



Sat-Light Gold Series

GL7330 70/140MHz IF Optical Link



Features & Benefits

- Optimized for Professional Satellite Applications
- Wide Dynamic Range
- 10Km Transmission Distance
- Selectable 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 70/140MHz IF Link offers a high performance, cost effective alternative to conventional coaxial-cabled systems. Sat-Light/Gold L-Band IFL operates in the range of 10 to 200MHz. The Gold Series L-Band link is designed for a wide range of satellite up and downlinking facilities whereby high CNR levels are required. Global Foxcom's high dynamic range DFB laser delivers exceptional signal quality for the most demanding of applications.

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 input power optical transmitter, which receives the RF signal from an IF modem, and an optical receiver that connects to the antenna BUC.

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

GL7330 70/140MHz IF Optical Link [10 to 200MHz], 4dB Optical Budget

| RF Specifications | Units | Typical | Minimum | Maximum |
|--------------------------------------------------------------|----------------------|-----------------------------|---------|------------------------------------------|
| Frequency Range | MHz | 10-200MHz | | |
| Link Gain | dB | Adjustable | -10 | +10 |
| Amplitude Response @ Unity Gain 10-200MHz any 36 MHz | dB | ±0.4dB ±0.3dB | | ±0.5dB |
| Gain Stability | dB/24hr | ±0.25 | | ±0.3 |
| SFDR1 | dB/Hz ^{2/3} | | 100 | |
| CNR [any 36 MHz] ¹ | dB | 60 | 57 | |
| Noise Figure (NF) ² | dB | 18 | | 21 |
| Output IP3 (OIP3) ³ | dB | +20 | +15 | |
| Third Order InterModulation [IMD] [□] | dBc | Adjustable | -55 | -40 |
| Group Delay Variation- linear 10 to 25 MHz 25 – 200MHz | ns | 5 1 | | |
| Input Signal Range - Total Power | dBm | | -30 | 0 |
| RF Output Signal Range - Total Power | dBm | | -25 | 0 |
| Maximum Input without Damage | dBm | | +15 | |
| Input/Output Impedance | 75 or 50 | | | |
| TX/RX Input/Output return loss 50 Ohm 75 Ohm | dB | -15 -12 | | -15 -12 |
| RF Connector Type Input/Output Test Port | | F, SMA BNC | | |
| Test Port [front panel sample port] | dB | -20 | -22 | -18 |
| Optical Specifications | Units | Typical | Minimum | Maximum |
| Optical Power Output | dBm | 3 | 1 | 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 | 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] | | | | |
| MTBF | Hours | TX: 309,481 RX: 359,057 | | |
| 1. 10dBm RF input, unity gain, IMD=-40 dBc @ 1 meter fiber | | | | 4. User adjustable |
| 2. - 20dBm input, 20dB Gain, IMD 40 @ 1 meter fiber | | | | 5. Under 10°C add 120 mA [laser heating] |
| 3. 0dBm RF Output, IMD=-40dBc | | | | |

Ordering Information

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|------------------------------------------|
| GL7330-T – Gold 70/140MHz IF Transmitter |
| GL7330-R – Gold 70/140MHz IF Receiver |