LASER LINK®

1550 nm NARROWCAST TRANSMITTER

APPLICATION

The Narrowcast Transmitter converts input RF narrowcast signal in the 50-870 MHz frequency range to an optical output with a discrete ITU grid wavelength. Multiple outputs of LLNT products (20 currently) may then be transmitted over a single fiber through utilization of wave division multiplexing.

BENEFITS

- Unparalleled link performance
- Cost-effective targeted service solution
- Highly scaleable
- Minimal hub space
- Reduced maintenance expense
- Simple implementation and operation

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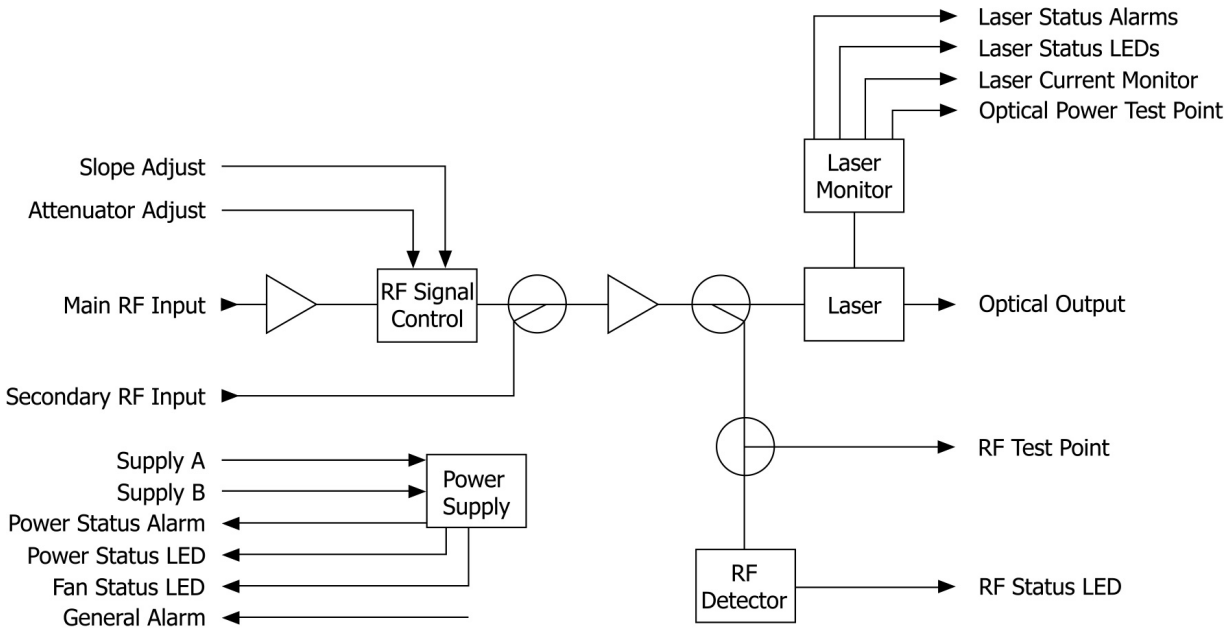
FEATURES

- Narrowcast services: Directly modulated DFB laser (DML) sources
- Wavelengths on ITU grid
- Front panel RF and optical test points
- Multiple wavelengths combined through DWDM
- Network Management (status monitoring) ready
- Front panel LEDs
- Front panel fiber interface

BLOCK DIAGRAM



SPECIFICATIONS

Optical		
Optical Power (dBm)	9 ±1	
Return Loss (dB)	Ž65	
Optical Cross-Talk[1] (dB)	•-40	
Wavelength (nm)	1560.61 ±0.1	1544.53 ±0.1
	1558.98 ±0.1	1542.94 ±0.1
	1557.36 ±0.1	1541.35 ±0.1
	1555.75 ±0.1	1539.77 ±0.1
	1554.13 ±0.1	1538.19 ±0.1
	1552.52 ±0.1	1536.61 ±0.1
	1550.92 ±0.1	1535.04 ±0.1
	1549.32 ±0.1	1533.47 ±0.1
	1547.72 ±0.1	1531.90 ±0.1
	1546.12 ±0.1	1530.33 ±0.1

RF	
Impedance (ohms)	75
Return Loss (dB) 550 MHz/550-870 MHz	Ž16/Ž14
Input Level[2] (dBmV/Channel)	17
Level Adjustment (dB)	0 to -4
Slope Adjustment (dB)	0 to -5
Frequency Response (MHz)	45-870
Flatness (dB)	±0.75
Test Point Level (dB) (relative to laser drive level)	-30 ±1.0
Carrier-to-Noise Ratio[2, 3] (dB)	49
Composite Second Orde[2, 3, 4] (dBc)	•-50
Composite Triple Beat[2, 3, 4] (dBc)	•-59

Powering	
Input Voltage (V dc)	24
Current Draw (mA)	833

Physical	
Operating Temperature °F (°C)	32-122 (0-50)
Relative Humidity (Min.-Max.) (Non condensing)	5-95%
Optical Connector	SC/APC; SC/UPC, E2000
Mounting	Laser Link Mainframe
Dimensions (H x W x D) in. (cm)	5.25 x 2.17 x 13.5 (13.33 x 5.51 x 34.29)
Weight lbs. (kg)	2.9 (1.3)

