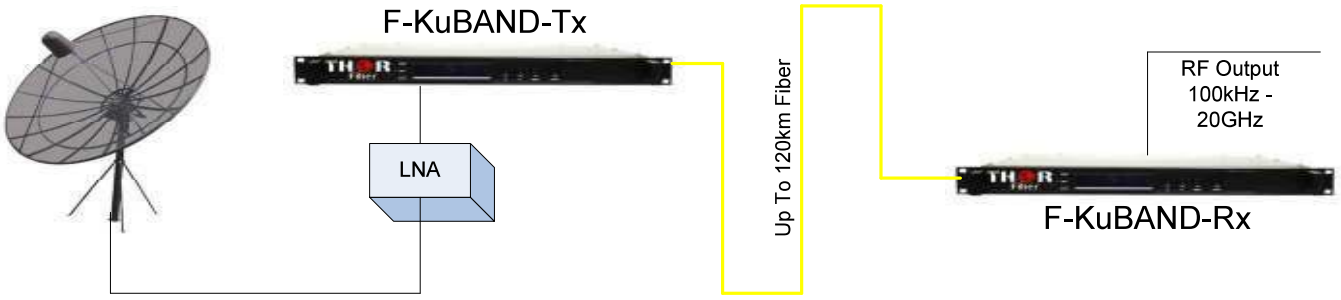
THOR Communications

Data Sheet:
F-KuBAND-Tx/Rx



The F-KUBAND series wide band laser transceivers are designed for enabling a high linearity optical link for RF over fiber in the K-BAND up to 20 GHz. The unit can also be used as a repeater for extending the transmission distance of a 30 Gb/s link. The F-KUBAND incorporates a broadband optical transmitter and linear receiver into a compact rack mounted unit. The F-KUBAND can be used for carrying almost any type of RF modulated signals such as RF over Fiber (RFoG), satellite/IF link, WiMax optical link, microwave over fiber, and mobile signals in fiber. The unit uses a lithium-niobate external modulator to convert input microwave/RF signals to optical waveforms from a frequency range of 100 kHz up to 20 GHz. The unit functions as a transperent link, transporting all satellite modulation formats over a single fiber. The F-KUBAND maintains excellent gain flatness over a wide frequency range due to a very narrow line width DFB laser. Transmission distances of up to 75 miles are possible using singlemode optical fiber. The F-KUBAND link is a cost effective and high performance solution for KU-Band Satellite links.

Typical L-BAND-Rx/Tx Application



Technical Specifications

Optical Wavelength	1310 – 1550 nm FP/DFB
Optical Output Power	6.0 dbm
Optical Budget loss	24 – 32 dB
Optical Return Loss	40 dB
RF Frequency Range	100 kHz – 20.0 GHz
RF Input Level	12 dBm Max
RF Gain	10 – 25 dB
RF Gain Flatness	4.0 +/- 2.0
Input Impedance	50 Ohm
RF Return Loss	10 dB <10 GHz 8 dB 13~15 GHz 6 dB 18~20 GHz
RF Noise	15 dB Max
VSWR Input / Output	2.0 : 1
CNR	40 dB
IMD	40 dB

Communications Interface	RS232
SNMP Interface	RJ45
Power Consumption	8 W
Power Supply	12V DC
RF Connector	SMA Female
Optical Connector	FC/APC or by request
Dimensions (H x W x D)	19in x 11.0in x 1.75in
Weight	0.75 Kg
Operating Temp. (℃)	-10 to +65 (℃)
Storage Temp. (℃)	-40 to +85 (℃)
Relative Humidity (%)	0 to 95 %