

RF-over-Fiber RFoF1 – 22 GHz LN

Description

The RF-over-Fiber Module (RFoF1 – 22 GHz LN) is a Low Noise Module that converts analog RF signals into Fiber signals; and also converts Fiber signals to RF signals. The module offers a wide frequency range up to 22 GHz. Ideal for high-tech applications requiring high frequency ranges and very low noise.

Features

- Extremely 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 between 1 GHz and 2 GHz
Noise figure		dB	8	12	20	
Spurious-free dynamic range		dB Hz ^{2⁄3}		100		
Max. input at 1dB compression		dBm		-35		
Max. input power for no damage		dBm		-25		
Input Return Loss		dB		>7		
OIP3		dBm		-15		
Supply voltage – Transmitter		VDC	+11	+12	+15	600 mA
Supply voltage - Receiver		VDC	+11	+12	+15	500 mA
Temperature range (OTR)	Operating	°C	-20		+60	
	Storage	°C	-55		+85	
RF input impedance		ohm	50			
Module weight – Transmitter		kg / lbs	1.2 / 2.6			
Module weight – Receiver		kg / lbs	1.1 / 2.4			
Module dimensions – Receiver		mm / inches	200 x 108 x 23 / 7.9 x 4.3 x 0.9			
Module dimensions – Receiver		mm / inches	200 x 108 x 23 / 7.9 x 4.3 x 0.9			
RF Inputs (connector) – Transmitter			1 (SK female)			Alternative connectors available
RF Outputs (connector) – Receiver			1 (SK female)			Alternative connectors available

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			Alternative connectors possible.
Fiber		Single mode fiber 9/125 um			
Wavelength	nm		1550		
Optical power in fiber	mW	1	3	6	
Side mode suppression ratio	dB	30	40		

RF-over-Fiber
RfOf1 – 22 GHz LN

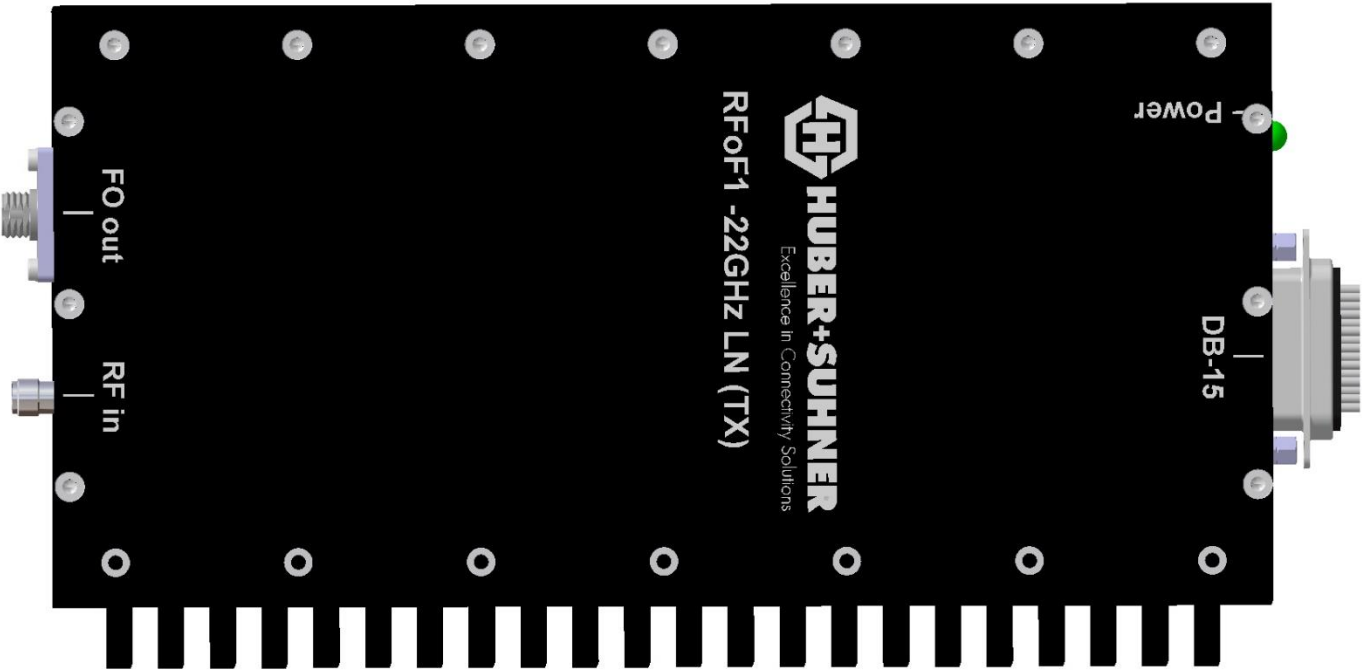
Mechanical Data

Transmitter Module

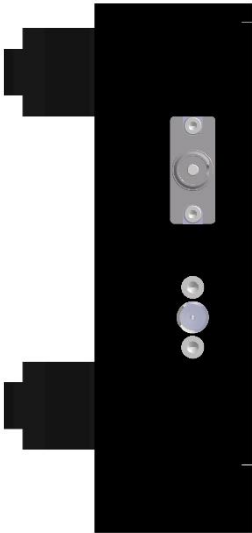
Dimensions Outline Drawing: DOU-00391388

