FOXCOM
Complete RF-2-Fiber Solutions

Sat-Light Gold Series

GL952CD C-Band Optical Downlink

Features & Benefits

- Optimized for Professional Satellite Applications
- Wide Dynamic Range
- 15Km Transmission Distance
- Transmitter and Receiver Gain Control
- Front Panel Test Port
- Powerful Monitoring Features
- Compatible with all 1st Generation Sat-Light Products

Product Description

Foxcom's Sat-Light C-Band fiberoptic interfacility links transmit and receive downlink signals in the 3.4–4.2 GHz range between antennas and control rooms or NOCs. Foxcom's IFLs offer a high performance alternative to conventional coaxial-cabled systems, reducing the need for waveguide and minimizing signal attenuation.

The Sat-Light IFLs function as a transparent link, transmitting all satellite modulation formats carrying an entire polarization on each link.

System limitations in using coaxial cable are overcome by the simplicity and performance of fiberoptic connections to provide the highest levels in signal quality. Foxcom achieves this by using state of the art lasers to provide high efficiency, low noise analog links.

A typical C-Band link consists of an optical transmitter that receives the RF signal, transmits it over a single mode fiber to an optical receiver and reconverts the optical signal to RF. Foxcom's advanced fiberoptic technology reduces the attenuation, slope, phase shift, and group delay maintaining extremely low levels over distances of up to 15 kilometers.

The C-Band's link cost effective high performance lasers produce negligible chirp and optical distortion, which is critical for long distance links. The EAM monolithic design, versus connectorized component electro-optics, assures high performance along with excellent reliability. The links are provided with test ports, status and fault LEDs, and gain controls.

Specifications

GL952CD C-Band Optical Downlink [3.4–4.2 GHz], 3dB Optical Budget

RF Specifications	Units	Typical	Minimum	Maximum
Frequency Range	GHz	3.4–4.2 GHz		
Link Gain	dB	Adjustable	0	0
Amplitude Response @ Unity Gain 3.4–4.2 GHz and 48 MHz	dB	±.75 ±.25		
Gain Stability @ Constant Temp	dB/24hr			±0.15
SFDR	dB/Hz		100	
CNR	dB		45	
Noise Figure (NF)	dB		23	
Output IP3 (OIP3)	dB		+15	
Third Order Inter-Modulation [IMD][1]	dBc	Adjustable	-50	
Group Delay Variation- linear 3.4–4.2 GHz	ns	0.3		
Input Signal Range – Total Power	dBm		-25	-5
RF Output Signal Range – Total Power	dBm		-25	-5
Maximum Input without damage for 60 sec	dBm		+5	
Input/Output Impedance	Ohm	50		
TX/RX Input/Output VSWR @50 Ohm	dB		1.5:1	
RF Connector Type Input/Output		SMA		
Test Port		SMA		
Test Port [front panel sample port]	dB	-20	-19	-21
Optical Specifications	**Unit**	**Typical**	**Minimum**	**Maximum**
Optical Power Output	dBm		-3	0
Optical Budget / Distance 4 dB optical budget	dB/Km	15Km@1550nm		
Optical Connector Types		FC/APC		
Optical Wavelength	nm	1550/CWDM		
Electrical Specification				
Supply Voltage	Vdc	13	12.7	18
Supply Current [TX][4]	Amps	0.8		
Supply Current (RX)	Amps	0.5		
Physical Specifications				
Operating Temperature Range			-10	+55
Dimensions [D×W×H]		RX: 5″ x 5″ x 1.5″ TX: 5″ x 5″ x 3″		

1. Two carriers at maximum input and output power

Ordering Information
GL952CD-T – Gold C-Band Downlink Transmitter
GL952CD-R – Gold C-Band Downlink Receiver

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