

BOR1000-x-19''

ULTRA-BROADBAND OPTICAL RECEIVER



Application

- ▶ Optical to electrical conversion of downstream and upstream signals in hybrid fiber coax (HFC) networks
- ▶ Usage as ultra-broadband receiver in hubs or headends

Features

- ▶ State of the art PIN photodiode and push-pull FET frontend
- ▶ Extremely low noise
- ▶ High reliability design
- ▶ Very low intermodulations
- ▶ Bandwidth 5 ... 1000 MHz
- ▶ Adjustable RF output level
- ▶ Automatic RF output level control using optical input level
- ▶ Power supply and management RS485 NMS interface
- ▶ Binary status alarm outputs
- ▶ "Red-yellow-green"-LED's for signal quality and module function
- ▶ Very thin, only 1 RU design for mounting into 19" ETSI or JIS racks

Technical Data

Electrical/Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Optical Input Power BOR1000-1 BOR1000-2	PIN	-8 -16		+2 -6	dBm
Optical Wavelength	λ	1280	1310/1550	1580	nm
Optical Return Loss	ORL		45		dB
Detector Responsivity	η	0.8		1	A/W
Power Supply	Vcc		100...240		V
Optical Connector			Any HRL-type		
RF-Connectors			IEC – female		

RF Characteristics

Parameter	Symbol	Min	Typ	Max	Unit
RF bandwidth		5	-	1000	MHz
Receiver noise current			4		pA/ $\sqrt{\text{Hz}}$
RF Impedance		-	75	-	Ω
RF Return Loss			20@ 47 MHz		dB
Flatness		-1.0		+1.0	dB
Nominal RF output level @ OMI=5% (factory setting) BOR1000-1 @ -8 dBm optical input power BOR1000-2 @ -16 dBm optical input power			81 65		dB μ V
Optical input range for automatic RF output level control @ nominal RF output*			10		[dB]
CSO (CENELEC 42)				60	dBc
CTB (CENELEC 42)				75	dBc
RF testpoint**		-31	-30	-29	dB

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Operating Temperature Range	T _{OP}	-20	+60	°C
Storage Temperature Range	T _{stg}	-40	+85	°C
Optical input power	P _{in}		+4	dBm

* RF output level is user-adjustable: BOR1000-1: between 69 dB μ V @ -8dBm optical input and 93 dB μ V @ +2 dBm optical input
BOR1000-2: between 53 dB μ V @ -16dBm optical input and 77 dB μ V @ -6 dBm optical input however with reduced optical input range (minimum 4dB)

** non-directional