

microwave photonic systems

MP-2350 Series Fiber Optic Transmitter (TX) and Receiver (RX)

L-Band Fiber Optic IFL Transmitter & Receiver



Hot-Swappable Plug-In Modules Support L-Band RF over Fiber Optic Transport with User Configurable Gain Control

The MP-2350TX and MP-2350RX is an RF/Fiber Optic module pair (link) designed to provide electrical-to-optical (E/O) and optical to electrical (O/E) conversion of RF signals over a frequency range of 850 MHz to 2150 MHz.

The utilization of the MP-2350TX, in conjunction with the appropriate MP-2350RX RF/Fiber Optic Receiver, forms a broadband link capable of supporting the transmission of RF signals over singlemode optical fiber for use in a wide array of communication applications. The link applications include antenna remoting, SATCOM, RF delay lines, telemetry tracking, and point-to-point RF transmission.

The transmitter utilizes a low noise, high dynamic range Distributed Feedback (DFB) laser with integrated temperature stability control. The transmitter operates over link distances up to 50 km. The transmitter's gain can be adjusted using the integrated variable RF attenuator. The unit provides the user with status monitoring through the use of an onboard processor that communicates via the rack chassis backplane. Device monitor and control is available over an Ethernet interface as well as the front panel display and key pad. The I/O parameters include laser bias current, temperature and alarm status.

The receiver utilizes a high speed, low distortion PIN photodiode detector that is integrated with a broadband RF post amplifier. The receiver's post-amplifier gain can be adjusted using the integrated variable RF attenuator. The unit, similar to that of the 2350TX, provides I/O parameters such as received optical power, temperature and alarm status.

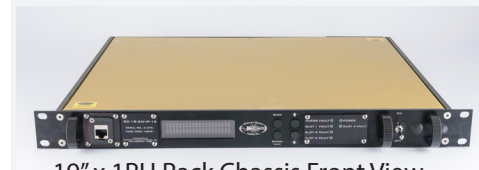
Information: Call us toll-free at 888-868-8967 or email info@b2bphotonics.com

Applications

- Antenna Remoting
- SATCOM
- Telemetry
- Wireless / PCS

Features

- 850 MHz to 2150 MHz
- User Adjustable Gain Profiles
- High Spur Free Dynamic Range
- Small Form Factor Flange Mount
- Hot Swappable, Plug-In Module
- Ethernet Status Monitoring



19" x 1RU Rack Chassis Front View



19" x 1RU Rack Chassis Rear View

Microwave Photonic Systems, Inc.

1155 Phoenixville Pike, Unit 106, West Chester, PA 19380, Toll-Free: 888-868-8967

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Specifications

RF Performance Parameters: (Note 1)

Frequency Response	850 MHz to 2150 MHz
Input/Output Impedance	50 Ohm
Input/Output VSWR	1.70 : 1 (max)
Gain (Note 2)	10 dB, Adjustable from +10.0 to -10.0 dB in 0.25 dB increments
Gain Flatness	± 1.0 dB Full Span
Gain Stability	± 0.25 dB/24 Hr
Input 1dB Compression	-6.0 dBm (min)
Input Third Order Intercept	+8.0 dBm (min)
Output Third Order Intercept	+18.0 dBm (min)
Noise Figure	21dB (max)
Optical Loss Budget	4.0 dBo
Spurious Free Dynamic Range	> 107 dB Hz ^(2/3)
RF Input Power Non-Damage	+5.0 dBm (max)

General Specifications

Power Supply	Provided Via Chassis, External Line Lump Power Supply (Note 3)
Optical Connector	FC/APC (or customer specified)
RF Connector	SMA (f), 50 ohm (or customer specified)
Operating Temperature	-20°C to +55°C
Storage Temperature	-30°C to +80°C
Monitor & Control	Local Front Panel Display w/ Keypad, Remote Ethernet (Note 3)

Note (1) : Performance stated with 4 dBo Optical Loss Budget and Link Gain of +10 dB

Note (2) : Gain User Adjustable on Both TX and RX Modules from +10.0 to -10.0 dB in 0.25 dB increment

