ERN - Electroline Reversed optical Node RF over Fiber



Description

The Electroline Reversed optical Node (ERN) is a ruggedized compact Forward optical transmitter and reverse optical receiver designed to convert CATV RF signals to optical. The optical FTX converts RF to Optical and the RRX converts Optical to RF.
ERN, in combination with standard micro-nodes such as ED212, allows the use of RFoG Technology to serve customers that could not be reached with traditional Coaxial cables. The ERN is designed to extend the reach of a coaxial distribution feeder to connect additional subscribers. Instead of a costly coaxial extension the subscriber(s) can be reached with a fiber drop of up to 33,000 feet (10 Km).
On the upstream side of the ERN is a coaxial connection and on the downstream side is a fiber connection. Connect the ERN to the end of the coaxial feeder (or a point in the coax feeder with at least 10dBmv of signal) and run fiber to the customer premise or MDU. At the customer side of the fiber an RFOG micro node or mini node would terminate the fiber. The ERN is a better solution for connecting new clients when a coaxial extension is economically and/or technically impractical. Because of the lower cost of deployment, better end of line performance and lower cost of ownership, this solution is the perfect choice for adding new revenue generating subscribers.
ERN uses a single fiber to transmit in both forward and return directions. Downstream signals are transmitted at 1550nm and there are options for either a 1610nm or a 1310nm upstream receiver. It is compatible with services using DOCSIS® technology.

Features

- 50 -1002 MHz Bandwidth.
- 1550nm DFB Transmitter.
- Integrated optical components into BOSA module.
- Built in 1550/1310 or 1610 WDM
- 1310nm or 1610nm receiver.
- Plug in PAD and EQ.
- RF AGC for OMI stability.
- 5dBm or 7dBm output
- Plug-in Diplexer filter.
- Fast and flexible Installation.
- Can connect up to 4 homes with 33,000 feet (10 Km) of fiber. 8 homes with 7dBm version.
- LED indicator for Transmit and Receive signals.
- Test point for easy set-up.
- Low power consumption.
- Small form factor.
- Perfect match with Electroline's micronode ED212 series.

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Technical Specifications

Parameter	Unit	Specification	Notes
Optical and RF Performance FTX			
Wavelength	nm	1550 +/-10	
Output Power	dBm	5 or 7	
Fiber Type		Single Mode	
Connector Type		SC/APC	
Bandwidth	MHz	54-1002	Plug-in Diplex filter
Input Level	dBmV/ch	+10, +/-4	Analog CH, AGC controlled
Transmitter OMI	%	3 +/- 0.2	Factory Default, with 150 Channels
Flatness	dB	+/- 1.0	
Input Return Loss	dB	>14	
Impedance	Ohm	75	
Optical and RF performance RRX			
Wavelength	nm	1310 or 1610	+/- 10nm
Input Optical Power	dBm	0 to -13	
Fiber Type		Single Mode	
Connector Type (input)		SC/APC	Connector located inside the unit.
Bandwidth	MHz	5-42/5-65/5-85	Depends on plug-in diplex filter.
Output Level	dBmV	> 30	-10dBm at RRX input @ 35% OMI
Flatness	dB	+/- 1.0	
Output Return Loss	dB	>14	
Impedance	Ohm	75	
Link Specification (tested with ED212)			
Channel Loading		77 NTSC+ 75 dig	3% OMI. Digital -6dB from analog channel.
CNR	dB	>50	0dBm at Micronode (e.g. ED212) receiver.
CTB	dBC	>65	
CSO	dBC	>60	
Electrical/Physical			
Powering	V_{AC}	40 - 90	
Power Consumption	W	< 12	Power factor : 0.5 0.26A @ 90V_{AC} / 0.60A @ 40V_{AC}
Operating Temperature	Degree C	-40 to +60	
Dimensions	inches	10.4 x 8.4 x 5.5	W x D x H (box = 11.8" x 9.1" x 6.5")
Weight	Lbs	6.6	

All specifications are subject to change without notice.

Ordering Information

Product Family		Diplex Band		RRX type (nm)		Output Power (dBm)		Output port(s)		Output port(s)
ERN	-	D or E or F for 5-45/54 or 5-65/85 or 5-85/102 (MHz)	-	1310 Or 1610	-	5 Or 7	-	1	-	1 (when unit has single RF+AC port) None (when unit has 1 RF port and 1 RF+AC port)

Product Family (accessories)		**Upgrade Diplex Kit**
1,2,3,4	**5**	**6**
ERNA	-	D or E or F for 5-45/54 or 5-65/85 or 5-85/102 (MHz)

Product Family (accessories)		**JXP accessories**	
1,2,3,4	**5**	**6,7,8,9**	**10,11,12**
ERNA	-	PADJ	-xx value from 00-21dB increment 1dB
		CSIM	-xx value from 03-15dB increment 3dB
		EQLI	-xx value from 01-15dB increment 1dB

For more information on our products, please visit: www.electroline.com or call: 800-461-3344

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