Note 1: 8 optical channels launched into 40 km of fiber at a power of 7 dBm

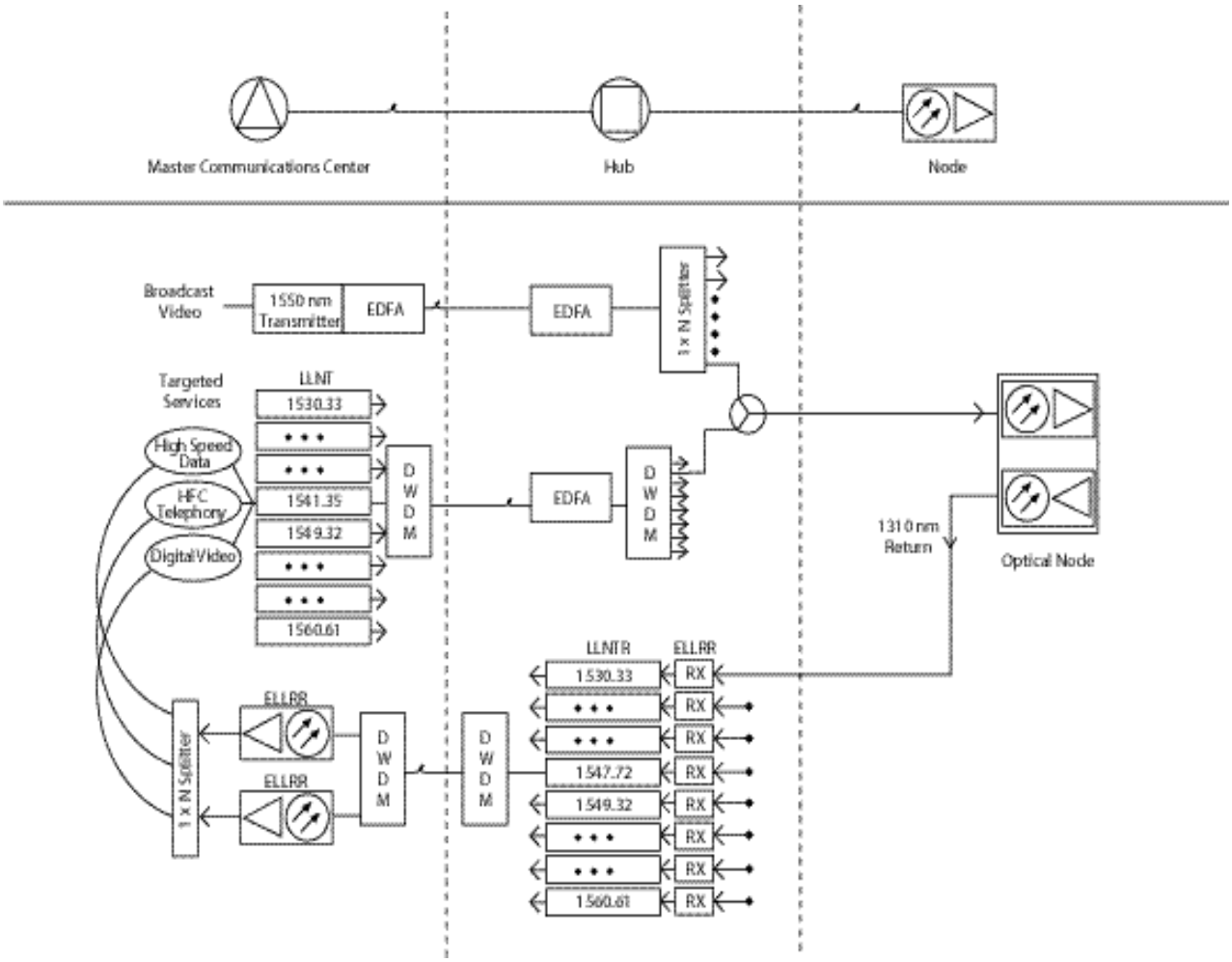
Note 2: Optical modulation depth = 10% per channel

Note 3: Link budget of 18 dB: 4 passive 14 dB (60 km) standard fiber; Receiver: LL forward receiver

Note 4: Eight channel CW measurement: channels 79-86

Specifications are subject to change without notice.

NETWORKDIAGRAM



ORDERING INFORMATION

Model #	Description	Wavelength	Part #
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1560.61 nm	252263
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1558.98 nm	252262
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1557.36 nm	252261
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1555.75 nm	252260
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1554.13 nm	252259
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1552.52 nm	252258
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1550.92 nm	252257
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1549.32 nm	252256
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1547.72 nm	254699
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1546.12 nm	254698
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1544.53 nm	254697
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1542.94 nm	254696
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1541.35 nm	253793
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1539.77 nm	253797
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1538.19 nm	253801
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1536.61 nm	253805
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1535.04 nm	253809
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1533.47 nm	253813
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1531.90 nm	253817
LLNT	Transmitter, Directly Modulated 1550 nm, 870 MHz	1530.33 nm	253821