

1550 nm 1.2GHz Direct MOD Transmitter (FTTx Solution)

AT5100 Series

- **Cost Effective Solution**
- **Video-Overlay for FTTx applications**
- **Single or Dual Output**
- **QAM DWDM Overlay**
- **Analog and Digital Video**
- **Redundant Power**
- **Intuitive Front Panel LCD Display**
- **Universal management through craft interface and SNMP**



ACT AT5100 1RU 1.2GHz 1550nm Direct-Modulated (DMOD) Laser Transmitter offers a flexible and scalable optical transmission for high quality video in short, medium distance CATV networks. It was designed with high linearity and low chirp DFB laser, with built-in pre-distortion compensation and AGC close loop control for improved performance.

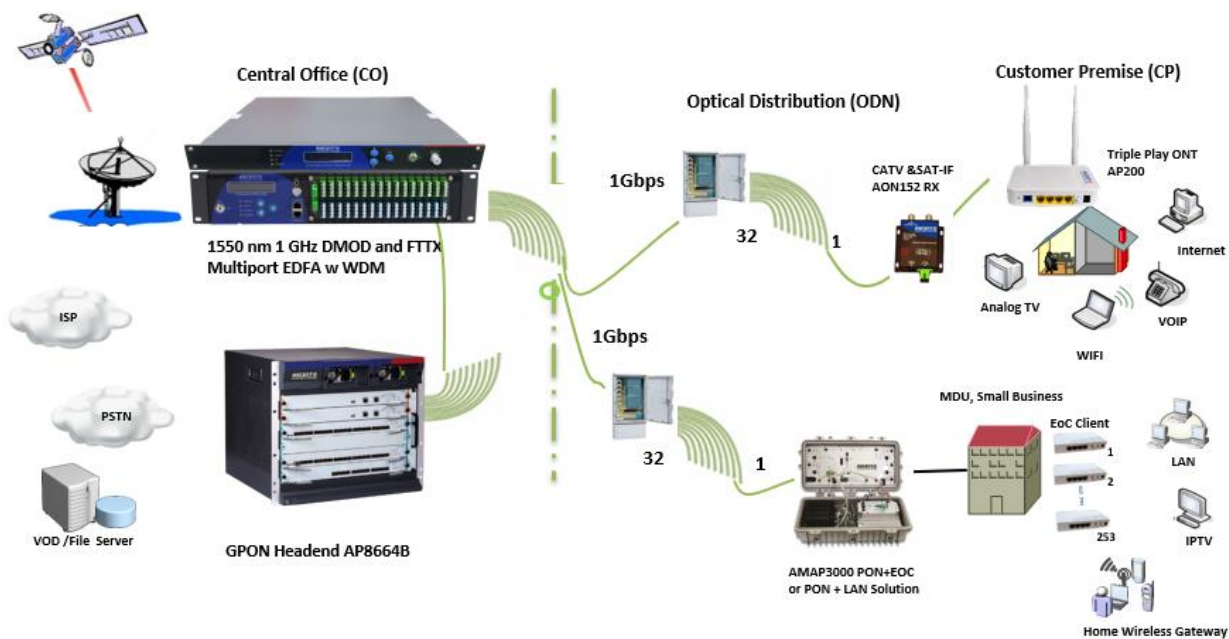
AT5100 DMOD series transmitters are capable of delivering analog and digital video transmission up to 15km, all Digital loading up to 40km and all QAM overlay up to 70km, with intuitive front panel LCD display to make operator's daily operation easier. The optical transmitter is packaged in a self-contained 19" sub-rack of 1 RU with universal mains power supply and SNMP management.

The optical output power level can be ordered single or dual outputs at various output power 6 dBm, 9dBm or 10dBm with single or dual power supply for redundancy. Combined with ACT AT5100 EDFA optical amplifier, AT5100 DMOD transmitter provides the most cost-effective solution for short, medium FTTX deployment, IPTV, VOD and traditional CATV signal in HFC network.

Key Features

- Suitable for short, medium distance FTTH applications
- Suitable for long distance 1550 nm QAM Overlay applications, up to 70km
- Optimized models for analog and digital signal up to 15km
- High linearity and low chirp DFB laser
- Built-in pre-distortion compensation and AGC closed loop control,
- Dual redundant hot-swappable AC or DC power supplies
- Stimulated Brillouin Scattering (SBS) suppression for optimized CSO
- Front-panel LCD for local monitoring of transmitter status
- Local or remote monitoring and configuration
- SNMP/HTTP monitoring, management and control

Application Diagram



Specifications

AT5100 DMOD 1550nm Direct-Modulated (DMOD) Laser Transmitter - 19" 1RU

RF Specification

RF Bandwidth	47 MHz to 862 MHz or 1002 or 1218 MHz
RF Flatness	± 0.75 dB @ 47 MHz to 862 MHz
RF Input Level	20 dBmV \pm 2 dBmV
RF Input Return Loss	≥ 16 dB
RF Input Impedance	75 Ω
RF Test Point	-20 dB
TV Channel Plan	60 PAL channels, 80 NTSC channels

Link Performance

CNR	50 dB (60 ch PAL, 15 km fibre, -1 dBm receive)
CTB	-63 dBc
CSO	-57 dBc
MER	39 dB (80 QAM256 channels within 47 MHz to 1002 MHz)

Optical Specifications

Wavelength	1550 nm \pm 5 nm and ITU Channels
Line Width	≤ 1 MHz
Optical Output Power	Single or Dual 5dBm, 6 dBm, 9 dBm, 10 dBm
Optical Connector	SC/APC
Optical Return Loss	55 dB

General Specifications

Management Interface	RJ45 Web & SNMP, RS232
Operating Temperature	-5 °C to +65 °C
Storage Temperature	-40 °C to +85 °C
Power Supply	90 to 265 VAC or 36 to 60 VDC
Power Consumption	≤ 50 W (single power supply)
Operating Relative Humidity	5 % to 95 % RH (non-condensing)
Dimensions (W \times D \times H)	483 mm \times 254 mm \times 44 mm
Weight	5 kg
Ship Weight	5.5 kg

Note: Measured in a typical system configuration for the nominated channel numbers and nominated fibre lengths for each model at 25 °C ambient temperature.

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