

## 4-Channel Reverse path Optical Receiver



**Model: ORx 4-200**

### **Description:**

**ORx 4-200** Reverse path Optical Receiver is a module-based product, capable to house up to four independent receiver modules in a standard 19" 1U deck suitable for mounting in equipment rack. Modules are designed to work at both 1310 and 1550nm wavelengths and perform reception of optical signal from the reverse path of a CATV network and converting it into RF signal in the range of 5 to 200MHz. Separate for each module monitoring circuitry analyses received optical power and shows its status by means of LED's. Furthermore, the current level of optical power is represented as proportional DC voltage, which could be measured at testpoint (one for each module) on the front panel. RF gain preset and output level control are also available. All these features have been specially designed to facilitate the supervision, adjustment, maintenance and troubleshooting thence to provide convenience to the user. The device is meant to work as a part of Head-end equipment.

### **Features:**

- Up to 4 independent optical receiver modules in a deck.
- Capable to work at both 1310 and 1550nm optic wavelengths with no additional setting.
- Optical and RF connectors arranged on front panel for easy installation.
- Easy monitoring of optical power status – LCD's showing NO POWER, NORMAL RANGE, OVERLOAD.
- Optical power level converted into proportional DC voltage measurable at testpoints on front panel.
- Wide frequency bandwidth – 5 to 200MHz.
- High/low RF gain presettable by internal jumper for each module.
- Front panel manual adjustment of RF output level for each module.
- RF output signal testpoints on front panel.
- Standard 19" 1U deck suitable for rack-mounting as well as stand-alone use.

## Specifications:

### Optical

Parameter		Units	
Wavelength		nm	1310 and 1550
Optical Input Power Range	Low RF gain preset	dBm	0 ÷ -15
	High RF gain preset	dBm	-6 ÷ -15
Optical Test Point		V/mW	1 ±10%, located on front panel
Optical Status			Red LED – OPTICAL POWER BELOW LIMIT Green LED – NORMAL RANGE Orange LED – OVERLOAD (>1mW)
Optical Input Connector			SC/APC on front panel

### RF

Parameter	Measurement Conditions	Units	
Bandwidth		MHz	5 ÷ 200
Output Level	Input Optical Power = 0dBm; OMI <sup>1)</sup> = 10%; Attenuation = 0dB; Gain preset = LOW	dBμV	107
	Input Optical Power = 0dBm; OMI <sup>1)</sup> = 10%; Attenuation = 0dB; Gain preset = HIGH	dBμV	117
Output Level Adjustment		dB	0 ÷ -20, step less adjustable
Gain Preset	HIGH – LOW, selectable by internal jumper		
Flatness	Over frequency range 5 ÷ 200 MHz	dB	±0.75
Return Loss	75Ω Load	dB	< -18
RF Test Point	75Ω Load	dB	-20; F-connector on front panel
RF Output Connector			F-type on front panel; 75Ω output impedance

### Electrical

Parameter	Units	
Mains Supply Voltage	V AC	230 ±10%
Mains Frequency	Hz	50
Power consumption (with 4 modules in deck)	W	18.5

### Environmental

Parameter	Units	
Operating temperature range	°C	+5 ÷ +40
Maximum relative humidity	%	80 (at +30°C max)
		50 (at +40°C max)

### Mechanical

Parameter	Units	
Housing		19" 1U Rack-mounting or Stand-alone Deck
Number of Receiver Modules	Pcs.	1 ÷ 4 <sup>2)</sup>
Dimensions	Length	483 (front panel)
	Width	307 (with handles)
	Height	50 (with rubber pads)
Weight	kg	3.0 (with 4 modules)

1) OMI – Optical Modulation Index

2) 4 – standard; less – on request