

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

<i>sat-nms</i> LFTX-S	Optical Transmitter converting from RF input spectrum to optical output at 1310nm
<i>sat-nms</i> 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:

<i>sat-nms</i> LFTXL-S and LFRXL-S	950 to 2150MHz (with LNC supply voltage)
<i>sat-nms</i> LFTXB-S and LFRXB-S	50 to 2150MHz (broadband)
<i>sat-nms</i> LFTXO10-S and LFRXO10-S	10MHz reference frequency for BUC/LNA/LNB



Key Features

- Integrated Attenuator
- Compact Design
- LNC Power Supply (LFTXL-S only)
- 50Ohm SMA or 75Ohm F-Type Connector
- Easy mechanical mounting on a DIN rail

Applications

- Satellite Ground Stations and Teleports
- VSAT and SNG

Contact Information

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RF Specification	
Frequency Range	950 to 2150MHz or 50 to 2150MHz or 10MHz
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 Power	-5dBm (+10dBm damage Level)
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 (LFTXL-S only)
MNC Interface Specification	
Summary Alarm	Open Collector (24V/350mW max.)
Remote Control Interface	I ² C

Electrical and Mechanical Specification, Environmental Conditions	
Supply Voltage	12...16.5V DC
power consumption (approx.)	LFTX-S: 3.2W (200mA@16V) w/o LNC supply power, LFRX-S: 2.4W (150mA@16V)
Connector for Power Supply, Alarm- and Remote Interface	D-SUB25 male
Temperature Range, Humidity	-20 to + 50°C, Up to 90% non-condensing
Mechanical Size of Case without Connectors, weight (approx.)	113.5 x 31 x 223 mm (WxHxD), 0.4kg

D-SUB25 Connector Pin Assignment			
Pin	Description	Pin	Description
1	Remote control (I ² C SCL Clock)	14	GND
2	Remote control (I ² C SDA Data)	15	GND
3	Remote control (I ² C Address select)	16	GND
4	TX Module: TX Laser Current Alarm (open Collector) RX Module: RX Optical Power Alarm (open Collector)	17	GND
5	RF Power Alarm (open Collector)	18	GND
6	TX Module: LNB Current Monitor 250mA~1V RX Module: GND	19	GND
7	Opt. Power Monitor 100uW~100mV	20	TX Module: Laser Current Monitor 10mA~100mV RX Module: GND
8	RF Power Monitor 50mV/dB	21	GND
9	DC Input	22	GND
10	Redundant DC Input	23	GND
11...13	n.c.	24/25	n.c.