Note (3): When integrated into 19" x 1RU Rack Chassis, RC-1R-4M-IP-19

Note (4): Most Options User Configurable - Contact MPS for Additional Questions

Ordering Information & Component Part Numbers

Device	Part Number	Description
Transmitter	2350TX-E-3-1-S-2-2-2	Fiber Optic Transmitter, L-Band Optimized, 1RU Plug-In, 1310 nm
Receiver	2350RX-E-1-5-S-2-2-2	Fiber Optic Receiver, L-Band Optimized, 1RU Plug-In
Rack Chassis	RC-1R-4M-IP-19	1RU Rack ,Front Panel Display, Dual Power Supplies, Ethernet M&C. 4 Module Capacity

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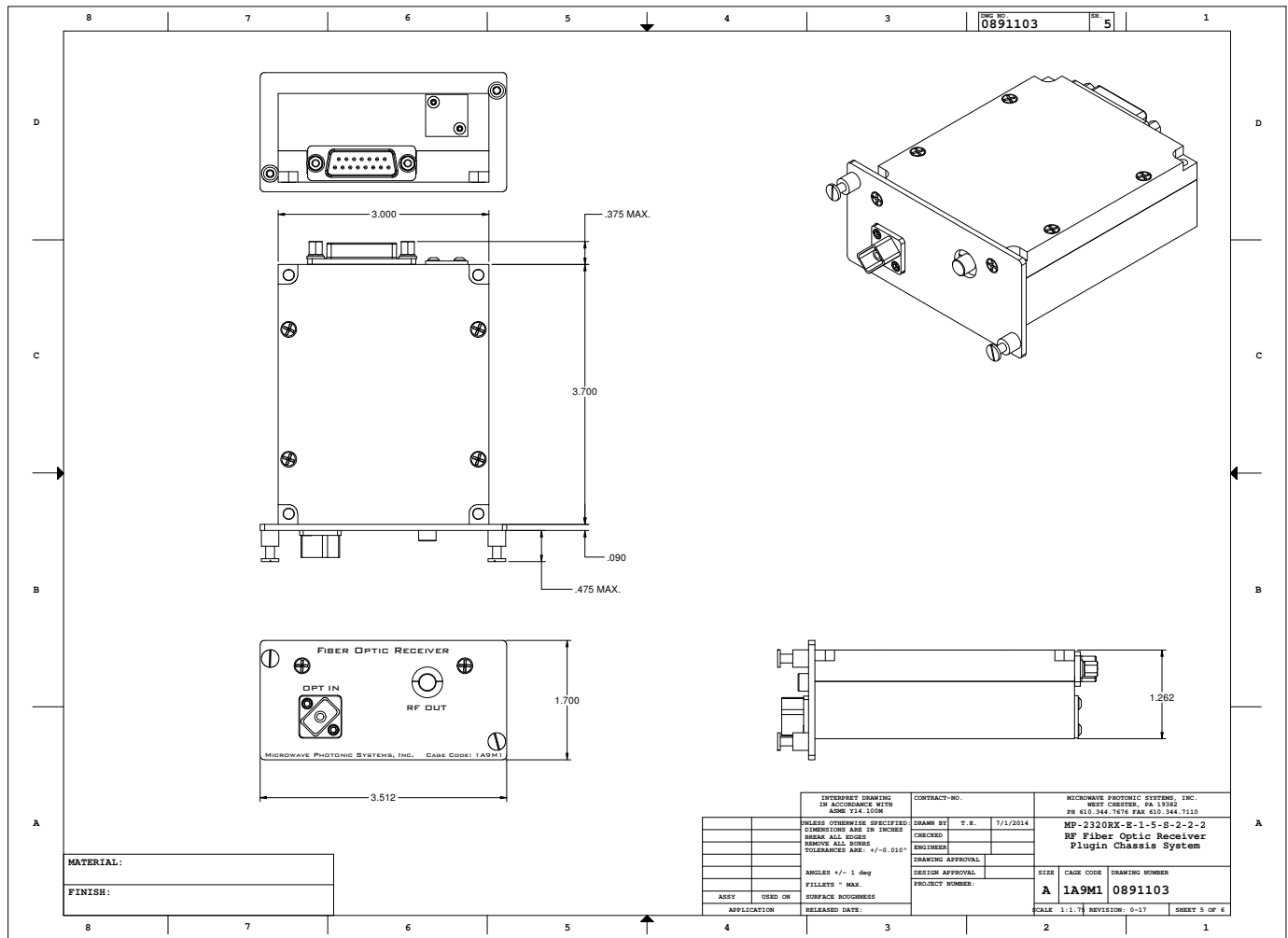
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Mechanical Drawing: Plug-In Module



