Optical

ED212 Series RFoG NODE with Burst Transmitter

Description

The ED212 series is a micro node designed to offer optical node application flexibility in a compact housing. They are ideal for advanced fiber to the premises and FTTH applications for multiple services. The ED212 series nodes provide an RF output up to 1.2 GHz (1218MHz) which is suitable for signal distribution within a subscriber's home.

Optional OBI free (mitigation) available with CWDM laser.



Applications

The ED212 series micro nodes are ideal for use in fiber to the home and fiber to the business applications. It is designed to terminate an RF Over Glass (RFoG) communications network and is the demarcation point between the outside plant and the internal building RF distribution network. Compatible with GPON and 10 GEPON transmission modes, it includes an optical MUX for pass through of the XPON downstream and upstream wavelengths.

It can be used to overlay RFoG based services onto an existing GPON or GEPON network or expand an RFoG network with services delivered with GPON or GEPON transmission modes.

The device uses a single fiber and receives downstream signals at 1550nm and return transmitters can be ordered as either 1310nm or 1610nm depending on the system requirements. As an RFOG device it is compatible with DOCSIS® and all the legacy HFC back office functionality.

The Electroline Advantage

A long-standing solution provider of high-quality products for specialized broadband applications, Electroline is pleased to offer the ED212 series micro node, which is ideal for application where space is limited but performance requirements are high.

ED212 eliminates the need for expensive installation of larger nodes, while providing comparable performance.

Features

- Bandwidth up to 1218MHz
- GaAs technology
- SCTE174 compliant
- RF output for premises distribution
- Forward RF test point (-20dB)
- Compact housing size
- LED indicators for power, optical input and transmit status
- Burst Transmitter
- Low power consumption
- Single Fiber WDM technology
- Flexible powering at local or remote sites
- Optical AGC functionality
- 1490 nm and 1310 nm pass through for xPON overlay or 1577nm and 1270 nm pass through for 10 GEPON overlay
- 1310nm or 1610 nm transmitter options or CWDM laser for OBI free (mitigation).
- Surge resistance 6KV/200A "Ringwave" on F port(s).
- Extended optical receiver version available 1525~1565nm

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Specifications:

Forward Path Receiver (77ch NTSC analog carriers (54-550 MHz), 73ch 256 QAM at -6dB, OMI 3.5%)	
Forward RF Optical Wavelength	1540~1565 nm 1525~1565 nm (ED212-E)
Fiber Input Connector	SC/APC or SC/UPC or LC/APC
Optical Return Loss	45 dB
RF Bandwidth	54/85/102/258 to 1218Mhz. (Depending on diplex filter)
RF Connectors	F Type (SCTE 02 compliant)
RF Output Impedance	75Ω
AGC Effective Range	Optical Input: -6dBm ~ +1dBm
AGC Stability	± 1.5dB
RF Output Level	16 dBmV@ 550MHz 20 dBmV @ 1218MHz
RF Flatness	± 1dB
RF Return Loss	18 dB
RF Output Tilt / Slope	5 ±1dB @ 1002Mhz (SCTE174 compliant) Options for 4, 3, 2 or 0 ± 1dB @ 1002Mhz
Equivalent input noise current density (NCD)	4.5 pA/√Hz typ.
Responsivity (r) of the photo diode (A/W)	0.88 (ED212-*5 type)
CNR	>48 dB @ -4dBm Optical Power Input
CSO/CTB	>60 dBC @ 0dBm Optical Power Input
CNR	> 47dB (-5dBm input)
Return Path Transmitter	
Return Path Laser Wavelength	1610nm ± 10nm / 1310nm ± 20nm or CWDM lasers (see ordering information)
Optical Output Power	3 ±1dBm
RF Input Power per 6.4MHz channel	10 - 40dBmV
Return Path Laser off power	<-35dBm
Return Laser Rise/Fall Time	1μs/1.2us
Return RF Bandwidth	5~42MHz/65MHz/85MHz/204MHz
Laser Turn On RF Level	+12dBmV
Laser Turn Off RF Level	-4dBmV
Relative Intensity Noise	< 155 dB/Hz
ONU Pass-through port. Note: WDM type D and T option	
Wavelengths	1260nm~1360nm, 1480nm~1500nm,1575~1580nm
Wavelengths loss	1dB Typical/1.5dB Maximum
Output Connector	SC/APC or SC/UPC or LC/APC
Optical Return Loss	Minimum 40dB
Environmental / General	
Operating Temperature	-40 ~ +65 degC
Storage Temperature	-40 ~ +85degC
Input Voltage Range	$11V_{DC}$ - $18V_{DC}$
Power Consumption	3W Typical
Dimension (L*W*H)	140mm×102mm×35mm 5.5" x 3.3" x 1.4"
Weight	0.6Kg / 1.2 lbs (not including power adapter)
Protection Class	IP52
Immunity	3V/m
Surge Protection	6KV/200A (ring wave)

Specifications are subject to change without notice.

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Ordering Information:

ED212-B	5-	5-	D61-	1-	4-	SA	0	0
Model Series	WDM Type:	RF Out	Return Wavelength[1]	Split	Slope[2]	Optical Connector(s)[3]	Power Adaptor ($15V_{DC}$)	Power Inserter
B=Basic Version E=Extended Optical Receiver Version	D=10GEPON T= GPON 5= No pass through	5= 16dBmV 6= 18dBmV	D13=1310nm D61=1610nm or C**=CWDM ITU Channels	1=42/54 3=65/85 4=85/102 5=204/258	0=no slope 2=2dB 3=3dB 4=5dB	SA=SC/APC SC=SC/UPC LC=LC/APC	0=none 1=North American 2=Europe 3=UK	0=none 1=included

[1] CWDM lasers available for ITU channels C27 (1270nm) to C61 (1610nm)

[2] *Slope option 4* **is** SCTE174 compliant, other slope options are not.

[3] By default, all optical connectors are of the same type. *WDM type 5* has one connector. Please call us for mix connectors request.

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

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