FOXCOM
Complete RF-2-Fiber Solutions

*Sat-Light Gold Series*

# GL7130 Optical Link for 10MHz Reference Signals


## Features & Benefits

- **Optimized for transmission of 10MHz Reference Signals**
- **10Km Transmission Distance**
- **Selectable AGC/MGC**
- **Front Panel Test Port**
- **Selectable LNB Powering**
- **Powerful Monitoring Features**
- **Compatible with all 1st Generation Sat-Light Products**

## Product Description

Foxcom's Sat-Light/Gold 10MHz Reference Signal Link offers a high performance, cost effective alternative to conventional coaxial-cabled systems. The Gold 10MHz Reference Signal optical link is designed for to meet the needs of a wide range of Satellite and professional VSAT applications. Foxcom's high dynamic range DFB laser delivers exceptional signal quality for the most demanding applications.

The new 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 10 MHz reference signals into optics, and an optical receiver that re-converts the optical signal back into RF. Inherently low phase is achieved by direct modulation of the laser diode.

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| GL7130 RF Optical Link<br>10MHz Reference Signal, 4dB Optical Budget | | | | |
|---|---|---|---|---|
| **RF Specifications** | **Units** | **Typical** | **Minimum** | **Maximum** |
| Frequency Range | MHz | 10MHz | | |
| Link Gain | dB | Adjustable | -10 | +10 |
| Amplitude Response @ Unity Gain<br>5 - 15 MHz | dB | | | 2.5 |
| Gain Stability | dB/24hr | ±0.25 | | ±0.3 |
| SFDR[1] | dB/Hz | | 100 | |
| CNR[1] | dB | 65 | 60 | |
| Noise Figure (NF)[2] | dB | 20 | | 23 |
| Output IP3 (OIP3) [2] | dBm | +30 | +20 | |
| Third Order InterModulation [IMD][4] | dBc | | 55 | 40 |
| Group Delay Variation- linear<br>10-20MHz | ns | 5 | | 6 |
| Input Signal Range – Total Power | dBm | | -25 | +5 |
| Output Signal Range - Total Power | dBm | | +15 | +10 |
| Maximum Input without Damage | dBm | | +15 | |
| Input/Output Impedance | 75 or 50 | | | |
| TX/RX Input/Output return loss<br>50 Ohm<br>75 Ohm | dB | <br>-15<br>-13 | | <br>-15<br>-13 |
| RF Connector Type<br>Input/Output<br>Test Port | | F, SMA<br>BNC | | |
| Test Port [front panel sample port] | dB | -20 | -22 | -18 |

| **Optical Specifications** | | **Typical** | **Minimum** | **Maximum** |
|---|---|---|---|---|
| Optical Power Output | dBm | 3 | 2 | 4 |
| Optical Budget / Distance<br>4 dB optical budget | dB/Km | 1310 nm \| 1550 nm<br>8 \|15 | | |
| Optical Connector Types | | FC/APC | | |
| Optical Wavelength | nm | 1310/1550/CWDM | | |

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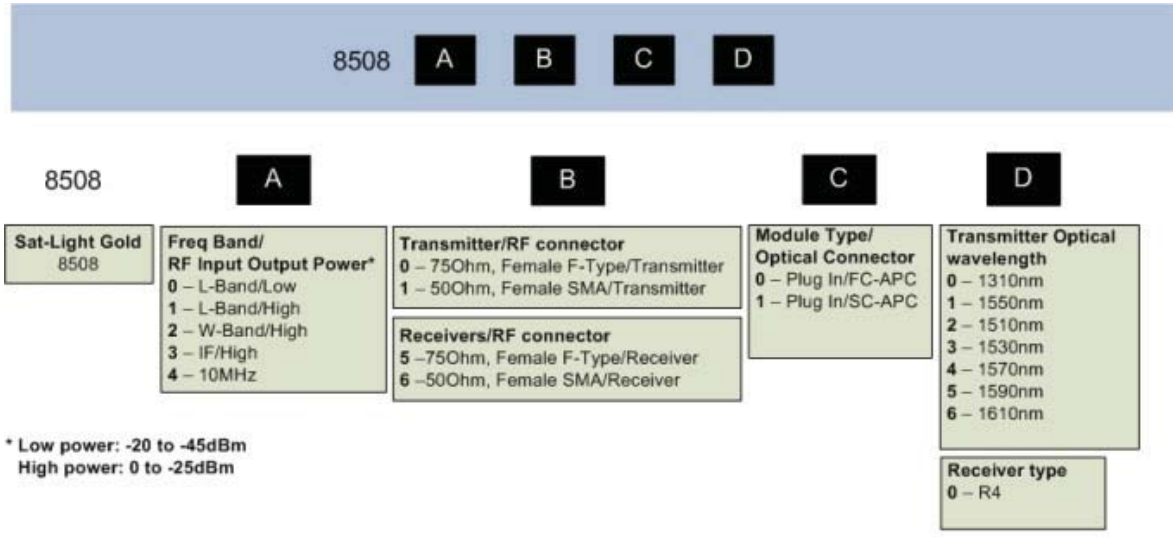
| Electrical Specification | | | | |
|---|---|---|---|---|
| Supply Voltage | Vdc | 13 | 12.7 | 18 |
| Supply Current [TX][5] | Amp | 0.4 | | |
| Supply Current (RX) | Amp | 0.3 | | |
| **Physical Specifications** | | | | |
| Operating Temperature Range | | | -10 | +55 |
| Dimensions [D×W×H] | | 5.1x4.9x1.6 | | |
| MTBF | Hours | TX: 309, 481<br>RX: 359, 057 | | |

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

## Ordering Information




Example: Plug in module, L-band, low RF input, 1310nm laser, F-Type RF connector and FC/APC optical connector

8508 0 0 0 0