

# Satellite Link Laser Transmitter

The QAMnet EMLT-1550-SA series of laser transmitters are designed to perform RF signal to optical conversion from 10MHz to above 3,000 MHz.

EMLT-1550-SA Satellite Link Laser Transmitter



## Product Description

The QAMnet EMLT-1550-SA series of laser transmitters are designed to perform RF signal to optical conversion from 10MHz to above 3,000 MHz. EMLT-1550-SA series transmitters are low cost and high performance products that can be used for a 36-Channel QAM satellite signal distribution in optical fiber networks. It can also be a ideal transmission solution for any RF, microwave signal over fiber applications.

EMLT-1550-SA transmitters incorporate a broadband external modulator that allows the transmission frequency range to be extended beyond 3,000 MHz. With a narrow linewidth DFB laser source, it is capable of transmitting 65 km kilometers in single mode fiber, while maintaining a high CNR and excellent IM2 and IM3 performance. EMLT-1550-SA transmitters can be utilized in IF link, mobile signal link applications.

## Features

- High Power DFB Laser
- Broadband External Modulator
- SBS suppression level to +13dBm
- 65 km standard transmission range
- Supports 36-Channel QPSK Satellite signal
- MGC (Manual Gain Controls) RF Input Control
- 10 - 3,000 MHz Modulation Bandwidth

## Applications

- ✓ HFC
- ✓ Satellite IF
- ✓ RfOG



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## PRODUCT SPECIFICATIONS

### Optical Specifications

Laser Wavelength Range	1550 nm $\pm$ 10 nm, or customer specified
Transmission Range	Up to 65 km in SMF-28 Fiber
Output Power Level	5.7 dBm min., 6.0 dBm typ.; 7.7 dBm min., 8.0 dBm typ.
Input RF Signal Level	10 to 20 dBmV
Operating Frequency Range	10 MHz to 3,000 MHz
Number of Output Ports	1 standard
Carrier to Noise Ratio (CNR)	> 40 dBc (for 36 Channels SAT/IF)
Intermodulation Products	< -40 dBc (for 36 Channels SAT/IF)
Noise Bandwidth	16 MHz
Third Order Distortion (IM3)	-65 dB max.
SBS Suppression Level	+10 dBm to +13 dBm
RF Connector	F Connector (SMA optional)
Flatness in Frequency Range	$\pm$ 1.0 dB
Input Impedance	50 $\Omega$
Input RF Return Loss	13 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 or 40 - 58 V DC (optional)
Power Consumption	50 W Maximum
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
Housing Dimensions	1RU 19"(W) x 14"(D) x 1.75"(H)

### Ordering Information

#### EMLT-1550-SA-xx

xx Output power level +6 to +8 dBm