FOXCOM
Complete RF-2-Fiber Solutions

Sat-Light Gold Series

GL7222 GPS Optical Link

Features & Benefits

- Optimized for GPS applications
- Selectable GPS antenna powering voltage
- Supports both L2 & L1 GPS bands
- 10Km transmission distance
- Selectable AGC/MGC
- Front panel test port
- Powerful monitoring features
- Compatible with all 1st generation Sat-Light products

Product Description

Foxcom's Sat-Light/Gold L-Band Interfacility Link offers a high performance, cost effective alternative to conventional coaxial-cabled systems. The Gold GPS Link covers the frequency range of 1100 to 1600MHz and supporting both L1 and L2 GPS bands. The Gold Series GPS link is compatible with wide range of active GPS antenna and is equipped with a 3.3/5V voltage selectable GPS antenna powering.

The new GPS link is compatible with first generation Sat-Light 7000 Series platform. The Gold Series support L-Band, 70/140MHz IF, Wide Band (10-2200 MHz), 10MHz Reference, Redundancy, M & C, SNMP, Ethernet, and Serial Data Communication.

The link consists of a GPS optical transmitter, which receives the RF signal from an active GPS antenna, and an optical receiver that connects to the indoor GPS receiver.

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Specifications

GL7222 GPS Optical Link; L-Band [1100-1600MHz], 4dB Optical Budget

RF Specifications	Units	Typical	Minimum	Maximum
Frequency Range	MHz	1100-1600MHz		
Link Gain	dB	Adjustable	-10	+10
Amplitude Response @ Unity Gain	dB			
1100-1600MHz		±1		±1.5
any 36 MHz		±0.25		±0.3
Gain Stability	dB/24hr	±0.25		±0.3
SFDR1	dB/Hz2/3	103	100	
CNR [any 36 MHz]1	dB	60	55	
Noise Figure (NF)1	dB	6		7
Output IP3 (OIP3) 2	dBm	+5	0	
Third Order Inter-Modulation [IMD]3	dBc	Adjustable	55	30
Group Delay Variation- linear	ns			5
950 - 2150MHz		4		
Input Signal Range – Total Power7	dBm			-50
Output Signal Range – Total Power	dBm			-50
Maximum Input without Damage	dBm		+15	
Input/Output Impedance	50			
TX/RX Input/Output return loss	dB			
50 Ohm		-14		-14
RF Connector Type		BNC, SMA		
Input/Output		BNC		
Test Port				
Test Port [front panel sample port]10	dB	-20	-22	-18
Optical Specifications	Unit	Typical	Minimum	Maximum
Optical Power Output	dBm	3	1	4
Optical Budget / Distance	dB/Km	1310 nm|1550 nm		
4 dB optical budget		8 |15		
Optical Connector Types		FC/APC or SC/APC		
Optical Wavelength	nm	1310/1550/CWDM		
Electrical Specification				
Supply Voltage	Vdc	13	12.7	18
Supply Current [TX]4	Amps	0.4		
Supply Current (RX)	Ampls	0.3		
Physical Specifications				
Operating Temperature Range			-10	+55
Dimensions [D×W×H]				
MTBF	Hours	TX: 309, 481		
		RX: 359, 057		

1. -50dBm RF input, 20dB gain, IMD=-40 dBc @ 1 meter Fiber
2. -25dBm RF Output, IMD=-40dBc
3. User adjustable
4. Under 10ºC add 120 mA [laser heating]

Ordering Information

GL7222T-1310-SMA-FC	Sat-Light Gold GPS fiber optic Transmitter (1.1 - 1.6GHz). Low RF Input (>-45dBm) Fixed gain. 5V/3.3v LNB Powering. 1310nm DFB Laser.
GL7222R4-SMA-FC	Sat-Light Gold GPS Fiber optic Receiver (1.1 - 1.6GHz) w/ Low RF output (>-45), Manual Gain Control; 4dB Optical Budget. 50-Ohm SMA RF Connector