

# EM Transmitter - Extended Range

The QAMnet EMLT-1550-ER series of laser transmitters are designed for use in HFC, deep fiber, RFOG and FTTH applications.

EMLT-1550-ER EM Transmitter - Extended Range



## Product Description

The QAMnet EMLT-1550-ER series of laser transmitters are designed for use in HFC, deep fiber, RFOG and FTTH applications. EMLT-1550-ER series are high-performance laser transmitters for head end applications with HFC/RFOG/FTTH networks. The EMLT-1550-ER transmitters incorporate an external modulator and pre-distortion circuit which allows a standard transmission range of 80 km, while maintaining a high OMI level and excellent CSO and CTB performance. With an internal phase modulator that broadens the laser linewidth, the launch power level can be adjusted up to +18.5 dBm for extended range of transmission, after EDFA amplification. The EMLT-1550-ER has two optical output ports. The EMLT-1550-ER transmitters can support up to 77 NTSC analog channels and since it is designed to be digitally ready, the transmitters can also be loaded with QAM modulated data and HDTV channels.

## Features

- High power CW DFB laser with narrow linewidth
- External modulator with integrated phase modulator
- Dual fiber output port
- 80 km standard transmission range, can be extended to 120 km
- Adjustable SBS suppression level range of +13 dBm to +18 dBm
- Supports 77 channel NTSC plus QAM modulated data, HDTV channels
- AGC (Automatic Gain Control) and MGC (Manual Gain Control) RF input
- -20 dB front panel RF test port
- 45-870 MHz modulation bandwidth

## Applications

✓ HFC    ✓ FTTH    ✓ RFOG    ✓ Deep Fiber Applications

**QAMnet**

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## PRODUCT SPECIFICATIONS

### Optical Specifications

Laser Wavelength Range	1550 nm ± 15 nm, Specific Wavelength on ITU Grid optional
Transmission Range	Up to 80 km, up to 120km with DCM
Output Power Level	+6, +8, and +9 dBm
Noise Bandwidth	4 MHz
Carrier to Noise Ratio (CNR)	53 dB typ. @ 0 dBm
Composite Second Order (CSO) Distortion	-63 dBc max.
Composite Triple Beat (CTB) Distortion	-63 dBc max.
Front Panel RF Gain / OMI Adjustment Range	+6 dB / -6 dB
SBS Suppression Level	+13.5 dBm, +16.5 dBm, +18.5 dBm
Input RF Power Level	8 to 20 dBmV per channel
Frequency Plan	77 NTSC analog channels + Digital QAM Channels
Frequency Range	45 MHz to 870 MHz
Flatness in Frequency Range	±0.75 dB
Input Impedance	75 Ω
Input RF Return Loss	16 dB min.

### Mechanical Specifications

Operation Temperature Range	0°C to +50°C
Storage Temperature Range	-40°C to +70°C
Power Supply	80 – 240 V, 43 – 63 Hz AC
Power Consumption	75 W max.
Housing Dimensions	1RU 19"(W) x 14"(D) x 1.75"(H)
Control / Monitoring	DFB Laser Temperature and Current
Display	Output Power Level, TEC temperature
Alarm	Over Temperature , Over Current
Optical Connectors	SC/APC or Customer Specified

### Ordering Information

#### EMLT-1550-ER-xx-y

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Output power level +6 to +9 dBm