

microwave photonic systems

MP-5000RX

12 GHz RF/Fiber Optic Receiver



Designed for antenna remoting and ultra-broadband RF transmission applications using singlemode fiber optic cable

The MP-5000RX is a RF/Fiber Optic Receiver designed for antenna remoting and ultra-broadband RF transmission applications using singlemode fiber optic cable.

The receiver utilizes a high-speed, low distortion PIN photodiode detector that provides Optical to RF conversion out to 12 GHz. The unit provides the user with status monitoring through the use of an onboard processor that communicates to a host computer over an RS-232 I/O interface.

The I/O parameters include received optical power, temperature and alarm status. When the MP-5000RX 12GHz RF/Fiber Optic Receiver is linked with the MP-5000TX 12 GHz RF/Fiber Optic Transmitter, the combination provides an excellent choice for your ultra-wideband RF to Fiber Optic conversion applications.

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

Applications

- Ultra-Wideband RF Transmission
- Antenna Remoting
- SATCOM
- RADAR, EW & ECM
- Frequency & Timing Distribution
- Telemetry

Features

- Ultra-Wideband, 1.0 MHz to 12 GHz
- High Dynamic Range
- Status Monitoring: RS-232 (opt)
- 1 Year Full, 2 Year Limited Warranty

MP-5000RX

12 GHz RF/Fiber Optic Receiver

Specifications

Optical/Electrical		General	
Bandwidth:	1.0 MHz to 12 GHz	Power Supply:	+8.0 to +24.0 Vdc, 350 mA max
Operating Wavelength:	800 nm to 1650 nm	Optical Input:	Pigtail, FC/APC, SC/APC or AVIM APC
Input Level (max):	+5.0 dBm	RF Output Connector:	SMA(f), 50 ohm
Responsivity (min):	0.70 A/W @ 1310 nm, or 0.75 A/W @ 1550 nm	DC Connector:	DB-15
Ripple (flatness):	-0.5 dB to 1.5 dB	Storage Temperature:	-55° C to +85° C
Group Delay (500 MHz to 3 dB):	±7.0 ps	Operating Temperature:	-40° C to +85° C
3 dB Bandwidth:	18 GHz (min), 22 GHz (typ)	Local Alarm:	LED - Optical Power Failure
Power Dissipation (= Vbd * Ibd):	150 mW	Optical Power Monitor:	1 V/mW ± 10%
Dark Current @ 25° C, 5V:	10 nA (typ), 100 nA (max)	Remote Alarms:	Open Collector and RS-232 Interface
Optical Return Loss:	-30.0 dB (min), -35.0 dB (typ)	Dimensions:	5(l)'' x 3(w)'' x 1(h)''
Wavelength Response Range:	800 nm (min), 1650 nm (max)		
Bias Voltage @ +13dBm:	+6V (typ)		
CSO @ +4dBm:	-70.0 dBc		
CTO @ +4 dBm:	-75.0 dBc		
Input Back-Reflection:	-35.0 dB		
Optical PDL @ 1550 nm:	0.06 dB (typ), 0.12 dB (max)		
Optical Fault Threshold:	Factory preset to -12.0 dBm		

