



## Sat-Light Gold Series

# GL952-218 2-18 GHz Wideband Optical Link



### Features & Benefits

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

### Product Description

Global Foxcom's Sat-Light wideband microwave fiber optic interfacility links transmit and receive signals in the 2-18GHz range between antenna and control rooms or NOCs. Global 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 fiber optic connections to provide the highest levels in signal quality. Global Foxcom achieves this by using state of the art lasers to provide high efficiency, low noise analog links.

A typical Microwave 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. Global Foxcom's advanced fiber optic technology reduces the attenuation, slope, phase shift, and group delay maintaining extremely low levels over distances of up to 15 kilometers.

The microwave 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 status and fault LEDs, and gain controls.

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## Specifications

### GL952-218 RF Link / 2-18GHz, 4dB Optical Budget

RF Specifications	Units	Typical	Minimum	Maximum
Frequency Range	GHz	2-18		
Link Gain	dB	Adjustable	-10	+10
Amplitude Response @ Unity Gain 2-18GHz any 36 MHz	dB	±2 ±0.3		
Gain Stability @ Constant Temp	dB/24hr			±0.15
SFDR	dB/Hz <sup>2/3</sup>	102	100	
CNR [36 MHz @ 5GHz] <sup>2</sup>	dB	55	50	
Noise Figure (NF) <sup>2</sup>	dB			22
Output IP3 (OIP3) <sup>1</sup>	dB		+15	
Third Order InterModulation [IMD] <sup>3</sup>	dBc		-55	-50
Group Delay Variation- linear 2 to 18GHz	ns	0.4		
Input Signal Range - Total Power	dBm		-25	-5
RF Output Signal Range - Total Power	dBm		-25	-5
Maximum Input without damage	dBm		+15	
Input/Output Impedance	ohm	50		
TX/RX Input/Output VSWR @ 50 Ohm	dB		1.5:1	
RF Connector Type Input/Output		SMA		
Optical Specifications	Units	Typical	Minimum	Maximum
Optical Power Output	dBm	-1	-3	2
Optical Budget / Distance 3 dB optical budget	dB/Km	15Km@1550nm		
Optical Connector Types		FC-APC or LC-APC		
Optical Wavelength	nm	1550/CWDM		
Electrical Specifications	Units	Typical	Minimum	Maximum
Supply Voltage	Vdc	13	12.7	18
Supply Current [TX] <sup>4</sup>	Amps	0.8		
Supply Current (RX)	Amps	0.5		
Physical Specifications	Units	Typical	Minimum	Maximum
Operating Temperature Range			-10	+55
Dimensions [D×W×H]		5" x 3" x 5"		

1. -5dBm RF input, unity gain, IMD=-50 dBc @ 1 meter Fiber	2. -25dBm RF input, 20dB gain, IMD=-50 dBc @ 1 meter Fiber
3. User adjustable	4. Under 10°C add 120 mA [laser heating]

## Ordering Information

Model Number	Description
GL952-218T	Gold 2-18GHz Microwave Transmitter
GL952-218R	Gold 2-18GHz Microwave Receiver