

RF-over-Fiber RFoF1 – 22 GHz LN

Description

The RF-over-Fiber link (RFoF1 – 22 GHz LN) is a low noise fiber-optic link that converts analog RF signals into optical signals and optical signals back into RF signals. It offers a wide operating bandwidth from 1GHz up to 22 GHz. This high dynamic range transparent fiber-optic link is ideal for high-tech applications requiring high frequency range and very low noise.

Features

- Low noise figure
- Wide bandwidth from 1 GHz to 22 GHz
- Small form factor

Applications

- Defence applications
- Test environments



Order Information

Item Description	Item Number
RFoF1 – 22 GHz LN (TX)	85077808
RFoF1 – 22 GHz LN (RX)	85077809

Electrical Data

Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case Temperature T _c , unless otherwise specified					
Frequency range	GHz	1		22	
Gain	dB	8		15	
Gain flatness	dB / GHz		1		4 dB between 1 GHz and 2 GHz
Noise figure	dB	8	12	20	
Spurious-free dynamic range	dBHz ^{2/3}		100		3 rd order nonlinearity
Max. input at 1dB compression	dBm		-25 .. -22		
Max. input power for no damage	dBm	-7			
Input return loss	dB		>7		
Output 3 rd order intercept point	dBm		-3		
Supply voltage – transmitter	VDC	+11	+12	+15	700 mA
Supply voltage - receiver	VDC	+11	+12	+15	250 mA
Temperature range	operating °C	-10		+50	
	storage °C	-40		+75	
RF input impedance	Ohm	50			
RF inputs (connector) – transmitter		1, 2.92 mm (female)			other connector available upon request
RF outputs (connector) – receiver		1, 2.92 mm (female)			other connector available upon request

Optical Data

Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case Temperature T _c , unless otherwise specified					
Fiber optic connectors		FC/APC			other connectors available upon request
Fiber		standard single mode 9/125 um			
Wavelength	nm		1550		
Optical power in fiber	mW	3	4 .. 5	6	
Side mode suppression ratio	dB	30	40		

RF-over-Fiber RfOf1 – 22 GHz LN

Mechanical Data

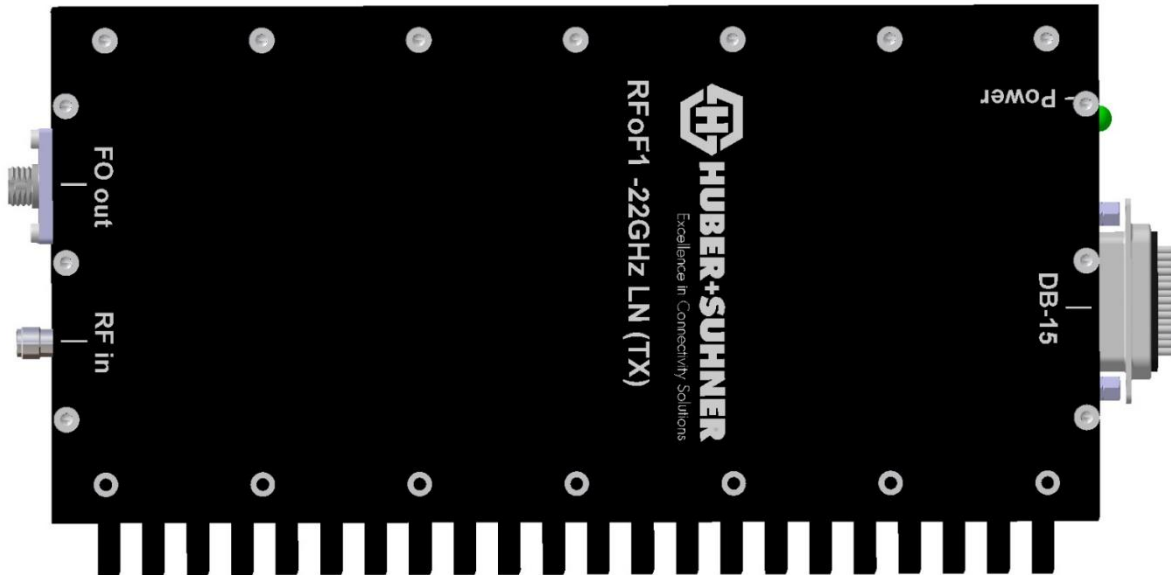
Parameters		Value	Remarks
All specifications at 25°C case Temperature T _c , unless otherwise specified			
Module weight – Transmitter	kg / lbs	1.2 / 2.6	
Module weight – Receiver	kg / lbs	1.1 / 2.4	
Module dimensions	mm / inches	200 x 108 x 23 / 7.9 x 4.3 x 0.9	

