1550 nm XMOD Transmitter Video Overlay Solution

AT5100 Series

- **High performance with pre-distortion circuit**
- **Video overlay for FTTx applications**
- **Dual optical output**
- **Redundant power system**
- **Intuitive front panel LCD display**
- **Adjustable SBS 13 dBm to 18 dBm**
- **Universal management through craft interface and SNMP**

AT5100 1RU Dual Output 1550nm Externally-Modulated (XMOD2) Laser Transmitter offers a flexible, medium and long distance and scalable optical transmission for high quality analog and digital video in CATV networks.

AT5100 XMOD2 1550nm series transmitters are designed with two optical output ports with power from 3 dBm, 6 dBm, 9 dBm, and 10 dBm. These transmitters are equipped with field adjustable Stimulated Brillouin Scattering (SBS) suppression from 13 dBm to 18 dBm. AT5100 XMOD2 series simplifies the application by offering chirp-free operation with confined optical line width and maintain excellent distortion performance CNR, CSO and CTB across the entire network.

AT5100 XMOD2 transmitter provides low dispersion transmission with intuitive front panel LCD display to make operator's life easier. The optical transmitter is packaged in a self-contained 19" sub-rack of 1 RU with dual main power supplies and SNMP management.

Together with ACT 1RU EDFA optical amplifiers, the AT5100 XMOD2 provides an ideal long-distance video and short, medium video overlay solution in high density FTTX networks to bring the CATV services to business and home premises.

Key Features

- High performance on CSO, CTB with RF pre-distortion circuit

- Dual optical output power up to 10dBm

- Suitable for long distance 1550 nm DWDM Video transmission applications

- Suitable for short, medium distance FTTH applications

- Low noise DFB continuous wave laser, reduce the dispersion effect

- Optimized models for 60 PAL or 89 PAL channels, 80 NTSC channels or 110 NTSC channels

- Dual redundant hot-swappable AC or DC power supplies

- Field-adjustable 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
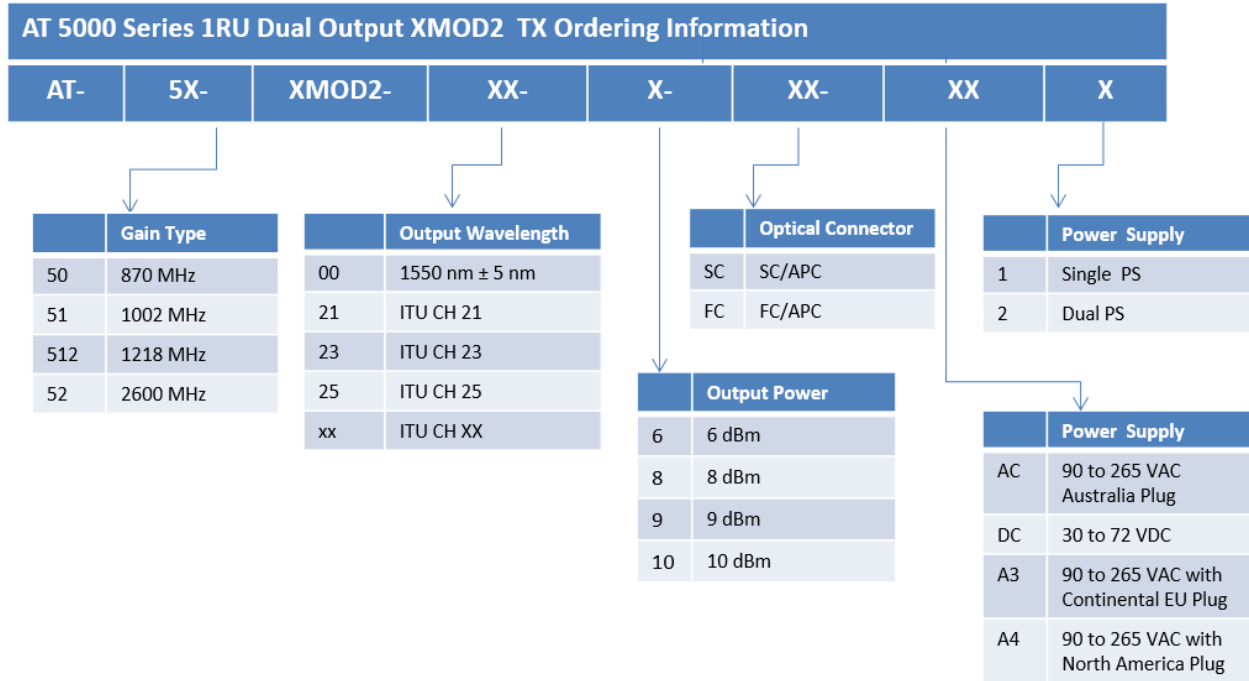
Application Diagram
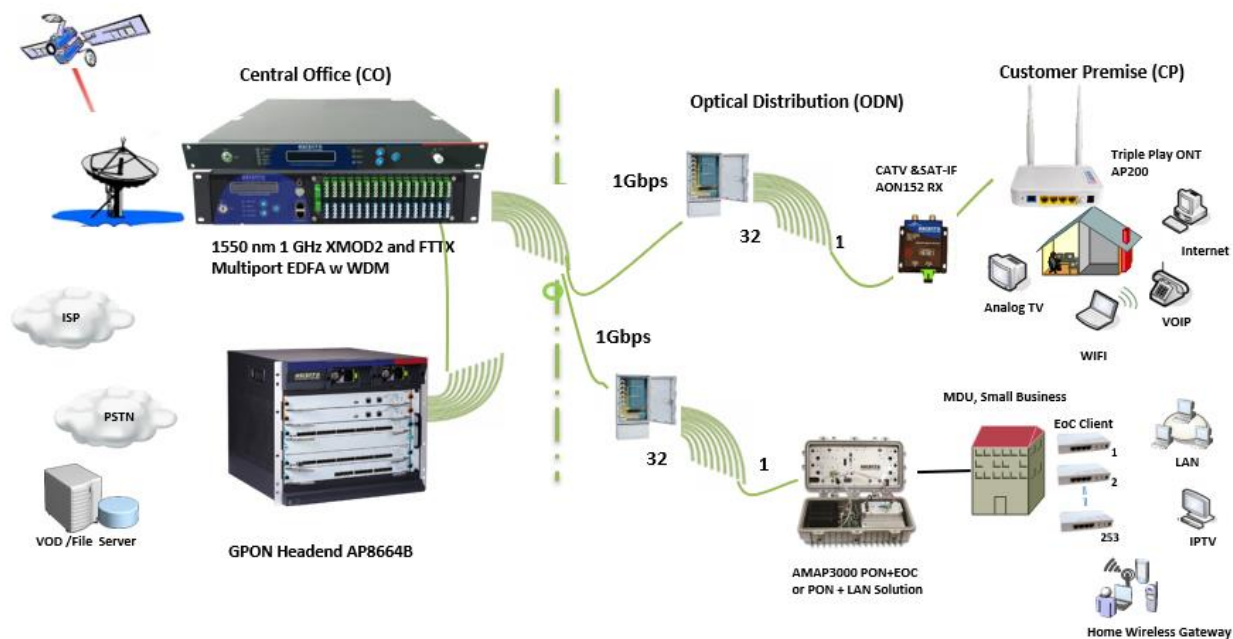
Specifications

