EMLT-1550-WM Dual Band Laser Transmitter

# EMLT-1550-WM | Dual Band Laser Transmitter


The QAMnet EMLT-1550-WM series of laser transmitters is designed for use with dual-band transmission applications. Based on our patented design, the EMLT-1550-WM incorporates two sets of laser transmitters with 1U rack mount chassis. There are two transmission bands: a standard CATV band and RF band with 12,000MHz bandwidth.

The CATV band transmitter operates as a standard HFC laser transmitter with a frequency range from 45MHz to 860MHz. It is designed for electrical to optical conversion of CATV signals such as AM-VSB, FM and QAM signals. It can transmit up to 65km in distance, while providing excellent CNR, CSO and CTB performance.

The RF band transmitter can perform electrical to optical conversion from 950MHz to above 12,000MHz. Depending on the model, EMLT-1550-WM can also be used for transmitting almost any type of RF modulated signals over optical fiber that include Microwave over Glass, satellite / IF signal, microwave link, WiMax /Mobile signals over fiber.

QAMnet EMLT-1550-WM series is highly versatile, and high-bandwidth transmission solution for numerous RF signal over optical fiber applications. They are available either single output or dual output model. The output of dual out put can be combined into single output fiber.

## Features

- Slim 1U height rack mountable housing
- Two independent transmitter design, each incorporating:
  - High power, narrow linewidth DFB laser module
  - Broadband external modulator
- Dual-band transmission:
  - CATV: 45MHz to 860MHz for analog and QAM channels
  - RF: 950MHz to 12,000MHz
- SBS suppression level selectable between +13dBm to +16dBm
- Separate input port for CATV and RF
- 65km standard transmission range
- AGC (Automatic Gain Controls) Input Control for CATV band

## Ordering Information

- EMLT-1550-WM-xx
- xx: (Output Power in dBm) 06, 08

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## Technical Specifications

| | |
|---|---|
| Laser Wavelength Range | 1550 nm ± 10 nm, Specific Wavelength on ITU Grid optional |
| Transmission Range | Up to 65 km in SMF-28 Fiber |
| Optical Output Power Level | 6 dBm, 8dBm |
| Optical Output Power Stability | ± 0.1 dBm over 24 hours |
| SBS Suppression Level | +13.5 dBm, +16.5 dBm (Optional) |
| Relative Intensity Noise (RIN) | < -158 dB/Hz |
| **CATV Band Input** | **AM-VSB, QAM** |
| Frequency Range | 45 - 870 MHz (77 Analog + Digital) |
| Input RF Power Level | 15 - 25 dBmV with AGC |
| Flatness in Frequency Range | ±0.75 dB |
| Carrier to Noise Ration (CNR) | > 53 dB (Direct out of transmitter) |
| | > 52 dB (w/ EDFA and 30km fiber) |
| Composite Second Order (CSO) | < -63 dBc |
| Composite Triple Beat (CTB) | < -63 dBc |
| RF Connector | F Type |
| Input Impedance | 75 Ω |
| **RF Band Specifications** | **DTH, SAT/IF, RFoG, WiMax, Microwave** |
| Frequency Range | 950 – 12000 MHz |
| Flatness in Frequency Range | ±1.5 dB over 950MHz - 15000 MHz |
| RF Connector | SMA Female |
| Input Impedance | 50 Ω |

## Environment / Mechanical Specifications

| | |
|---|---|
| Temperature Range | 0°C to +50°C (operation)<br>-40°C to +70° C (storage) |
| Power Supply | 80 – 240 V, 43 – 63 Hz AC |
| Power Consumption | 120 W Maximum |
| Housing Dimensions | 1U Rack: 19”(W) x 18”(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 |

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