



## FEATURES & BENEFITS

- Full performance from 45 to 870 MHz
- Optimized for medium reach fiber links in the 50 to 70 km range using one or multiple 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-MR high performance 1550 nm externally modulated transmitter offers a very high degree of versatility. It can easily be configured to meet most HFC network solutions requiring medium range link lengths of 50 to 70 kilometers with one or multiple EDFAs. In addition, the RMC-EMT-MR performs optimally in systems that require multiple optical splits and fiber branching incorporating unequal fiber lengths.

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-MR 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-MR is energy efficient. Level control is provided through an internal system that provides integrated software controlled AGC gain adjustments. The RMC-EMT-MR 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 16 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: 16 dBm output power, NF 5 dB
- 65 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

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



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