

## sat-nms LFTX-S and sat-nms LFRX-S Single L-Band Fiber Optical Transmitter/Receiver



**sat-nms** LFTX-S and **sat-nms** LFRX-S are the stand-alone, single box modules of the well-established **sat-nms** LFTXRX Fiber Optical Transmission System. With the help of these modules you are now in the position to interconnect also smaller satellite ground terminals or VSATs that need only 1 or two transmission links in a cost-efficient way. Also mechanical “space” requirements are now reduced to a minimum if you have limited equipment space like in SNG vans.

The **sat-nms** LFTX Optical Transmitter Module and **sat-nms** LFRX Optical Receiver Module form together a high performance optical link for analog multi-carrier RF transportation on fiber optical media.

<b>sat-nms</b> LFTX-S	Optical Transmitter converting from RF input spectrum to optical output at 1310nm
<b>sat-nms</b> LFRX-S	Optical Receiver regenerating the optical signal back to an analogue RF spectrum

SatService offers the **sat-nms** LFTX/RX-S Modules in different frequency bands:

<b>sat-nms</b> LFTXL-S and LFRXL-S	950 to 2150MHz (with LNC supply voltage)
<b>sat-nms</b> LFTXB-S and LFRXB-S	50 to 2150MHz (broadband)
<b>sat-nms</b> LFTX10-S and LFRX10-S	950 to 2150MHz and 10MHz reference frequency for BUC on same fiber



### Key Features

- 10MHz and L-Band Transfer via one Fiber
- Integrated Attenuator
- Compact Design
- LNC Power Supply
- 50Ohm SMA or 75Ohm F-Type Connector

### Applications

- Satellite Ground Stations and Teleports
- VSAT and SNG

### Contact Information

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## Technical Specification

### RF Specification

Frequency Range	950 to 2150MHz or 50 to 2150MHz
L-Band Input Connectors (Transmitter)	SMA female 50Ohm or F female 75Ohm
L-Band Output Connector (Receiver)	SMA female 50Ohm or F female 75Ohm
Input and Output Return Loss	> 17dB
L-Band Test Connector	SMA female 50 Ohm
Optical Connectors	E2000/APC or FC/APC
Input Noise Figure Total Optical Link	< 30dB with 13dB Attenuator Setting
Gain Flatness Total Link	+/-1.5 dB, +/-0.25dB in any 40MHz
Gain of Complete Link with Attenuator Setting of 12 to 17dB	0dB
Attenuation TX Card (adjustable via local and remote Interface)	0 to 31dB in 1dB Steps
Attenuation RX Card (adjustable via local and remote Interface)	0 to 31dB in 1dB Steps
Input Signal max. (Total Level)	-5dBm
Output Level max. (Total Power)	-5dBm
Intermodulation at -13dBm Input Level	<-40dBc
DC-Output at L-Band Input Connector	0.5...1.5V below Supply Voltage (for LFTXL Model only)

### MNC Interface Specification

Summary Alarm	Open Collector
Remote Control Interface	I <sup>2</sup> C

### Electrical and Mechanical Specification, Environmental Conditions

Supply Voltage	16V DC mA without LNC Supply
Connector for Power Supply, Alarm- and Remote Interface	D-SUB25 male
Temperature Range	-20 to + 50°C
Humidity	Up to 90% non-condensing
Mechanical Size of Case without Connectors	113.5 x 31 x 223 mm (WxHxD)

### D-SUB25 Connector Pin Assignment

Pin	Description	Pin	Description
1	Remote control (I <sup>2</sup> C SCL Clock)	14	GND
2	Remote control (I <sup>2</sup> C SDA Data)	15	GND
3	Remote control (I <sup>2</sup> C Address select)	16	GND
4	<b>TX Module:</b> TX Laser Current Alarm (open Collector) <b>RX Module:</b> RX Optical Power Alarm (open Collector)	17	GND
5	RF Power Alarm (open Collector)	18	GND
6	<b>TX Module:</b> LNB Current Monitor 250mA~1V <b>RX Module:</b> GND	19	GND
7	Opt. Power Monitor 100uW~100mV	20	<b>TX Module:</b> Laser Current Monitor 10mA~100mV <b>RX Module:</b> GND
8	RF Power Monitor 50mV/dB	21	GND
9	DC Input	22	GND
10	Redundant DC Input	23	GND
11	n.c.	24	n.c.
12	n.c.	25	n.c.
13	n.c.		

