



## EMLT-1550-NC | EM Transmitter – Narrowcasting



The QAMnet EMLT-1550-NC series of laser transmitters are designed for multiple wavelength system for HFC, deep fiber, and FTTH applications. EMLT-1550-NC series transmitters can be incorporated into forward path narrowcasting solution specifically for targeted digital services (VOD, IP, cable telephony). Digital bandwidth can be incrementally added to existing fiber infrastructure, by adding a new wavelength.

EMLT-1550-NC transmitters can be custom ordered with 41 different wavelengths. Using DWDM combiner, multiple EMLT-1550-NC transmitters can be combined with a standard laser transmitter into a single fiber. Each transmitter can deliver various digital services to targeted recipient, via a specific wavelength laser. EMLT-1550-NC transmitters incorporate an external modulator and pre-distortion circuit which allow the transmission range to be extended up to 80 km, while maintaining a high OMI level and excellent CSO and CTB performance. The launch power level can be adjusted from +13 dBm to +16 dBm.

Designed to be digitally ready, the transmitters can be loaded with 135 channels of QAM modulated signals. EMLT-1550-NC transmitters are available in three output power level versions: +5 dBm, +6 dBm and +7 dBm.

### Features

- Externally modulated technology at a low cost of directly modulated price
- Laser wavelength can be selected to from 41 channel
- 65 km standard transmission range, can be extended to 90km
- Adjustable SBS suppression level range of +13 dBm to +16 dBm
- Fully compatible with QAM256 modulated digital data and HDTV channels
- AGC (Automatic Gain Control) and MGC (Manual Gain Control) RF input control

### Ordering Information

- EMLT-1550-NC-xx-yy
- xx: 05, 06, 07 (Output Power in dBm)
- yy: 10-50, ITU Channel #10 (1562 nm) to #50 (1530 nm) - See Table



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## Technical Specifications

Laser Wavelength Range	Customer choice of laser wavelength, from channel #10 (1562.2 nm) to #50 (1530.1 nm) - See Table in Page 3
Transmission Range	Standard 65 km, can be extended to 90km
Optical Output Power Level	
<i>EMLT-1550-NC-05</i>	5.0 dBm Minimum, 5.3 dBm Typical
<i>EMLT-1550-NC-06</i>	6.0 dBm Minimum, 6.3 dBm Typical
<i>EMLT-1550-NC-07</i>	7.0 dBm Minimum, 7.3 dBm Typical
Noise Bandwidth	4 MHz
Carrier to Noise Ration (CNR)	51.5 dBc Typical @ 0 dBm
Composite Second Order (CSO) Distortion	-63 dBc Maximum
Composite Triple Beat (CTB) Distortion	-63 dBc Maximum
Front Panel RF Gain / OMI Adjustment Range	+6 dB / -6 dB
SBS Suppression Level	Select from +13.5 dBm and +16.5 dBm
Input RF Power Level	13 - 25 dBmV per channel
Frequency Plan	60 NTSC analog channels + Digital QAM Channels
Frequency Range	Standard: 45 MHz to 870 MHz
Flatness in Frequency Range	±1.0 dB
Input Impedance	75 Ω
Input RF Return Loss	16 dBm Minimum

## Environment / Mechanical Specifications

Temperature Range	0°C to +50°C (operation) -10°C to +70°C (storage)
Power Supply	80 – 240 V, 43 – 63 Hz AC
Power Consumption	75 W Maximum
Housing Dimensions	1U Rack: 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



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## EMLT-1550-NC EM Transmitter – NarrowCasting



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### Available Wavelength Channel List for EMLT-1550-NC

Channel Number	Wavelength (nm)	Frequency (THz)
10	1562.23	191.90
11	1561.41	192.00
12	1560.60	192.10
13	1559.79	192.20
14	1558.98	192.30
15	1558.17	192.40
16	1557.36	192.50
17	1556.55	192.60
18	1555.74	192.70
19	1554.94	192.80
20	1554.13	192.90
21	1553.32	193.00
22	1552.52	193.10
23	1551.72	193.20
24	1550.91	193.30
25	1550.11	193.40
26	1549.31	193.50
27	1548.51	193.60
28	1547.71	193.70
29	1546.91	193.80
30	1546.11	193.90
31	1545.32	194.00
32	1544.52	194.10
33	1543.73	194.20
34	1542.93	194.30
35	1542.14	194.40
36	1541.34	194.50
37	1540.55	194.60
38	1539.76	194.70
39	1538.97	194.80
40	1538.18	194.90
41	1537.39	195.00
42	1536.53	195.10
43	1535.72	195.20
44	1534.92	195.30
45	1534.12	195.40
46	1533.32	195.50
47	1532.52	195.60
48	1531.72	195.70
49	1530.92	195.80
50	1530.12	195.90