Chromadigm

CIR - Integrated RFoG Transmitter

Features

- Integrated EDFA
- Up to 8 output ports at 18 dBm each.
- Optional 1610nm Return Reflect Ports
- Optional Express ports for GPON 1310nm/1490nm wavelengths.
- Space-Efficient 19" 1 RU
- Redundant Load-Sharing – AC or DC Power supplies
- Superior CNR, CSO and CTB
- Error Free QAM Transport with Very High OMI

Applications

- RFoG / FTTx
- RF Video Overlay for PON

Key Benefits

- Compact 19" 1 RU Transmitter with integrated EDFA for multiple 18 dBm outputs is ideal for centralized RFoG deployments
- Integrated filters for 1610nm RFoG return & 1310nm/1490nm PON OLT eliminate external WDM and multiple connections
- Chromadigm high performance patented technology facilitates RFoG
  - Chirp Cancelation for distance independent performance
  - Clipping mitigating circuitry for error-free QAM performance
  - High Optical Modulation Index (OMI) of 5 % enables superior CNR, longer EDFA cascades and higher receiver RF output
- + 20 dBm SBS threshold over 20 km

The Chromadigm Integrated Transmitter (CIR) is a 1 RU transmitter for RFoG and other applications where only a single wavelength is required. It incorporates the advanced features available in InnoTrans' revolutionary full band Multi-wavelength Transmitter (CHS series) such as Clipping Mitigation and Chirp Cancelation for superior performance.

The CIR is a 1GHz single ITU wavelength transmitter capable of high SBS suppression. An integrated EDFAs provides the option of two, four or eight outputs at +18 dBm each. Each output can be configured to include 1610nm reflect ports for the upstream RFoG return and express ports for PON OLT 1310nm and 1490nm wavelengths to eliminate external space requirements and multiple optical connections increasing network reliability.

The chassis is equipped to support two modular power supply modules working in a load share configuration with the option of a universal AC or -48 VDC powering for high network reliability.

Status monitoring is provided through a local craft interface, CLI and SNMP based Element Management Systems

22 Great Oaks Blvd. Suite 100
San Jose, CA 95119
www.inno-trans.com

Phone: (408) 227-3400
Fax: (408) 227-3403
sales@inno-trans.com

Chromadigm

CIR - Integrated RFoG Transmitter

Specifications[1, 2, 3]

Transmitter Performance [1,2,3]	
Carrier-to-Noise (CNR)	>51 dB
Composite Triple Beat (CTB)	>70 dB
Composite Second Order (CSO)	>63 dB
Pre-FEC BER	1 E-9

Optical Outputs	
Wavelength:	ITU CHs 21 to 37
Number of Output Ports	2,4 or 8
Output Power Per Port	18 dBm

RF Input	
Bandwidth	50 to 1002 MHz
AGC Mode	
Broadcast RF Input Range	15 to 21dBmV
Recommended BC Input (80 CHs Analog)	18 dBmV
Recommended QAM CHs Input	12 dBmV
MGC Mode	
Broadcast RF Input	15 to 21 dBmV
Recommended BC Input (80 CHs Analog)	15 dBmV
Recommended QAM CHs Input	9 dBmV

Power	
Power Consumption	30 to 60 W
AC Voltage Supply Range	85 to 240 VAC
DC Voltage Supply Range	-42 to -56 VDC

Environmental	
Operating Temperature Range	0 to 50 C
Storage Temperature Range	40 to +85 C
Relative Humidity	Maximum 85% non-condensing

Physical	
Dimensions (WxHxD)	19” x 1.75” x 21” (1RU)
Weight	<20 lbs
RF Connectors	Type F
Optical Connectors	SC/APC

Network Management	SNMP V4

User interface

Front Panel	
LCD Display with menu switch keys	
RF Test Point	
RF test point level relative to RF Input	-20 dB
Test point flatness with respect to input	±0.8 to ±1.0 dB
Craft interface	RS - 232

Rear Panel
RF Inputs and Optical Output connectors
LAN port
Hot Swappable fan
DB-9 connector for alarm contacts

Notes

1. Measured with a reference receiver using a network analyzer with appropriate levels from 50 to 1002 MHz
2. With 77 NTSC channels, up to 40 km of fiber (version dependent), 0 dBm received power into an analog receiver with noise current density < 7 pA/sqrt (Hz); with field demux optical isolation > 30 dB.
3. Specified over temperature and lifetime.

Available Configurations

2, 4 or 8 Output Ports at 18dBm. Optional 1610nm Reflect Ports and GPON Express Ports for 1310nm/1490nm Wavelengths. DC or AC Power Supplies

22 Great Oaks Blvd. Suite 100
San Jose, CA 95119
www.inno-trans.com

Phone: (408) 227-3400
Fax: (408) 227-3403
sales@inno-trans.com