

Microwave Photonic Systems, Inc. 888-868-8967



OFW-5800 Fiber Optic Antenna Link (FOAL)

The OFW-5800L Fiber Optic Antenna Link (FOAL) consists of an antenna module, located on the topside mast structure, and a receiver module, located in the below deck navigation space (IC/GYRO Room). OFW-5800L Fiber Optic Antenna Link (FOAL) is configured to receive L1 and L2 GPS RF signals, generate a RF intensity modulated optical carrier and transmit the optical carrier to the receiver module via a shipboard fiber optic cable. OFW-5800L Fiber Optic Antenna Link (FOAL) detects and converts the optical carrier to the GPS RF signals and distributes the GPS signals to the GVRC. When configured as a Dual FOAL Subsystem, the OFW-5800L Fiber Optic Antenna Link (FOAL) consists of two independent FOALs each interconnected through a corresponding NAVSSI/GVRC RTS. In this configuration the OFW-5800L Fiber Optic Antenna link (FOAL) is capable of meeting the antenna subsystem requirements of the NAVSSI/GVRC DUAL RTS architecture.

Features

- Utilizes Commercial-Off-the-Shelf (COTS) Hardware**
- Preserves Dual FOAL Subsystem Performance Specs**
- Eliminates Topside FO & AC Power IC Box**
- Retains Existing Military FRPA-GP Enclosure**
- Integrates Mil. Multi-Channel Opt. Connector into FRPA-GP**
- Supports Various FO Cable Interconnection Architectures**
- Compatible with Existing FOAL Receiver Drawer ICD**

Specifications

RF Performance*

Gain	21.0 dB (min), 35.0dB (max)
Center Freqs.	L1, 1575.42 MHz and L2, 1227.6 MHz
Out of Band Rej.	-3.0 dB BW -- 40 MHz (max) -40.0 dB BW -- 140 MHz (max) -70.0 dB BW -- 245 MHz (max)
Noise Figure	4.0 dB (max)
Input/Output VSWR	2.0:1 (max)
Spur Free Dynamic Range	95.0 dB Hz ² /3 (typ)
Input Protection	< 2.0 GHz, 350 W Peak, 10 micro sec PW, 0.1% DC > 2.0 GHz, 400 W Peak, 10 micro sec PW, 0.1% DC
Max. RF Input	30 dBm, CW

*Values Measured from RF Input to RF Output

Optical Performance

Wavelength	1300 nm \pm 15 nm
Linewidth	\pm 2 nm
Output Power	3.0 dBm/CH (typ)
E/O EFF	0.03 W/A
Responsivity	> 0.85 A/W
Operating Temperature	Antenna Unit: -28°C to +65°C Receiver Unit: 0°C to +50°C, -40°C to +71°C, Antenna & Receiver Unit
Storage Temperature	-40°C to +71°C, Antenna & Receiver Unit
Vibration	Mil-STD-167
Shock	Mil-S-901D



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