

# microwave photonic systems

OFW-3478: Neutral Host GPS Fiber Optic Distribution System

## OFW-3478 : GPS Fiber Optic Distribution System



### Provides GPS Remoting Capability for Network Timing and System Synchronization

The OFW-3478 GPS Fiber Optic Distribution System is a cost effective turn-key system solution which consists of a GPS Antenna, Transmitter Module, Receiver Module, Surge Suppressor, and all associated coaxial and fiber optic interconnection cables.

The OFW-3478 GPS Fiber Optic Subsystem provides optical conversion of GPS L-Band RF signals in the L1, L2 and L5 frequency ranges. The Subsystem can support GPS signal transmission over singlemode fiber optic cable with an optical loss budget of 15 dBo. The Subsystem's optical conversion process is transparent to the GPS signal data modulation format and rate. The Subsystem offers many advantages including Low Noise High Dynamic Range RF characteristics, full spectrum environmental operating range and integrated Health Status Monitoring and Control.

The OFW 3478 provides status monitoring through the use of an onboard processor that communicates with a host computer over a serial or Ethernet interface. The I/O parameters include laser bias current, optical receive power, internal temperature and alarm monitoring. In addition, an optional integrated Bias-T for LNA powering may be specified. The Subsystem provides a high-performance, cost-effective solution for transporting GPS signals over single mode fiber.

The OFW 3478 can be packaged in alternative form factors including: 1RU x 19" rack chassis and 4RU x 19" high-density plug-in card chassis.

The OFW-3478 GPS Fiber Optic Distribution System can be customized in numerous distribution applications such as a GPS Satellite Simulator Distribution, GPS Base Station Antenna-Remoting/Distribution, or a GPS Shipboard Antenna-Remoting/Distribution.

Contact MPS directly for specific design applications and technical specifications.

### Market Applications

- 4G/LTE Node Synchronizations
- Cellular E911 Augmentation
- National Contingency Centers
- Power Generation Substations
- EMC Test Labs
- Aviation Hangers
- Naval Shipboard & Maritime Vessels
- Oil, Gas & Mining Operations
- Rail & Tunnel Complexes

### Features & Options

- Dual Redundant Antennas
- GNSS Compatible
- AC & DC Power Options
- Point to Multipoint Distribution
- Ethernet Remote Monitoring
- Optical Loss Budget: 10 dBo
- 3 Year Limited Warranty

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## Specifications

Optical Wavelength	1310 nm or CWDM Grid
Optical Output Power	+3dBm (typical)
Optical Fiber Type	Single Mode, 9/125 um
Optical Loss Budget	10 dBo, max
Frequency Range	L1 - 1575.42 MHz , L2 or other GNSS frequencies
Gain (dB)	25 dB (typ), including antenna
Noise Figure	3.5 dB (max)
Input 1dB Compression (dBm)	-40.0 (min)
Input / Output Impedance	50 Ohm
Input / Output VSWR	2.0:1 (maximum)
Antenna Electronics RF Connector	Type N (Female), or customer specified
User Electronics RF Connector	SMA (Female), or customer specified
Antenna Electronics Optical Connector	Dual IP67, or customer specified
User Electronics Optical Connector	SC/APC, or customer specified
Antenna Electronics Input Power	120VAC , or customer specified
User Electronics Input Power	-48VDC , or customer specified
Monitor and Control	Serial or Ethernet, customer specified.
Operational Temperature	-40°C to +75°C
Antenna Electronics Form Factor	NEMA 4X Enclosure
User Electronics Form Factor	1RU x 19" x 14"



Head-End Equipment Rack Chassis Front



Head-End Equipment Rack Chassis Rear

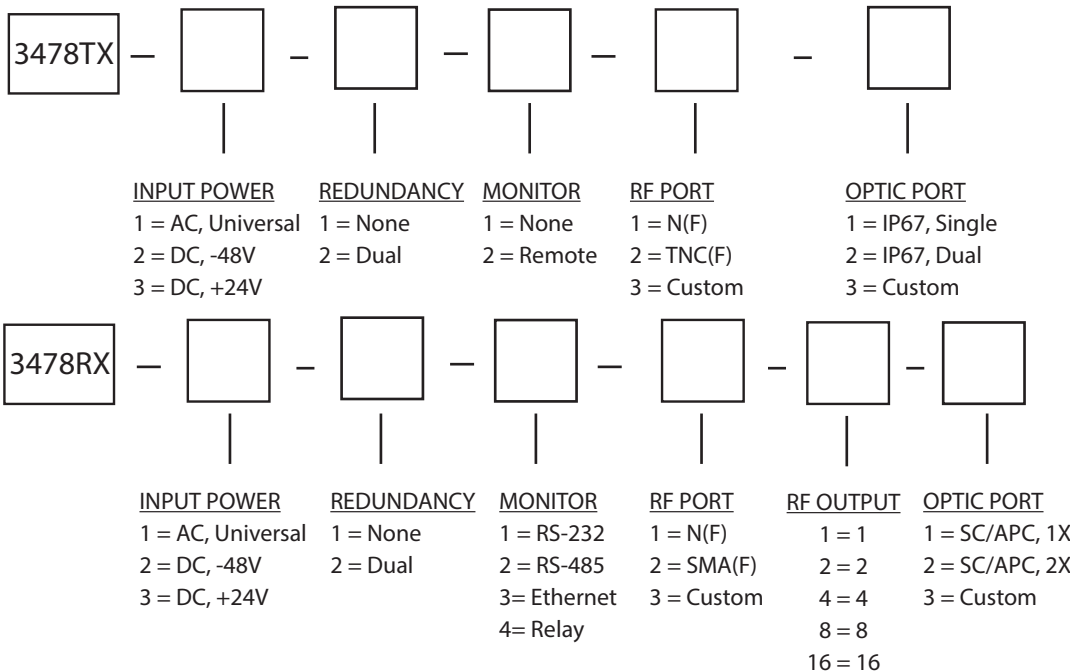


Head-End Equipment 1 x 16 Passive Splitter



Active GPS Antenna with Surge Protection

## Part Number Generator:



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