



## FEATURES & BENEFITS

- Full performance from 45 to 870 MHz
- Optimized for long reach fiber links in the 70 to 90 km range using single EDFAs
- Dual 6 dBm optical output ports
- Options for manual or AGC operation
- Field Adjustable SBS Suppression
- Field Adjustable Electronic Dispersion Compensation (EDC)
- OMI / RF Gain Adjustment
- Electro-Fluorescence Status Display
- Front Panel RF Test Point
- RS-232 Control Interface

The RMC-EMT-LR high performance 1550 nm externally modulated transmitter is optimized for single EDFA fiber links in the 70 to 90 kilometer range. Exceptional CATV performance is achieved through advanced fiber dispersion compensation and SBS suppression circuitry. This enables the RMC-EMT-LR to provide a cost efficient transport solution for medium to long distances.

The unit supports both NTSC or PAL format and provides full bandwidth operation to 870

MHz with an optical output power of 6 dBm at each of the two output ports. Moreover, the transmitter also offers options for DWDM applications.

The RMC-EMT-LR utilizes advanced fiber dispersion compensation circuitry to provide exceptional broadband performance. Moreover, field adjustable SBS control allows the transmitter to be optimized to meet any link requirement without the need to procure specifically tuned transmitters..

Engineered with the latest low power components, the RMC-EMT-LR is energy efficient. Level control is provided through an internal system that provides integrated software controlled AGC gain adjustments. The RMC-EMT-LR also includes a user selectable manual gain control that may be utilized instead of AGC.

A front panel status display panel provides immediate visual indication of the transmitter status. An onboard micro-controller provides complete monitoring and control of the unit. Software design includes both function control and unit monitoring. The controller system also provides alarm processing and status monitoring functions.

# SPECIFICATIONS

## Optical:

Center Wavelength: Standard 1555 nm,  $\pm 5$  nm  
 Optional ITU DWDM Channel

Optical Output Power: 6 dBm nominal (two ports)

Noise Bandwidth: NTSC: 4 MHz, PAL: 5 MHz

SBS Threshold 18 dBm

Optical Connector: SC/APC or E-2000/APC

## RF:

Bandwidth: 45 to 870 MHz

RF Input: (Manual Mode)  
 NTSC - 80 Channels  $+17 \pm 1.0$  dBmV/ch  
 PAL - 60 Channels  $+18 \pm 1.0$  dBmV/ch

(CW Mode)  
 NTSC - 80 Channels  $+19 \pm 1.0$  dBmV/ch  
 PAL - 60 Channels  $+20 \pm 1.0$  dBmV/ch

Front Panel Control: Gain/OMI Adjustment  
 $\pm 2/-4$  dB from nominal

Response Flatness:  $\pm 0.50$  dB, 45-550 MHz  
 $\pm 0.75$  dB, 45-870 MHz

Input Impedance: 75 ohms

Input Return Loss:  $>16$  dB

## Performance:

Test/ Link Configuration:

- 6 dBm launch power
- EDFA: 18 dBm output power, NF 5 dB
- 80 km SMF-28 (0.2 dB/km loss)
- 0 dBm at receiver

CNR: 54 dB

CSO: -65 dBc

CTB: -65 dBc

## Mechanical/Electrical:

RF Input Connector: Type F

Front Panel RF Tap:  $-20 \pm 1$  dB  
 down from RF Input

Power:

AC: 95-256 VAC, 50/60 Hz

DC: 36-60 VDC

Dimensions (WxDxH): 19.0" x 15.32" x 1.72"

## Environmental:

Operating Temperature: 0°C to 50°C

Humidity: 20 to 95%,  
 non-condensing

Storage Temperature: -40°C to +85°C, 24 hours

# ORDERING INFORMATION

RMC-EMT-LR -	XXX	-	XX	-	XX	-	XX
External Modulation Transmitter for Long Range	<u>Channel Plan</u> N80 = 80 NTSC P60 = 60 PAL		<u>Wavelength</u> 15 = 1550 nm XX = ITU Channel		<u>Connector</u> SC = SC/APC E2 = E2000/APC		<u>Power</u> AC = 90-265 VAC, 50/60 Hz DC = 36-60 VDC



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