



Sat-Light Gold Series

GL7430 Wideband Optical Link



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

Global 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. Global 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, Wideband (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

GL7430 Wideband Optical Link [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 and 36 MHz	dB	±2.25 ±0.3		
Gain Stability @ Constant Temp	dB/24hr			±0.25
SFDR	dB/ Hz ^{2/3}		100	
CNR (any36MHz)	dB		52	
Noise Figure (NF)	dB		18	
Output IP3 (OIP3)	dB	+20	+15	
Third Order Inter-Modulation [IMD]	dBc	Adjustable	-55	-40
Group Delay Variation- linear 10-60MHz 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 for 60 sec	dBm		+15	
Input/Output Impedance	Ohm	75 or 50		
TX/RX Input/Output VSWR @50 Ohm	dB			-15
TX/RX Input/Output VSWR @75 Ohm	dB			-13
RF Connector Type: Input/Output		F, SMA		
Test Port		BNC		
Test Port [front panel sample port]	dB	-20	-22	-18
Optical Specifications	Units	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 Specifications	Units	Typical	Minimum	Maximum
Supply Voltage	Vdc	13	12.7	18
Supply Current [TX] ⁵	Amps	0.4		
Supply Current (RX)	Amps	0.3		
Physical Specifications	Units	Typical	Minimum	Maximum
Operating Temperature Range			-10	+55
Dimensions [D×W×H]		RX: 5" x 5" x 1.5" / TX: 5" x 5" x 3"		
MTBF		TX: 309,481 / RX: 359,057		

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

Ordering Information

Model Number	Description
GL7430-T	Gold Wideband Transmitter
GL7430-R	Gold Wideband Receiver