



Sat-Light Gold Series

GL952KU KU-Band Optical Uplink



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 KU-Band fiberoptic interfacility links transmit and receive uplink signals in the 13.75-14.5 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 fiber optic 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 KU-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 fiber optic technology reduces the attenuation, slope, phase shift, and group delay maintaining extremely low levels over distances of up to 15 kilometers.

The KU-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

GL952KU KU-Band Optical Uplink [13.75-14.5GHz], 3dB Optical Budget

RF Specifications	Units	Typical	Minimum	Maximum
Frequency Range	GHz	13.75-14.5		
Link Gain	dB	Adjustable	-10	+10
Amplitude Response @ Unity Gain 13.75-14.5GHz and 36 MHz	dB	±1 ±0.2		
Gain Stability @ Constant Temp	dB/24hr			±0.15
SFDR ¹	dB/Hz ^{2/3}	102	100	
CNR [36 MHz @ 2.5GHz] ²	dB	55	50	
Noise Figure (NF) ²	dB			22
Output IP3 (OIP3) ¹	dB		+15	
Third Order Inter-Modulation [IMD] ³	dBc		-55	-50
Group Delay Variation – linear 14 to 14.5 GHz	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		+5	
Input/Output Impedance	Ohm	50		
TX/RX Input/Output VSWR @50 Ohm	dB		1.4:1	
RF Connector Type Input/Output		SMA		
Test Port		SMA		
Test Port [front panel sample port]	dB	-20	-22	-18
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		
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]	
1. -5dBm RF input, unity gain, IMD=-50 dBc @ 1 meter Fiber	3. User adjustable
2. -25dBm RF input, 20dB gain, IMD=-50 dBc @ 1 meter Fiber	4. Under 10°C add 120 mA [laser heating]

Ordering Information
GL952KU-T – Gold KU-Band Uplink Transmitter
GL952KU-R – Gold KU-Band Uplink Receiver