

# OR4160-D

## QUADRUPLE OPTICAL RETURN PATH RECEIVER FOR 2G6

### Application

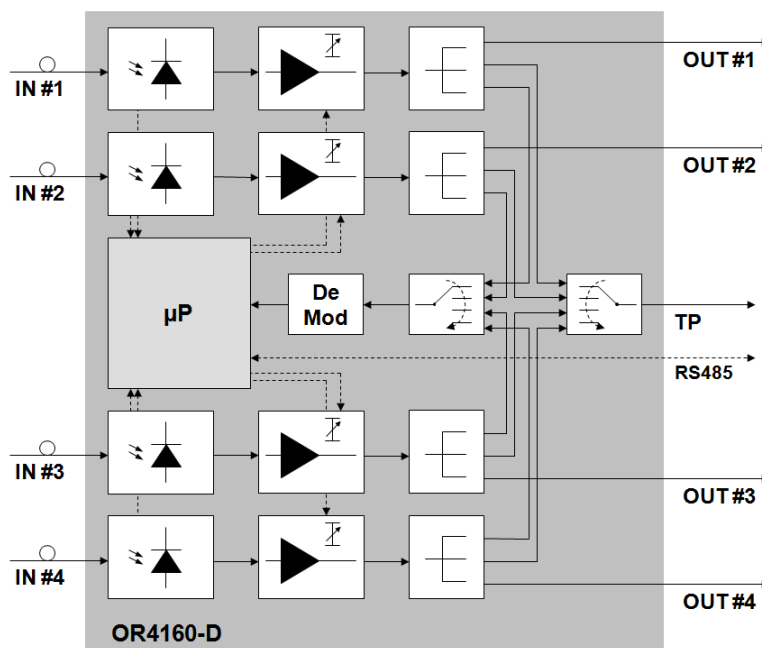
- ▶ Optical to electrical conversion of four return path signals in hybrid fiber coax (HFC) networks

### Features

- ▶ Four independent optical receivers
- ▶ Bandwidth 5...160 MHz
- ▶ Each of the 4 receivers can be switched to the -20dB test port on front
- ▶ Pilot tone and optical input power controlled AGC to keep the RF level independent from the optical input power
- ▶ Wide optical input power range
- ▶ Each receiver section can be disabled separately
- ▶ Optical power detection on all inputs
- ▶ Sleep mode for the unused receiver
- ▶ RS485 remote supervision and control interface
- ▶ SC/APC or E2000 connector as standard
- ▶ Requires 2 slots in 2G6 rack



### Block Diagram



**Technical Data**
**Electrical/Optical Characteristics**

Parameter	Symbol	Min	Typ	Max	Unit
Optical Input Power	PIN				dBm
Standard		-16		+2	
Optical Return Loss	ORL	45			dB
Detector Responsivity (1310nm)	$\eta$	0.8			A/W
Power Supply Voltage	Vcc	22.8	24	25.2	V
Power Consumption	P			10	W
Optical Connector			SC/APC		
RF-Connectors			F		

**RF Characteristics**

Parameter	Min	Typ	Max	Unit
RF bandwidth	5	-	200	MHz
Receiver noise current @ -16 dBm		2.5	4	pA/ $\sqrt{\text{Hz}}$
RF Impedance	-	75	-	$\Omega$
RF Return Loss		16@ 47 MHz		dB
Flatness				
5 ... 160 MHz	-0.75		+0.75	dB
5 ... 200 MHz	-1.0		+1.0	dB
Nominal RF output level (@OMI=5%)		75		dB $\mu$ V
IM2, IM3 (2 carriers, OMI=20% each, 0dBm, 85dB $\mu$ V)	50			dB
Frequency of ALC pilot tone	590		640	kHz
OMI of pilot tone		5		%
ALC range	36			dB
Testpoint attenuation		20 dB $\pm$ 1.5		dB

**RF Output Level for AGC Control (OMI= 5%)**
