

Melbye Raycore Taiwan Co., Ltd

Specification of CATV 1310nm Direct Modulated Transmitter

Part Number: ATXM-13DM-1xx10-DP

RAYCORE

Raycore is a fiber optic product brand name of Melbye Skandinavia AS.

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CATV 1310nm Direct Modulated Transmitter



1. Descriptions

The standard rack-mounted ATXM-13DM series 1310nm optical transmitters are designed for HFC and fiber to the home (FTTH) network application at present and in the future. These AM modulated transmitters have a wide bandwidth from 45 to 1003MHz and can be used for both analog and digital signals transmission. The ATXM-13DM series transmitters employ high performance 1310nm MQW DFB lasers with integrated optical isolator. These lasers operate at a wide range of optical output power (from 6 to 25mW), providing system designers a flexible loss budgets.

The ATXM-13DM series feature on integrated advanced pre-distortion circuit which achieves superior CSO and CTB performance. The embedded MCU circuit monitors and controls full status parameters and remote communication. All parameters can be accessed through front panel LCD or RJ-45 interface located on the rear panel of the transmitter.

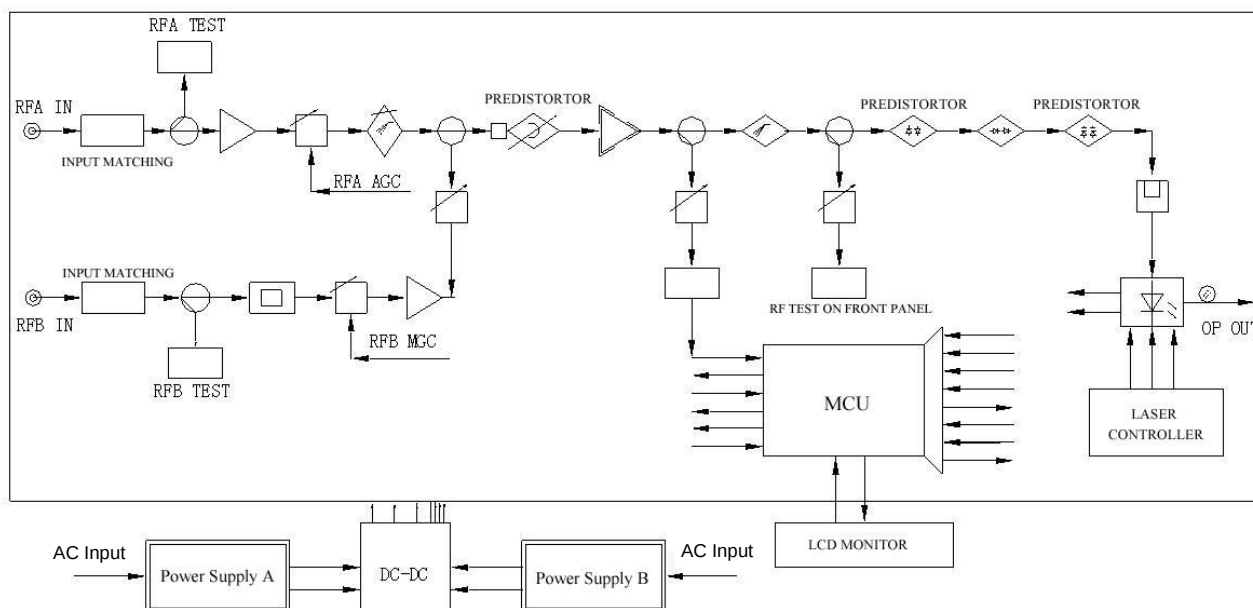
2. Features

- High performance cooled DFB laser with integrated optical isolator
- 19" standard 1U rack design
- Bandwidth 45~1003MHz
- 6/10/13/16/20/25 mW optical output power (options)
- Automatic/manual gain control (AGC/MGC)
- RF input test point
- LCD display/control functions
- Dual hot-swap AC power supply
- RJ45 port complies with standard SNMP protocol

3. Specifications

Parameter	Unit	Specification	Note
Optical Performance			
Wavelength	nm	1310 +/-20	--
Output power	mW	6/10/13/16/20/25	(options)
Connector	--	SC/APC	--
RF Performance			
Bandwidth	MHz	45-1003	--
Return loss	-dB	≥16	--
Broadcast RF Input Level	dBmV	15	per channel(for analog)
Narrowband RF Input Level	dB	20	higher than broadcast
AGC	dB	±5	--
Impedance	ohm	75	--
Flatness	dB	+/-0.75	--
Connector	-	F-female	--
Test point (Laser Input)	dBmV	35+/-1	front panel
Test point (Broadcast- RFA)	dB	-20+/-1	rear panel
Test point (Narrowband- RFB)	dB	-20+/-1	rear panel
Link Performance: 10km fiber + attenuator, receiver optical power -1dBm (77 NTSC or 60 PAL channels)			
CNR	dB	>51	--
CSO	dBc	≤-63	--
CTB	dBc	≤-67	--
XMOD	dBc	≤-65	--
Environment Performance			
Operating temperature	°C	-10 ~ 40	--
Storage temperature	°C	-20 ~ 55	--
Humidity	%	85	non-condensing
Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. These are absolute stress ratings only. Functional operation of the device is not implied at these conditions. Exposure to absolute maximum ratings for extended periods can adversely affect device reliability.			
Electrical/Physical Performance			
Supply voltage	VAC	100-240	50/60Hz
Power consumption	W	<30	--
Dimensions	mm	450D x 483W x 45H	--
Weight	Kg	5.0	--

4. Block Diagram



5. Ordering Information

Part Number	Descriptions
ATXM-13DM-10810-DP	CATV 1310nm Direct Modulated Transmitter (1003MHz, Dual AC Power, 8dBm/6mW)
ATXM-13DM-11010-DP	CATV 1310nm Direct Modulated Transmitter (1003MHz, Dual AC Power, 10dBm/10mW)
ATXM-13DM-11110-DP	CATV 1310nm Direct Modulated Transmitter (1003MHz, Dual AC Power, 11dBm/13mW)
ATXM-13DM-11210-DP	CATV 1310nm Direct Modulated Transmitter (1003MHz, Dual AC Power, 12dBm/16mW)
ATXM-13DM-11310-DP	CATV 1310nm Direct Modulated Transmitter (1003MHz, Dual AC Power, 13dBm/20mW)
ATXM-13DM-11410-DP	CATV 1310nm Direct Modulated Transmitter (1003MHz, Dual AC Power, 14dBm/25mW)