

OFW-2320TRX

UHF Fiber Optic Interfacility Link (IFL) System



Designed to provide full duplex signal transmission between a UHF Ground Station and its transmit/receive antenna complex

The OFW-2320TRX UHF Fiber Optic Interfacility Link (IFL) System is the principle hardware for long-haul transmission of UHF signals in the frequency range of 225 MHz to 400 MHz over singlemode fiber optic cable. The OFW-2320TRX is designed to provide full duplex signal transmission between a UHF Ground Station and its transmit/receive antenna complex with as much as 50 km of optical cabling. The OFW-2320TRX system architecture consists of a Remote Unit located at the antenna complex such that it is optically interconnected to a Local Unit at the ground station. The OFW-2320TRX is compatible with UHF SATCOM Transceivers and can replace the conventional RF Coax Cables that interconnect the transceivers to their respective antennas. The system function is independent of the RF carrier's data modulation format. The links have low noise and high dynamic range characteristics, a wide operating temperature range and provide turnkey installation. The system provides status monitoring through the use of an onboard processor that communicates with a host computer over a RS-232 or RS-485 I/O interface.

A typical antenna installation configuration would resemble an architecture where the OFW-2320TRX remote unit is installed such that it is interconnected to the Antenna via an uplink/downlink duplexer. Specifically, the uplink optical channel connects to the Power Amplifier (PA), the downlink optical channel connects to the Low Noise Amplifier (LNA). Similarly, the ground station installation configuration would resemble an architecture where the OFW-2320TRX uplink and downlink optical channels are mated to the radio SATCOMM transceivers. With the addition of an optional WDM module will enable the system to have bi-directional uplink/downlink transmission over a single fiber optic cable.

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

Applications

- Interfacility Link Remoting
- SATCOM Uplink & Downlink Remoting
- UHF Distribution, 225 MHz to 400 MHz

Features

- CWDM Compatible
- High Dynamic Range
- Low Noise RF Front-end
- LNA Powering (opt)
- 80 km Extended Range (opt)
- RS-232 or RS-485 Data Port (opt)
- 1 Year Full, 2 Year Limited Warranty

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Specifications

Optical	General
Operating Wavelength: 1310 nm \pm 2 nm or CWDM Bands or 1550 nm \pm 2 nm	Power Supply: +8 VDC to +24 VDC @ 500 mA
Laser Diode: Class 3A	Optical Connector: FC/APC, SC/APC, AVIM APC or User Specified
Output Power: +3 dBm \pm 0.5 dBm	RF Connector: SMA(f), 50 ohm or F(f), 75 ohm
Allowed Backreflection (max): 36 dB @ full specs	Operating Temperature: -40° C to +71° C
E/O Diff. Eff. (min): 0.06 W/A	Storage Temperature: -40° C to +85° C
RF Channel Uplink/Downlink	Local Alarm: LED - Optical Power Failure LED - Line Power On
Modulation Bandwidth: 100 MHz to 2500 MHz	Optical Power Monitor: 1 V/m W \pm 10%
Flatness (max): \pm 2.0 dB	Remote Alarms: Open Collector and RS-232 or RS-485 Interface
VSWR (max): 2.0:1	Dimensions: 5.6" x 6.0" x 1.35"
1 dB Comp. Level (min): 15.0 dBm*	
Input IP-3 (min) @ 2x+3 dBm: 26.0 dBm*	
Input Damage Level: +27.0 dBm*	
RF Link Gain (typ): +0.0 dB @ 1.0 dB Optical Loss*	
Noise Figure (max): 35 dB @ 1.0 dB Optical Loss*	
	* Note: Overall link performance as measured RF input to RF output.

