

iTRVR-G



GEPON Enabled RFoG Mini-Node

The Optilab iTRVR-G is a bi-directional analog Optical Network Unit (ONU) designed for combining GEPON-based systems with RFoG applications. The iTRVR-G contains a full-function burst mode RFoG mini-node and an internal multiplexer for combining external GEPON signals. With advanced Wavelength Division Multiplexing (WDM) technology, optical wavelengths from the analog ONU, which are 1550 nm in forward-path and 1570 nm -1610 nm in return-path, can be added to with the GEPON ONU signals, which are 1490 nm downstream and 1310 nm upstream. The iTRVR-G can provide the HD video and QAM-based return data bandwidth as in a conventional HFC optical node, and can be used for enhancing GEPON transmission in HFC, Deep Fiber and RFoG networks. The return-path bandwidth capacity of the RFoG systems can be increased by a factor of 3 by using return-path lasers with 3 different CWDM wavelengths. All contained within a compact, versatile mini-node, the iTRVR-G is the most cost-effective solution available. Contact Optilab for more information.

Features

- 1550 nm forward path receiver
- Return-path λ of 1570 nm, 1590 nm, or 1610 nm
- GEPON wavelengths of 1310 nm & 1490nm
- Single optical fiber for forward / return path
- Designed for combining GEPON with RFoG
- **3 year warranty standard**

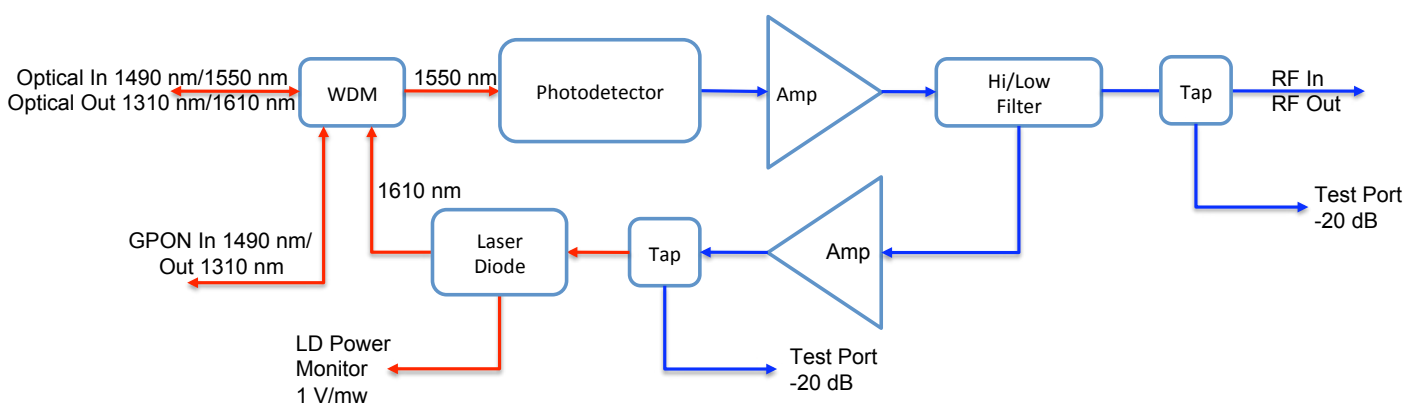
Applications

- HFC
- RFoG
- XPON
- Deep Fiber Applications
- Optilab is RUS/USDA accepted



Functional Diagram

iTRVR-G



GEPON Enabled RFoG Mini-Node | iTRVR-G

OPTIONS

iTRVR-G

TECHNICAL INFO

For technical info and support:

sales@optilab.com

www.optilab.com

WEB ORDER

To order, please visit OEQuest.com.



Optilab Advantage

- Innovation
- Performance
- Quality
- Customization
- Warranty

Optical Specifications - Forward Path (Receiver)	
Receiver Wavelength Range	1530 nm - 1560 nm
Input Optical Power	+3 dBm to -6 dBm
RF Output Power Level	35 dBmV
Carrier to Noise Ratio (CNR)	50+ dB typ. @ 0 dBm Input Level
Composite Second Order (CSO) Distortion	-63 dBc max.
Composite Triple Beat (CTB) Distortion	-63 dBc max.
Frequency Range	54 MHz to 870 MHz, 1 GHz Available
Optical Specifications - Return Path (Transmitter)	
Transmitter Wavelength	1570 nm, 1590 nm, 1610 nm
Output Optical Power Level	+2 dBm typ.
Burst Mode Switch-on Time	1.0 μ s max.
MER of QAM64	34 dB min. at 20 MHz
Frequency Range	5 MHz to 42 MHz
XPON Path	
Pass Wavelength	1310 nm \pm 25 nm, 1490 nm \pm 5 nm
Insertion Loss for GEPON signals	1 dB max.
Isolation from RFoG	30 dB min.
General Specifications	
Flatness in Frequency Range	\pm 0.5 dB
Optical Return Loss	45 dB min.
RF Impedance	75 Ω
RF Return Loss	16 dB min.
Mechanical Specifications	
Optical Connectors	2, SC/APC, RFoG and GEPON
Temperature Range	-20°C to +65°C
Power Supply	12 - 15 V DC, 350 mA
Power Consumption	5 W max.
Housing Dimensions	4.6"(W) x 5"(L) x 1.3"(H)
Control / Monitoring	Voltage Monitoring: Optical Level 1V/mW
Display	3 LEDs: Optical Input/Output and Power