

FTTX Mini Node Deep Fibre Solution

AON121 Series

- Video Overlay for FTTH/PON network (GPON/ XGS PON)
- 1218 MHz RF Spectrum
- RF Output up to 83 dBµV
- Compact Housing
- Suitable for Home or MDU
- Optional PON Pass-ThroughPort
- 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 dB μ V (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.

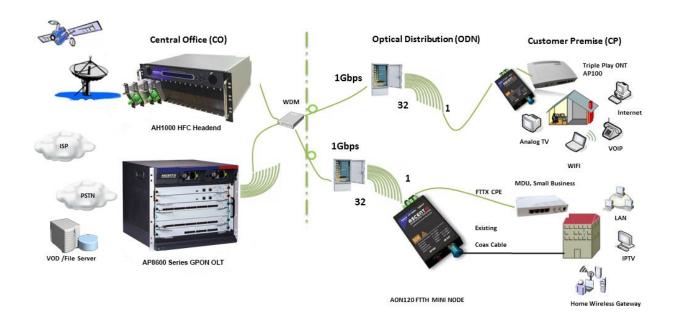
With the extremely compact housing, modular design, AON121 mini node provides the flexible configuration for MSOs to deliver advanced video services to their customer. This fiber deep product series improve overall network performance, and offer sufficient bandwidth for new application demand.



Key Features –

- 1002or 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 1002 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 1560 nm (with WDM filter)

1310/1490/1550 nm all pass (without WDM filter)

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 -20 dBm to +2 dBm (AGC: -10 dBm to 0 dBm)

-10 dBm to 0 dBm (Input Power LED Green)
>0dBm (Input Power LED Red Flashing)

<-10 dBm or no input power (Input Power LED Red)

Optical Return Loss 45 dB (typ.)

WDM Insertion Loss (optional) <-0.8 dB
Responsivity ≥0.9 A/W @ 1550 nm

RF Bandwidth: 47 MHz to 1002 MHz, 1218 MHz

Output Level 83 dBμV @ -10 dBm to 0 dBm (AGC)

Output Level Adjustment 0 dB to 20 dB

RF Flatness $\pm 1.0 \text{ dB}$ (47 MHz to 1002 MHz)

RF Return Loss \geq 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 Temp $-20 \,^{\circ}\text{C} \, \text{to} +50 \,^{\circ}\text{C}$ Storage Temp $-40 \,^{\circ}\text{C} \, \text{to} +85 \,^{\circ}\text{C}$

Power Supply +12 V_{DC}

Operating Relative Humidity 5 % to 95 % RH (non-condensing)

Power Consumption ≤2 W

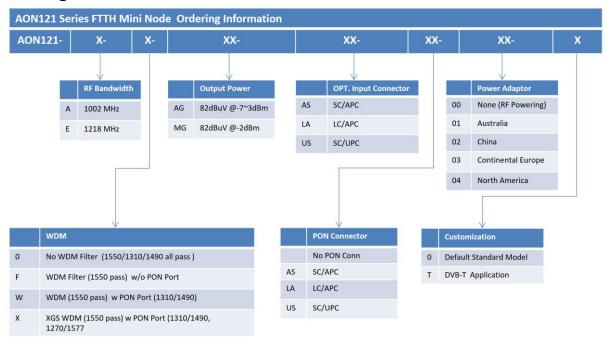
Dimensions (W \times D \times H) 48 mm \times 88 mm \times 22 mm

Weight 0.4 kg

Ship Weight 5 kg (Packed in carton boxes of ten units)



Ordering Information -



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