Transmitter Module

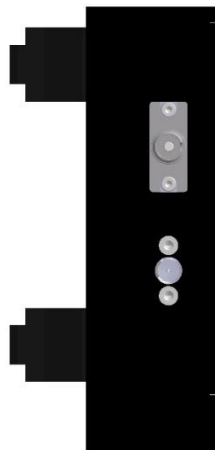
Dimensions Outline Drawing: DOU-00391388

Input	Output	Description	Interface
X		RF in	2.92 mm (female)
	X	FO out	FC/APC (bulkhead)
X		DB-15	D Sub-15 (Power)

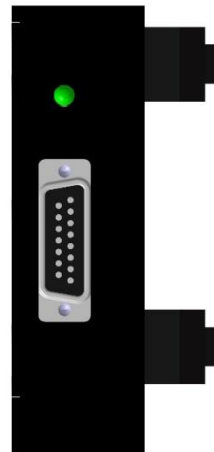
Top View



Side View left



Side View Right



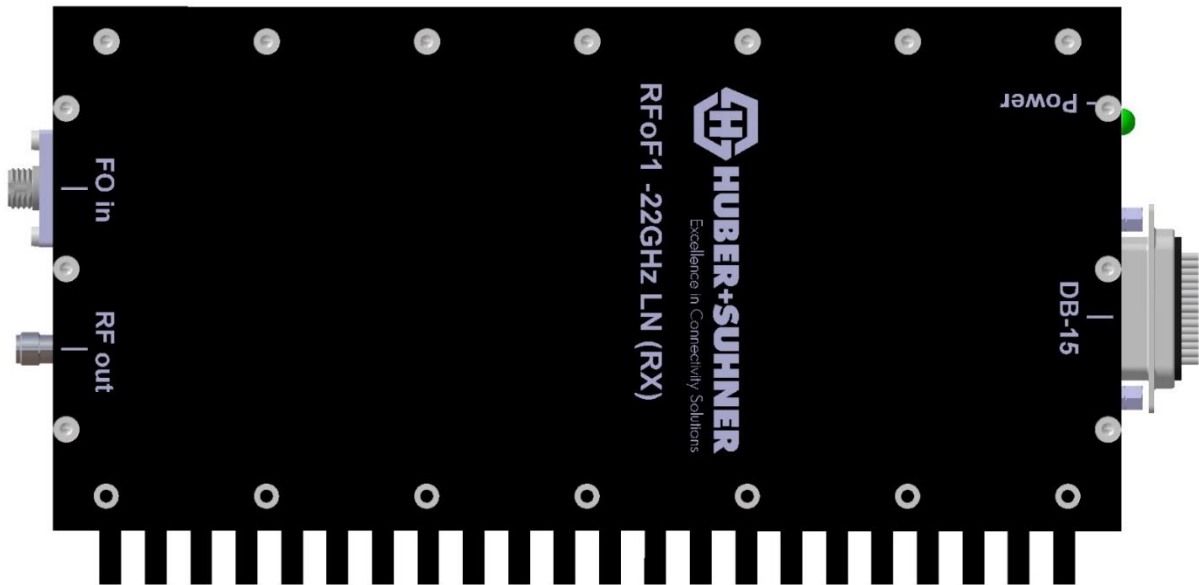
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Receiver Module

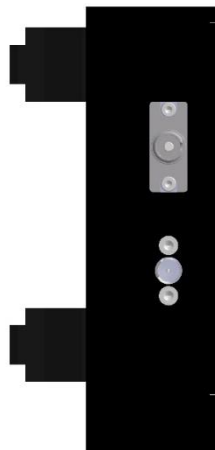
Dimensions Outline Drawing: DOU-00391410

Input	Output	Description	Interface
	X	RF out	2.92 mm (female)
X		FO In	FC/APC (bulkhead)
X		DB-15	D Sub-15 (Power)

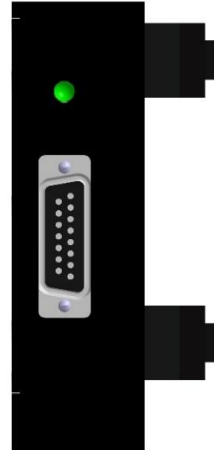
Top View



Side View left



Side View Right



Additional Information

- All modules are RoHS compliant
 - All modules are EMI protected
 - DIN 35 brackets are delivered with each module (other brackets available upon request)
 - MIL and other certifications are possible upon request
- Various racks and enclosures available

Important catalogue links

RF cables: <http://literature.hubersuhner.com/Technologies/Radiofrequency/RFCablesEN/>
 RF connectors: <http://literature.hubersuhner.com/Technologies/Radiofrequency/RFCConnectorsEN/>
 FO standard assemblies: <http://literature.hubersuhner.com/Technologies/Fiberoptics/FOcableassembliesEN/>

HUBER+SUHNER is certified according to ISO 9001, ISO 14001, ISO/TS 16949 und IRIS

www.hubersuhner.com

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