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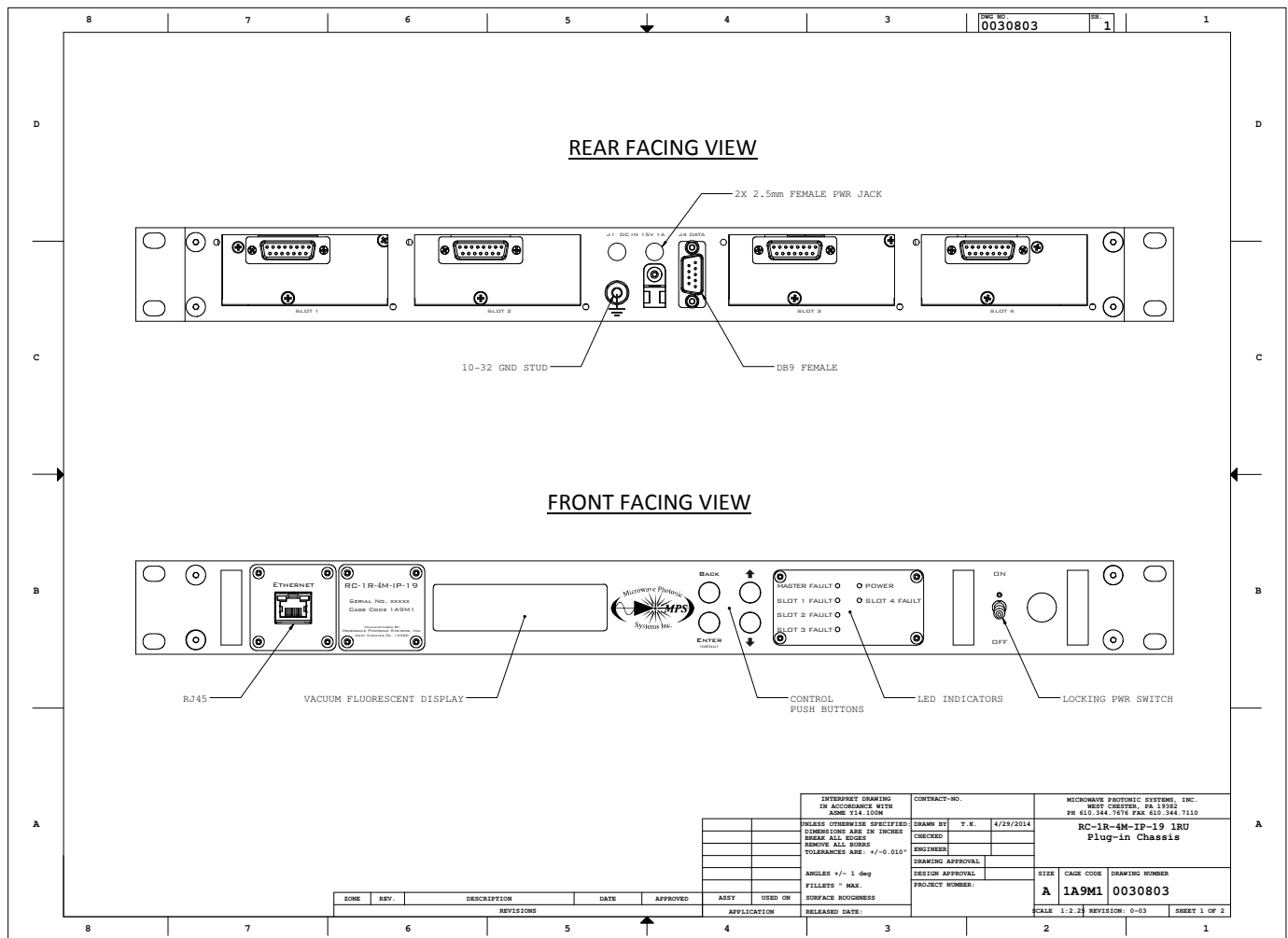
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MP-2350 Series Fiber Optic Transmitter (TX) and Receiver (RX)

