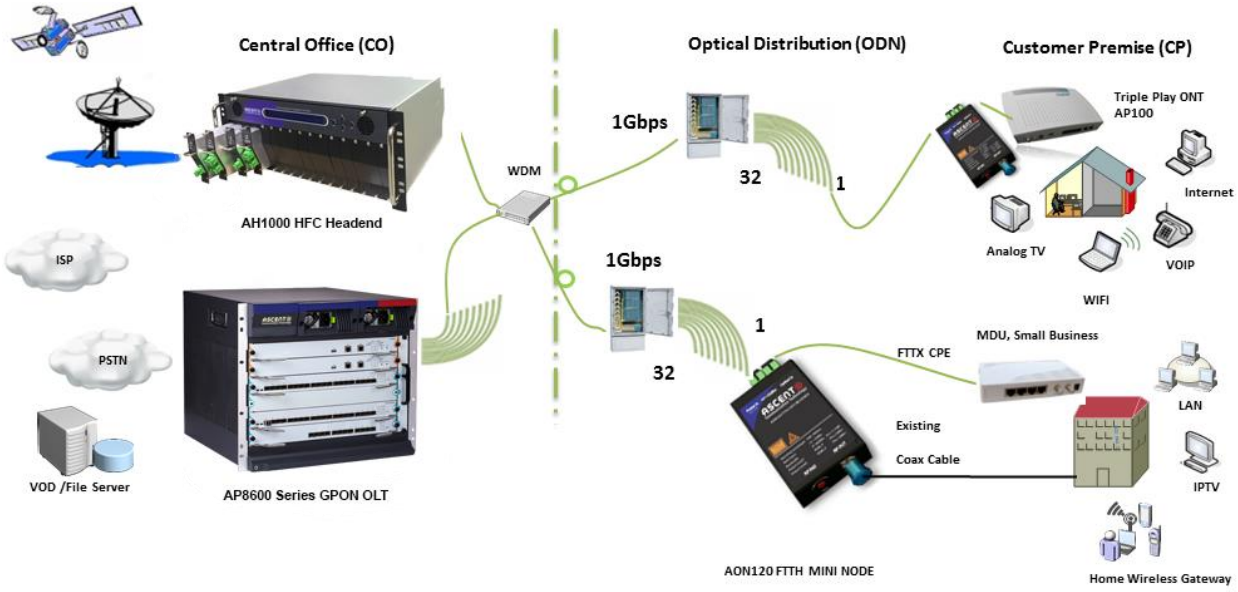
The AON120 Mini Node adopts high sensitivity optical receiver and specially designed low noise matching circuit. The mini node provides high output and is installed at the subscriber premises, suitable for advanced FTTx, high density MDU, SMB, or hospitality market applications. The AON120 mini node is designed with built in WDM optical passive, which will pass the GPON 1310/1490nm and XGS PON 1270/1577nm 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

- 1218 MHz RF Spectrum for superior video services
- Small form factor and low power consumption
- Low noise circuit (3.8 % modulate, -10 dBm receive, CNR ≥ 45dB)
- High output power up to 82 dBµV for MDU application
- Excellent linearity at wider optical receiving range +3 dBm to -12 dBm
- Flatness less than ± 0.75 dB in the range of 47 MHz to 862 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

AON120 FTTH Deep Fibre Mini Node

Downstream Specifications (Receiver)	
CATV Wavelength Range	1540 nm to 1560 nm
PON Pass Channel Wavelength	1260 nm to 1330 nm
(GPON and XGS PON)	1470 nm to 1510 nm
	1575 nm to 1650 nm
Optical Input Power	-17 to +3dBm (-7 dBm to +3 dBm for analog TV signal)
	-14 dBm to 2dBm (1550 nm LED Green)
	-16 dBm to -14 dBm (1550 nm LED Orange)
	≤-16 dBm or ≥2 dBm (1550nm LED Red)
Optical Return Loss	-55 dB
WDM Insertion Loss	≤1 dB
Channel Isolation (GPON)	≥35 dB
Responsivity	≥0.9 A/W @ 1550 nm
Channel Isolation (CATV)	≥18 dB
RF bandwidth:	47 MHz to 1218 MHz
Output Level	92 dBμV @ +3 dBm, 82 dBμV @ -2 dBm, adjustable (MGC)
	82 dBμV @ -7 dBm to +3dBm (AGC)
Output Level Adjustment	0 dB to 20 dB
RF flatness	±0.75 dB
RF return loss	≥14 dB
RF input impedance	75 Ω
RF Connector	F-Female
Link Performance	
CNR	48.0 dB (60 PAL-D, -8dBm receive, 3.8% OMI)
CTB	-65 dBc
CSO	-65 dBc
HUM	-60 dB
General Specifications	
Optical Connector	SC/APC, SC/UPC, LC/PC
Operating Temp	-20 °C to +50 °C
Storage Temp	-40 °C to +85 °C
Power Supply	+12 V_{DC}
Operating Relative Humidity	5 % to 95 % RH (non-condensing)
Power Consumption	≤3 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

AON120 Series FTTH Mini Node Ordering Information

AON120-	X-	X-	XX-	XX-	XX-	X

	RF Bandwidth
A	1002 MHz
E	1218 MHz

	Output Power
AG	82dBuV @-7~3dBm
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)
X	XGS WDM (1550 pass) w PON Port (1310/1490, 1270/1577

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

	Customization
0	Default Standard Model
T	DVB-T Application

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