

HDO212 CATV FIBRE RECEIVER

HDO212 is a dual receiver module for fibre optic return path links in CATV networks. HDO212 has an extended frequency range to fulfil DOCSIS 3.1 requirements. The module contains also an integrated route back up function. HDO212 is installed into HDX installation frame.

Features

- DOCSIS 3.1 compatible 204 MHz bandwidth
- Two return path receivers in one module
- Integrated A/B route backup switch
- Two equal RF outputs
- Wide input power/ output level range
- Three output level control modes:
 - Manual
 - Automatic based on OMI, target output level and optical input level
 - Automatic based on optical input level
- Extremely low power consumption
- Small form factor family, 2 RU height
- Fibre connectors can be located at the rear or at the front panel



Management features

- A/B route back up configuration with monitoring
- Optical input power measurement and monitoring
- Automatic output level control with monitoring
- Signal LEDs for the statuses of each receiver
- Module LED for internal status
- Internal temperature measurement and monitoring
- Intelligent fan speed control with monitoring
- Non-volatile logging of 64 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 HDX021 adapter cable
- Remote IP connection through HDC100 controller module
- SNMP monitoring and configuration through HDC100 controller module

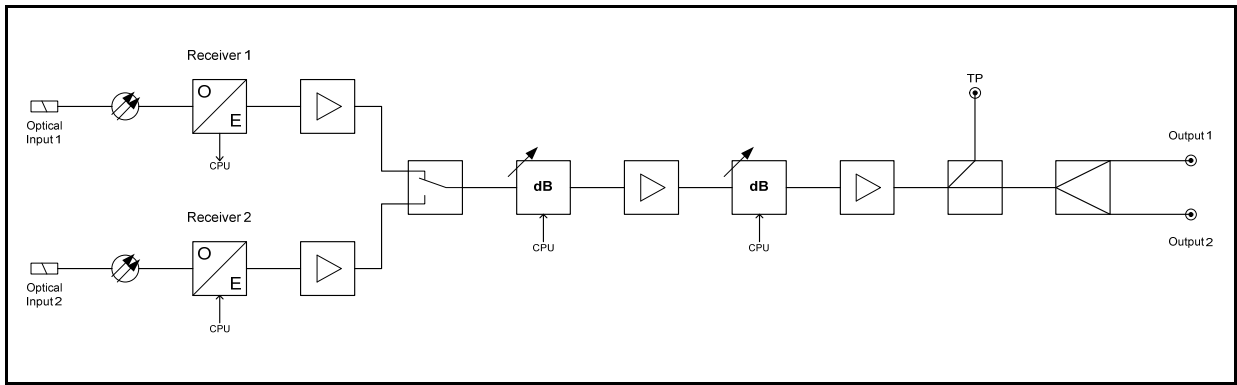
Technical specifications

Parameter	Specification	Note
Optical parameters		
Light wavelength	1100...1620 nm	
Input power	-20...+2 dBm	1)
RF parameters		
Frequency range	5...204 MHz	
Output level (OMI 10 %)	2 * P _{opt} + 130 dB μ V	2)
Flatness	\pm 0.75 dB	3)
Slope variation	\pm 0.75 dB	
RF impedance	75 Ω	
Output return loss	18 dB	
Level control range	60 dB	
RF test points	20 dB	4)
Isolation	50 dB	5)
Linearity and noise parameters		
Noise current density	3.8 pA/ \sqrt Hz	
CINR	45 dB	6)
General		
Power consumption	2.5 W	
Supply voltages	25 V / 55 mA 6.3 V / 145 mA	
Optical connectors	SC/APC or E-2000/APC	7)
RF Connectors	F female	8)
Cooling	Free air flow	
Dimensions	2U x 7HP x 380 mm Occupies 1/12 of HDX002	h x w x d
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) Too high optical input power together with a high OMI may distort the signal because of the high RF gain. The photodiode damage power is higher than +3 dBm.
- 2) Gain limited maximum output level when OMI is 10 %. RX input -15 dBm and 4 % OMI equals to 92 dBµV output level.
- 3) Typical value. Maximum value is ±1.0 dB.
- 4) Compared to output. Typical accuracy is ±0.5 dB. Maximum value is ±0.75 dB.
- 5) This is a crosstalk attenuation between input sections.
- 6) Typical value. Full load 23 QAM channels, optical input power -3 dBm, output level 95 dBµV.
- 7) Fibre connectors can be located at the rear or at the front panel.
- 8) Fixed connections are located at the rear panel. Test point is located at the front panel.

Block diagram



Ordering information

HDO212 configuration map

	1-
	1 2
HDO212	
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.	

DOC0023278, Rev.001