OFC-3478: Neutral Host GPS Fiber Optic Distribution System

OFC-3478 : GPS Fiber Optic Distribution System

Provides GPS Remoting Capability for Network Timing and System Synchronization

The OFC-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 OFC-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 OFC 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 OFC-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 OFC-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.
OFW-3478: Neutral Host GPS Fiber Optic Distribution System

**Specifications**

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

**Part Number Generator:**

**3478TX**

- **INPUT POWER**
  - 1 = AC, Universal
  - 2 = DC, -48V
  - 3 = DC, +24V
- **REDUNDANCY**
  - 1 = None
  - 2 = Dual
- **MONITOR**
  - 1 = None
  - 2 = Remote
- **RF PORT**
  - 1 = N(F)
  - 2 = TNC(F)
  - 3 = Custom
- **OPTIC PORT**
  - 1 = IP67, Single
  - 2 = IP67, Dual
  - 3 = Custom

**3478RX**

- **INPUT POWER**
  - 1 = AC, Universal
  - 2 = DC, -48V
  - 3 = DC, +24V
- **REDUNDANCY**
  - 1 = None
  - 2 = Dual
- **MONITOR**
  - 1 = RS-232
  - 2 = RS-485
  - 3 = Ethernet
  - 4 = Relay
- **RF PORT**
  - 1 = N(F)
  - 2 = SMA(F)
  - 3 = Custom
- **RF OUTPUT**
  - 1 = 1
  - 2 = 2
  - 4 = 4
  - 8 = 8
  - 16 = 16
- **OPTIC PORT**
  - 1 = SC/APC, 1X
  - 2 = SC/APC, 2X
  - 3 = Custom

**Expand Your RF Horizon**

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