FOXCOM
Complete RF-2-Fiber Solutions

Sat-Light Gold Series

GL7430T / GL7430R RF Link Wideband Optical

Features & Benefits

- Optimized for Professional Satellite and Wireless Applications
- Wide Dynamic Range
- 10Km Transmission Distance
- Selectable VAR/AGC/MGC
- Front Panel Test Port
- Powerful Monitoring Features
- Compatible with all 1st Generation Sat-Light Products

Product Description

Foxcom's Sat-Light/Gold Wideband Optical Link offers a high performance, cost effective alternative to conventional coaxial-cabled systems. Sat-Light/Gold L-Band IFL covers the range of 10 to 2200MHz. The Gold Series Wideband link is designed for a wide range of satellite and wireless applications. Foxcom's high dynamic range DFB laser delivers exceptional signal quality for the most demanding of requirements.

The new Sat-Light Gold series 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 high dynamic range optical transmitter, which converts incoming RF signals into optics, and an optical receiver that re-converts the optical signal back into RF.

All satellite modulation schemes are accommodated –digital or analog. Inherently low phase is achieved by direct modulation of the laser diode.

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Specifications

GL7430T / GL7430R RF Link Wideband [10-2200MHz], 4dB Optical Budget

RF Specifications	Units	Typical	Minimum	Maximum
Frequency Range	MHz	10-2200MHz		
Link Gain	dB	Adjustable	-10	+10
Amplitude Response @ Unity Gain 10-2200MHz any 36 MHz	dB	 ±2.25 ±0.3		 ±2.5 ±0.4
Gain Stability	dB/24hr	±0.25		±0.3
SFDR[1]	$dB/Hz^{2/3}$	102	100	
CNR [any 36 MHz][1]	dB	55	52	
Noise Figure (NF)[1]	dB	18		21
Output IP3 (OIP3) [2]	dB	+20	+15	
Third Order Inter-Modulation [IMD][3]	dBc	Adjustable	55	40
Group Delay Variation- linear 10 to 60 MHz 60 - 2200MHz	ns	 14 2		
Input Signal Range - Total Power[4]	dBm		-25	0
RF Output Signal Range - Total Power	dBm		-25	+5
Maximum Input without Damage	dBm		+15	
Input/Output Impedance	75 or 50			
TX/RX Input/Output return loss 50 Ohm 75 Ohm	dB	 -15 -13		 -15 -13
RF Connector Type Input/Output Test Port		 F, SMA BNC		
Test Port [front panel sample port]	dB	-20	-22	-18

Optical Specifications	Unit	Typical	Minimum	Maximum
Optical Power Output	dBm	3	2	4
Optical Budget / Distance 4 dB optical budget	dB/Km	 1310 nm | 1550 nm 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][5]	Amps	0.4		
Supply Current (RX)	Ampls	0.3		
Physical Specifications				
Operating Temperature Range			-10	+55
Dimensions [D×W×H]				
MTBF		TX: 309, 481 RX: 359, 057		

1. -5dBm RF input, unity gain, IMD=-40 dBc @ 1 meter Fiber
2. -25dBm RF input, 20dB Gain, IMD=-40 dBc
3. 0dBm RF Output, IMD=-40dBc
4. User adjustable
5. Under 10ºC add 120 mA [laser heating]