HDO371 CATV FIBRE TRANSMITTER

HDO371 is a DWDM DFB laser transmitter for return path (upstream) fibre optic links in CATV networks. HDO371 transmitter is available at different ITU wavelengths to support DWDM applications.
The transmitter can be installed into HDX installation frame.

Features

- Small form factor family, 2 RU height
- Standardised input and test point levels
- Adjustable input attenuator and equaliser
- Integrated driver amplifiers
- Pilot generator as OMI reference
- Temperature compensated OMI
- Test signal and modem signal input connectors at front and rear
- Fibre connectors can be located at the rear or at the front panel
- Local and remote software control of all adjustments
- Forced cooling through the unit

Management features

- LED indicators for signal and module statuses
- Optical output power monitoring
- Laser bias current control
- Laser temperature monitoring and control
- TEC current control
- Manual level and slope adjustment
- Internal temperature measurement and monitoring
- Intelligent fan speed control with monitoring
- Non-volatile logging of 32 latest events, including alarms, alarming values, settings changes and application starts
- Uptime and total uptime counters
- All alarm limits fully user configurable
- Local PC connection through backplane HDO bus with DVX021 cable
- Remote IP connection through HDC100 controller module
- SNMP monitoring and configuration through HDC100 controller module

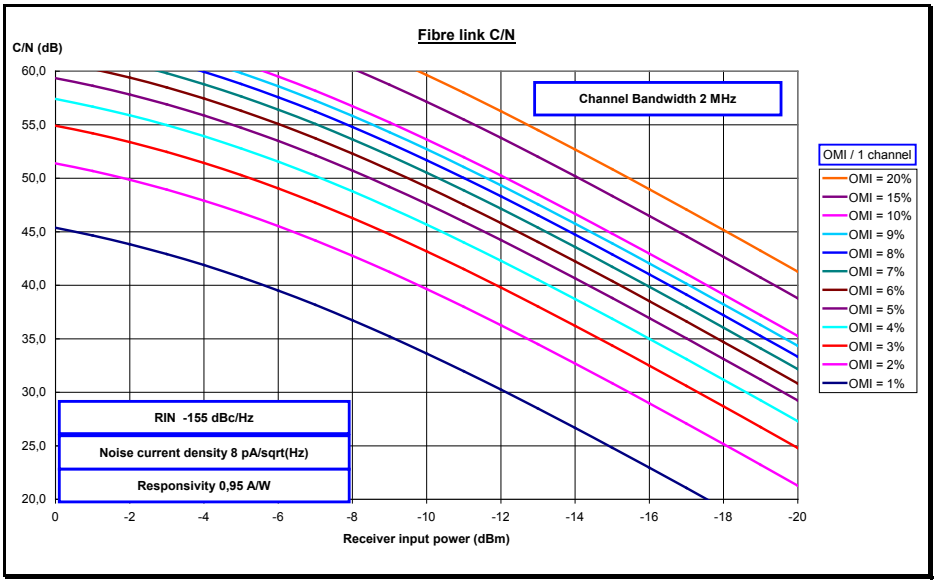
Technical specifications

Parameter	Specification	Note
Optical parameters		
Light source	Cooled DFB with optical isolator	
Peak wavelength	1530…1542 nm	1)
Output power, nominal value	+8 dBm	
Relative intensity noise	-155 dBc/Hz	2)
Number of optical outputs	1	
RF parameters		
Frequency range	5...300 MHz	
RF impedance	75 Ω	
Input return loss	18 dB	3)
Flatness	±0.5 dB	4)
Laser test point level for 10 % OMI	80 dBµV	5)
Input level	80 dBµV	6)
External inputs	20 dB	7)
Level adjustment range	15 dB	
Equaliser adjustment range	0…6 dB	
Pilot frequency	4.5…6.5 MHz	8)
Pilot level	4 % OMI	
Noise and distortion performance		
3rd order distortion	-60 dB	9)
2nd order distortion	-55 dB	10)
C/N	see graph	2)
General		
Power consumption	5 W	11)
Supply voltages	25 V / 120 mA	11)
	6.3 V / 350 mA	11)
RF connectors	F female	12)
Optical connector	SC/APC or E-2000/APC	13)
Fan	Replaceable	14)
Dimensions	2U x 7HP x 380 mm	
Weight	1.5 kg	
EMC compatibility	EN 50083-2	15)
Operating temperature range	0...+45 °C	
Storage temperature range	-20...+60 °C	
Operating relative humidity	0…85 %	