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Mechanical Drawings: Rack Chassis Front and Rear Panel



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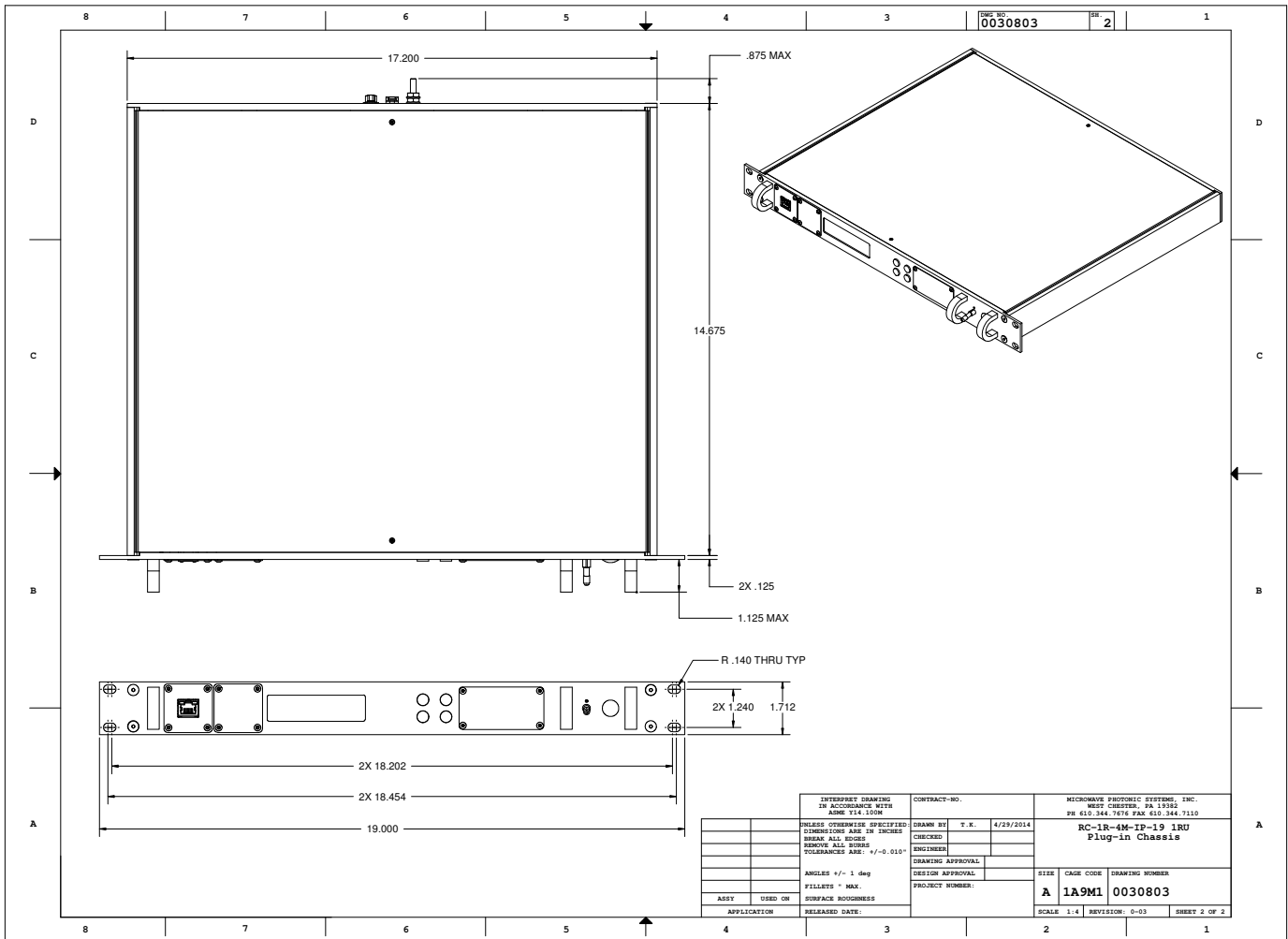
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MP-2350 Series Fiber Optic Transmitter (TX) and Receiver (RX)

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Mechanical Drawing: 4 Channel Plug-In Module Rack Chassis



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