

OFW-7300-IFL

MIL SATCOM RF PHOTONIC L-Band Interfacility Link Transceiver Subsystem



OFW-7300/IFL Utilizes a Leading Edge Optical Conversion Process

The OFW 7300 / IFL; L Band Fiber Optic Transceiver Subsystem provides “Best of Breed” optical long-haul transmission of RF signals in the frequency range of 950 MHz to 2250 MHz. The Subsystem can support the transmission of High Density L Band SATCOM traffic over distances of up to 50 km using Mil Tactical Harsh Environment singlemode interconnections.

The OFW 7300 / IFL utilizes a leading edge optical conversion process that is transparent to the User’s data modulation rate and format. The Subsystem offers many performance advantages including an “Ultra-High Spur Free Dynamic Range, 10 MHz Frequency Reference Transport, Embedded Fault & Alarm Status Monitoring over Ethernet, and Harsh Environmental Temperature Range.

In addition, the OFW 7300 / IFL supports a list optional features that enhance SATCOM terminal operation: Uplink / 10 MHz RF Frequency Diplexed Transport, Downlink LNB powering, RF Link Gain Control, Optical Dynamic Range > 6 dBo, and Extended RF Frequency Range up to 3000 MHz.

The OFW 7300 / IFL can be packaged in various styles of form factors including: 1RU x 19” rack chassis, 4RU x 19” high-density plug-in card chassis, Harsh Environment / Outdoor Enclosures, and compact flange mount modules.

Information: Call us toll-free at 888-868-8967 or email info@b2bphotonics.com

Applications

- WGS 84 MIL SATCOM / L Band
- Wideband RF Transmission
- VSAT Antenna Remoting
- L / S Band Telemetry Remoting
- MIL SATCOM Uplink / Downlink

Features

- Bandwidth, 950 to 2250 MHz, (3000 MHz)
- RF Freq Refer: 1 MHz, 5MHz to 10 MHz
- Ultra-High Spur Free High Dynamic Range
- Enhanced Low Noise RF Front-end (Opt)
- RF Link Gain Control (Opt)
- LNB Powering (Opt)
- 80 km Extended Range (Opt)

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Specifications

RF Uplink Specifications:	950 MHz to 2250.0 MHz
RF Link Gain (typ)	+0.0 dB, ± 2 dB @ 3.0 dBo Optical Loss(1)
Flatness (max)	± 1.5 dB, 1 to 2 GHz, ± 2.5 dB full bandwidth
VSWR (max)	1.5:1
Noise Figure (max)	30 dB @ 3.0 dBo Optical Loss(1)
1 dB Comp. Level (min)	+5.0 dBm(1)
Input IP3 (min)	+22.0 dBm(1)
Second Harmonic (min)	70 dBc @ 2 GHz w/ -25 dBm Input @ 1 GHz
Spur Free Dynamic Range	+110.0 dBm * Hz(2/ 3)(1)
RF Downlink Specifications:	950 MHz to 2250.0 MHz
RF Link Gain (typ)	+0.0 dB, ± 2 dB @ 3.0 dBo Optical Loss(1)
Flatness (max)	± 1.5 dB, full bandwidth
VSWR (max)	1.5:1
Noise Figure (max)	20 dB @ 3.0 dBo Optical Loss(1)
1 dB Comp. Level (min)	+0.0 dBm(1)
Input IP3 (min)	+12.0 dBm(1)
Input IP2 (min)	+25.0 dBm(1)
Spur Free Dynamic Range	+110.0 dBm * Hz(2/ 3)(1)
RF Frequency Response:	
RF Link Gain (typ)	+0.0 dB, ± 2 dB @ 3.0 dBo Optical Loss(1)
1 dB Comp. Level (min)	+0.0 dBm(1)
VSWR (max)	1.5:1
Noise Figure (max)	20 dB @ 3.0 dBo Optical Loss(1)
Phase Noise	-145.0 dBc / Hz(1)
Optical Specifications:	
Operating Wavelength	1310 nm ± 2 nm, 1550 nm ± 2 nm or CWDM Bands
Output Power (typ)	+3 dBm (output powers available up to +13 dBm)
Allowed Backreflection (max)	45 dB @ full specs
E/O Diff. Eff. (min)	0.12 W/A
General Specifications:	
Power Supply, AC Autoranging	85 VAC -264 VAC, 47 Hz to 440 Hz, Single Phase
AC Receptacle	IEC 320
Optical Input / Output Port	FC/APC, SC/APC, AVIM APC or User Specified
RF Input / Output Port	SMA(f), 50 ohm or F(f), 75 ohm
Temperature Storage / Operating	-40°C to +85°C / -20°C to +65°C
Local Alarms / Remote Alarms	Panel LEDs / Fault Relay, RS 232, 485 or Ethernet

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