

OFW-5800

## Fiber Optic Antenna Link (FOAL)



**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**

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.

**Information:** Call us toll-free at 888-868-8967 or email [info@b2bphotonics.com](mailto:info@b2bphotonics.com)

### 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

Microwave Photonic Systems, Inc.

1155 Phoenixville Pike, Unit 106, West Chester, PA 19380, Toll-Free: 888-868-8967

Phone: 610-344-7676, Fax: 610-344-7110, E-mail: [info@b2bphotonics.com](mailto:info@b2bphotonics.com), Internet: [b2bphotonics.com](http://b2bphotonics.com)

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### Specifications

Optical Performance	RF Performance*
Wavelength: 1310 nm $\pm$ 15 nm	Gain: 21.0 dB (min), 35.0 dB (max)
Linewidth: $\pm$ 2 nm	Center Freqs.: L1, 1575.42 MHz and L2, 1227.6 MHz
Output Power: 3.0 dBm/CH (typ)	Out of Band Rej. -3.0 dB BW - 40 MHz (max)
E/O EFF: 0.03 W/A	-40.0 dB BW - 140 MHz (max)
Responsivity: >0.85 AW	-70.0 dB BW - 245 MHz (max)
Operating Temperature	Noise Figure: 4.0 dB (max)
Antenna Unit: -28° C to +65° C	Input/Output VSWR: 2.0:1 (max)
Receiver Unit: 0° C to +50° C	Spur Free Dynamic Range: 95.0 dB Hz 2/3 (typ)
Storage Temperature:	Input Protection: <2.0 GHz, 350 W Peak, 10 micro sec PW, 0.1% DC
Antenna Unit: -40° C to +71° C	<2.0 GHz, 400 W Peak, 10 micro sec PW, 0.1% DC
Receiver Unit: -40° C to +71° C	Max. RF Input: 30 dBm, CW
Vibration: Mil-STD-167	
Shock: Mil-S-901D	

\* Note: Values measured from RF Input to RF Output.