	Input	Output	Description	Interface	
	X		RF In	SK (female)	
		X	FO Out	FC/APC (Adapter)	
	X		DB-15	D Sub-15 (Power In)	

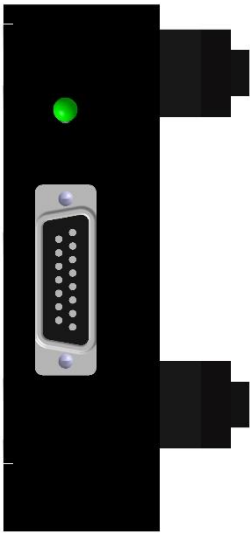
Top View



Side View left



Side View right

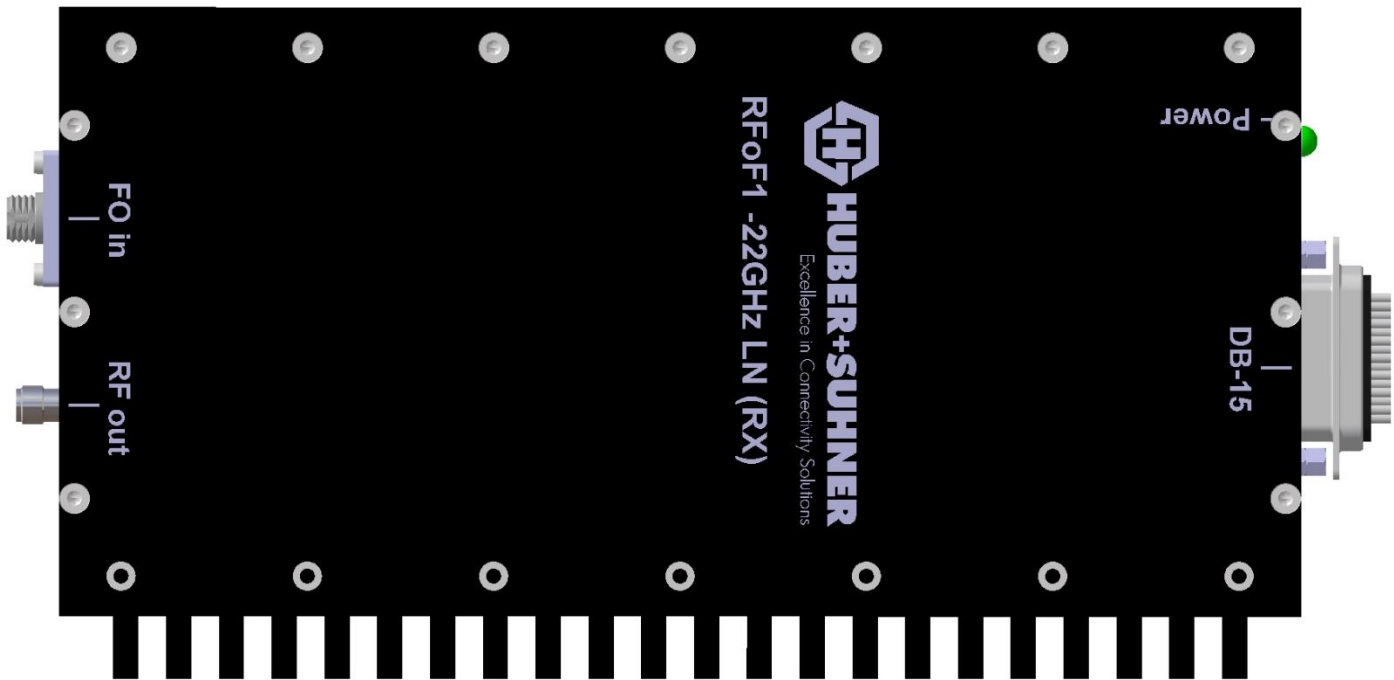


RF-over-Fiber
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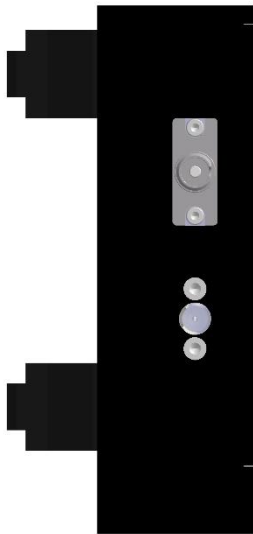
Receiver Module
Dimensions Outline Drawing: DOU-00391410

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

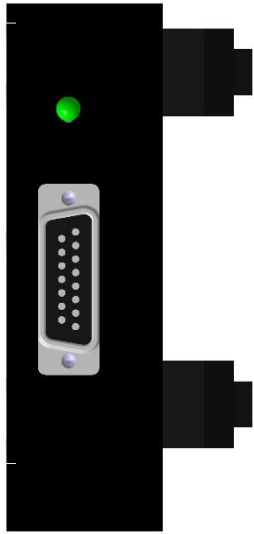
Top View



Side View left



Side View right



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Additional Information

- All modules are RoHS Compliant
 - All modules are EMC 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/RFConnectorsEN/>

FO Standard Assemblies: <http://literature.hubersuhner.com/Technologies/Fiberoptics/FOcableassembliesEN/>

Mouser Electronics

Authorized Distributor

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HUBER+SUHNER:

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