AT5100 XMOD2 1550 nm Externally-Modulated (XMOD) Laser Transmitter - 19" 1RU

Items	Unit	Min.	Typ.	Max.	Notes
Optical					
Wavelength	nm	1540		1563	Compatible with ITU wavelength
Output Port No.		1	2		
Each Output	dBm	5		10	1 dBm/step
Laser linewidth	MHz	0.35			
SMSR	dB	45	50		
RIN	dB/Hz			-160	20 MHz to 1002 MHz
Optical Return Loss	dB	50			
Fiber Connector		SC/APC			FC/APC, LC/APC Optional
RF					
Bandwidth	MHz	47		1218	860 MHz / 1002 MHz optional
Input Level	dBµV	75	80	85	AGC
MGC ATT	dBµV	0		15	In MGC
Unflatness	dB	-0.75		+0.75	47 to 1002MHz
Return Loss	dB	16			47 to 1002MHz
Input Impedance	Ω		75		
RF Connector		F Metric/ Imperial			Optional
Link					
Test Channels		PAL-D/59CH	PAL-D/99CH		
CNR1	dB	≥53.0	52.0		TX to RX, 0 dBm input to node
CNR2	dB	≥51.0	50.0		65K fiber, 0 dBm input to node
CTB	dB	≥65			
CSO	dB	≥65			
SBS	dBm	13		19	Adjustable, Step 0.1dB
General					
Network Management		SNMP, WEB supported			
Power Supply	V	90		265	AC
		-72		-36	DC
Power Consumption	W			50	Dual power supply, 1+1back up
Working Temperature	°C	-5		+65	Auto case temp control
Storage Temperature	°C	-40		+85	
Working Relative Humidity	%	5		95	
Dimensions (W×L×H)	mm	450 × 483 × 44			
Weight	kg	7.4			

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

Ordering Information

AT 5000 Series 1RU Dual Output XMOD2 TX Ordering Information

AT-	5X-	XMOD2-	XX-	X-	XX-	XX	X

	Gain Type
50	870 MHz
51	1002 MHz
512	1218 MHz
52	2600 MHz

	Output Wavelength
00	1550 nm ± 5 nm
21	ITU CH 21
23	ITU CH 23
25	ITU CH 25
xx	ITU CH XX

	Optical Connector
SC	SC/APC
FC	FC/APC

	Output Power
6	6 dBm
8	8 dBm
9	9 dBm
10	10 dBm

	Power Supply
1	Single PS
2	Dual PS

	Power Supply
AC	90 to 265 VAC Australia Plug
DC	30 to 72 VDC
A3	90 to 265 VAC with Continental EU Plug
A4	90 to 265 VAC with North America Plug

Note: Contact ACT for additional product variations on output power, 1GHz, specific ITU channels, optical connectors etc.

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