HDO203 CATV FIBRE RECEIVER

HDO203 is a dual receiver module for fibre optic return path (upstream) links in CATV networks. It is installed into HDX installation frame. HDO203 has an integrated alarm receiver to enable a monitoring data of AC800 FTTLA node or CXE880 node.

Features

- Two independent return path receivers
- Integrated node alarm receiver (AC800 FTTLA or CXE880 counterpart)
- Monitoring of 32 nodes
- Wide input power / output level range
- Three output level control modes:
  - Automatic based on OMI, target output level and optical input level
  - Automatic based on optical input level
  - Manual
- Small form factor family, 2 RU height
- Fibre connectors can be located at the rear or at the front panel

Management features

- Optical input power measurement and monitoring
- Automatic output level control with monitoring
- AC800 FTTLA or CXE880 node monitoring: presence, identification data, measurements, statistics (see also node specification)
- Signal LEDs for both receiver statuses, module LED for internal status
- 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

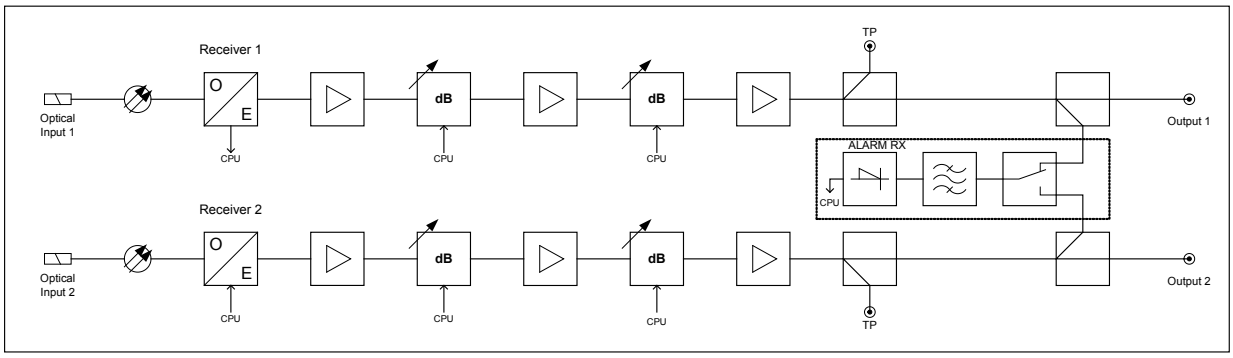
Technical specifications

Parameter	Specification	Note
Optical parameters		
Light wavelength	1000...1620 nm	
Input power	-20...+2 dBm	1)
RF parameters		
Frequency range	5…85 MHz	
Output level	2 ∗ P_{opt} + 124 dBµV	2)
Flatness	±0.75 dB	3)
Slope variation	±0.75 dB	
RF impedance	75 Ω	
Output return loss	18 dB	
Level control range	40 dB	
RF test points	20 dB	4)
Isolation	60 dB	5)
Linearity and noise parameters		
Noise current density	7 pA/√Hz	
3rd order distortion	-60 dB	6)
2nd order distortion	-60 dB	7)
Alarm receiver		
Maximum number of monitored nodes	2 x 16	8)
Data carrier frequency	10.7 MHz	
Modulation method	ASK 9600 bps or FSK 38400 bps	9)
Channel bandwidth	0.4 MHz	10)
ASK decision making threshold	75 dBµV	11)
General		
Power consumption	5 W	
Supply voltages	25 V / 180 mA	
	6.3 V / 80 mA	12)
Optical connectors	SC/APC	13)
RF Connectors	F female	14)
Cooling	Free air flow	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) Photodiode damage power is +4 dBm.
2) Gain limited maximum output level when OMI is 10%.
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 the isolation between the separate signal paths 1 and 2 up to 85 MHz.
6) Typical distortion distance for two carriers between 5 and 85 MHz when output level is 90 dBµV.
7) Typical distortion distance for two carriers between 5 and 85 MHz when output level is 90 dBµV.
8) In FSK mode each receiver can monitor up to 16 nodes. In ASK mode one node per one receiver.
9) ASK is the factory setting value. A user can select ASK or FSK mode.
10) In ASK mode typical selectivity >45 dB outside channel between 5…85 MHz.
11) Equivalent level at RF output. Accuracy ±3 dB.
12) 280 mA if an optional fan is installed to the unit front panel. This increases the total power consumption by 1.3 W.
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) Optional cooling fan can be installed or replaced by the user without signal interruption.

Block diagram



Ordering information

HDO203 configuration map

	1-1	1-2	-	2-1
HDO203			-	

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 Node alarm receiver	
A	ASK / FSK

DOC0012719, Rev.006