Microwave Photonic Systems, Inc. 888-868-8967

OFW-3478

GPS/Inmarsat Fiber Optic Antenna Link

The OFW-3478 GPS/Inmarsat Photonic Antenna Link is designed to perform E/O and O/E conversion of RF satellite downlink signals over a range of 1.0 GHz to 2.0 GHz. Specifically, the link can accept simultaneous RF inputs from both a GPS antenna and an Inmarsat antenna. The RF/optical signals can then be transported between the antenna head-end and the radio-processing center over an optical fiber cable up to distances of 50 km. An optional long-haul DFB laser can be specified that increases the link range to 80 km. The system's optical conversion process is functionally independent of the RF carrier's data modulation format. In addition, an optional integrated Bias-T for GPS and Inmarsat LNA powering may be specified. The system can be tailored for a variety of custom L-Band SATCOM applications.

The OFW-3478 system provides end-to-end status monitoring of it's head-end and radio processing center units through the use of an imbedded software controlled onboard processor that can communicate with a M & C host computer over a RS-232 I/O interface. The I/O parameters include GPS and Inmarsat LNA current, GPS and Inmarsat laser bias current, GPS and Inmarsat optical receive power, internal temperature and alarm monitoring. The OFW-3478 provides a high-performance, cost-effective solution for transporting L-Band signals over single mode fiber.

Applications

Satellite Signal Generator Distribution

Antenna Remoting

L-Band SATCOM

Telemetry

Time & Freq. Reference Distribution

Features

CWDM Compatible

GPS L1/L2 Dual Frequency Capability

High Link Dynamic Range

Status Monitoring of Key System Comp. over RS-232

Imbedded Software Control

LNA Powering (opt)

Custom Configurations are Available

1 Year Full, 2 Year Limited Warranty

Specifications

GPS			**General**	
RF Gain	-20.0 dB to 38.0 dB, adjustable range		Power Supply, AC Autoranging	85 VAC -264 VAC, 47 Hz to 440 Hz, Single Phase
RF Noise	3.0 dB to 40.0 dB, adjustable range		Power Supply, DC Autoranging (opt)	-48 VDC to +48 VDC
VSWR In/Out	2:0:1 (max)		AC Recepticle	IEC 320
P1dB	>-20.0 dBm		Optical Input	FC/APC, SC/APC, AVIM APC or User Specified
SFDR	>100.0 dB $Hz^{2/3}$		RF Output Connector	SMA(f), 50 Ω or F(f), 75 Ω
Optical Loss Budget	>15.0 dBm		Storage Temperature	-40°C to +85°C
Optical Wavelength	1310 nm, 1550 nm or CWDM		Operating Temperature	-40°C to +71°C
			Local Alarm	LED: Optical Power Failure, LED: Line Power On
Inmarsat			Optical Power Monitor	1 V/mW +/- 10%
RF Gain	-20.0 dB to 38.0 dB, adjustable range		Remote Alarms	Open Collector & RS-232 Interface or RS-485
RF Noise	3.0 dB to 40.0 dB, adjustable range		Dimensions	19"(w) x 14"(l) x 1.75"(h)
VSWR In/Out	2:0:1 (max)			
P1dB	>-20.0 dBm			
SFDR	>100.0 dB $Hz^{2/3}$			
Optical Loss Budget	>15.0 dBm			
Optical Wavelength	1310 nm, 1550 nm or CWDM			

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