Notes

1) Standard centre wavelengths are 1530.33, 1531.90, 1533.47, 1535.04, 1536.61, 1538.19, 1539.77 and 1541.35 nm i.e. ITU channels 59, 57, 55, 53, 51, 49, 47 and 45.
Other wavelengths are available on a request.

2) Maximum value. See C/N curves below.



3) Minimum value up to 200 MHz. Between 200 and 300 MHz minimum value is 10 dB.

4) Typical value. Maximum value is ±0.75 dB.

5) Typical accuracy is ±0.4 dB. Maximum value is ±0.75 dB.

6) Input level required to reach 10 % OMI with adjustments in 0 dB positions.

7) Attenuation compared to main input.

8) The frequency can be adjust with 200 kHz steps.

9) Typical distortion distance for two carriers between 5 and 65 MHz at 10 % OMI.

10) Typical distortion distance for two carriers between 5 and 65 MHz at 10 % OMI.

11) Typical power consumption at 25°C.

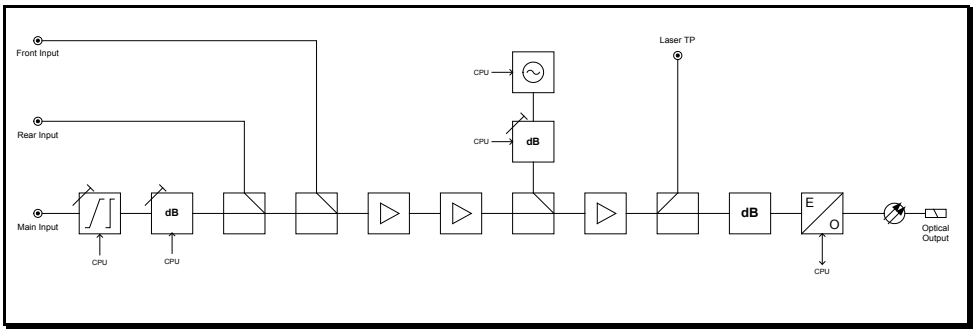
12) Fixed connections are located at the rear panel. Test points are located at the front panel.

13) Fibre connectors can be located at the rear or at the front panel.

14) The fan is replaceable without a need to disconnect the signal. The fan is installed into the module front panel.

15) Radiation limit 20 dBpW.

Block diagram



Ordering information

HDO371 configuration map

HDO371 1- 1 2- 1 2 - -

1-1 Wavelength and output power	
2108	Ch21 1560.61 nm +8 dBm DWDM
2308	Ch23 1558.98 nm +8 dBm DWDM
2508	Ch25 1557.36 nm +8 dBm DWDM
2708	Ch27 1555.75 nm +8 dBm DWDM
2908	Ch29 1554.13 nm +8 dBm DWDM
3108	Ch31 1552.52 nm +8 dBm DWDM
3308	Ch33 1550.92 nm +8 dBm DWDM
3508	Ch35 1549.32 nm +8 dBm DWDM
4508	Ch45 1541,35 nm +8 dBm DWDM
4708	Ch47 1539,77 nm +8 dBm DWDM
4908	Ch49 1538,19 nm +8 dBm DWDM
5108	Ch51 1536,61 nm +8 dBm DWDM
5308	Ch53 1535,04 nm +8 dBm DWDM
5508	Ch55 1533,47 nm +8 dBm DWDM
5708	Ch57 1531,90 nm +8 dBm DWDM
5908	Ch59 1530,33 nm +8 dBm DWDM

2-1 Fibre location	
F	Front panel
R	Rear panel
2-2 Fibre connector type	
A	SC/APC, 9 deg
B	FC/APC
C	E-2000
D	SC/APC, 8 deg
H	SC/APC with shutter.

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