HDO802 CATV FIBRE RECEIVER

HDO802 is a forward path (downstream) receiver for fibre optic links in CATV networks. It is installed into HDX installation frame.

Features

- Fibre connectors can be located at the rear or at the front panel
- Front panel test point for optical input power
- Wide adjustment ranges for output level and slope
- Automatic A/B backup switching with external passive RF coupler
- Three output level control modes:
  - Automatic based on optical input level
  - Manual
  - Pilot based (requires spectrum analyser option)
- Small form factor family, 2 RU height
- Forced cooling through the unit

Management features

- Optical input power measurement and monitoring
- User configurable backup switching with monitoring
- Automatic and manual output level control with monitoring
- Spectrum analyser module option, allowing pilot based level adjustment and signal monitoring with fully user programmable frequencies and limits
- Manual slope control
- LED indicators for signal and module statuses
- 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 adjustments and 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 wavelength	1290...1620 nm	
Input power	-5…+3 dBm	1)
RF parameters		
Frequency range	47…1006 MHz	
Output level	105 dBµV	2)
Flatness	±0.5 dB	3)
Slope variation	±1 dB	4)
RF impedance	75 Ω	
Output return loss	18 dB	5)
Slope control range	10 dB	
Level control range	20 dB	
RF test point	20 dB	6)
Secondary output attenuation	20 dB	
Spectrum analyser module (optional)		
Measurement range	50…860 MHz, 0.25 MHz steps	
Measurement bandwidth	1.5 MHz	7)
Dynamic range	70…110 dBµV	8)
Measurement accuracy	±1 dB	9)
Noise and distortion performance, CENELEC 42 unmodulated channels		
Noise current density	7 pA/√Hz	
CTB	72 dB	10)
CSO	68 dB	11)
General		
Power consumption	11.5 W (with SA 13 W)	12)
Supply voltages	25 V / 340 mA (with SA 350 mA)	12)
	6.3 V / 450 mA (with SA 650 mA)	12)
Optical connector	SC/APC or E-2000	13)
RF connectors	F female	14)
Cooling	Field replaceable fan	15)
Dimensions	2U x 7HP x 380 mm	h x w x d
	Occupies 1/12 of HDX002	
Weight	1.5 kg	
EMC compliance	EN 50083-2	
Enclosure classification	IP20	
Operating temperature range	0...+45 °C	
Storage temperature range	-20…+60 °C	
Operating relative humidity	0…85%	

Notes

1) Recommended input power range. Photodiode damage power is +4 dBm.

2) Gain limited, maximum available output level when the optical input power is 0 dBm, the wavelength is 1310 nm and the optical modulation index is 4.5 %. If the optical input power decreases 1 dB the maximum RF output level decreases 2 dB.

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

4) Maximum value at 25 °C.

5) Typical value is 18 dB on the whole frequency band. Minimum value is 18 dB and above 40 MHz -1 dB/octave.

6) Typical inaccuracy is ±0.4 dB. Maximum value is ±0.75 dB.

7) Typical -3 dB bandwidth. Typical -20 dB bandwidth is 2.5 MHz.

8) For modulated PAL signal at the main output. For QAM detection the dynamic range is approximately 6 dB higher.

9) This is the typical performance over band 50…740 MHz for PAL signals. For PAL signals between 740…860 MHz and all QAM signals the accuracy is ±2.0 dB.

10) EN50083-3, CTB 42 channels. Typical value at 25 °C when the output level is 100 dBµV and the optical input power is less than 0 dBm. With flat response.

11) EN50083-3, CSO 42 channels. Typical value at 25 °C when the output level is 100 dBµV and the optical input power is less than 0 dBm. With flat response.

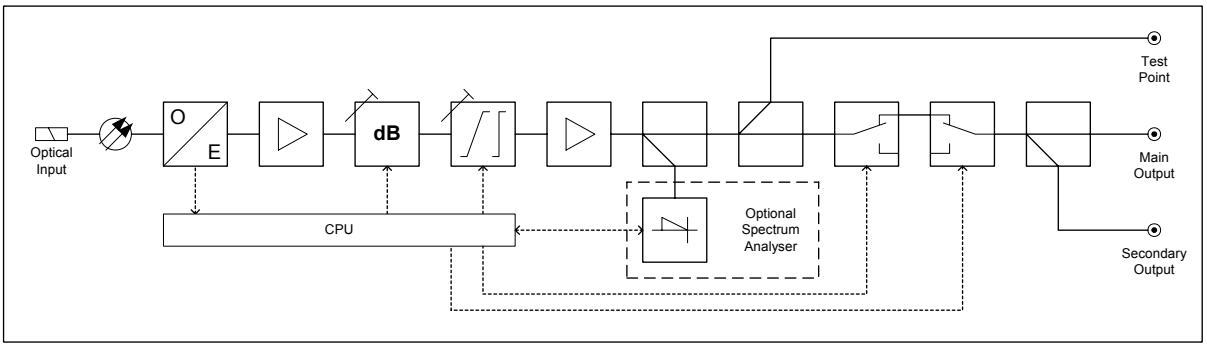
12) Maximum values without and with the spectrum analyser module.

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

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

15) The fan can be replaced by the user without signal interruption.

Block diagram



Ordering information

HDO802 configuration map

HDO802 1-1 1-2 - 2-1

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

2-1 Signal monitoring	
A	Spectrum analyser
X	None

DOC0012644, Rev004