

## GPS-over-Fiber GPSoF1 – 1.5 GHz

### Description

The GPS-over-Fiber Link (GPSoF1 – 1.5 GHz) offers a very high stability in addition to excellent performance in phase noise and frequency jitter in applications such as remote antenna connection in GNSS receiving systems.

### Features

- For GPS, Galileo, Glonass, BeiDou, IRNSS, QZSS and other GNSS systems
- No external control circuits required
- Analog signal to optical convert and back

### Applications

- Reference signal distribution (time and location)
- Antenna remoting
- Inter-facility links



### Order Information

Item Description	Item Number
GPSoF1 - 1.5 GHz (TX) [L1 only]	85065409
GPSoF1 - 1.5 GHz (RX) [L1 only]	85065397
GPSoF1 - 1.5 GHz (TX) [L1+L2]	85072905
GPSoF1 - 1.5 GHz (RX) [L1+L2]	85072906

### Electrical Data

Parameters		Value			Remarks	
		Min.	Typ.	Max.		
All specifications at 25°C case Temperature T <sub>c</sub> , unless otherwise specified						
Frequency range		MHz	1218		1615	
Gain		dB	4	7	10	
Gain flatness		dB		< 2		
Noise figure		dB		14		
Spurious-free dynamic range		dB Hz <sup>2</sup> ⁄3		100		
Max. input at 1dB compression		dBm		-20		
Max. input power for no damage		dBm		+15		
VSWR (input and output)		dB		< 1.8		
OIP3		dBm		+ 7		
Time Delay		ns		55		
Supply voltage V <sub>s</sub>	Transmitter	VDC	+ 12	+ 12	+ 15	Max. 170 mA
Supply voltage V <sub>s</sub>	Receiver	VDC	+ 12	+ 12	+ 15	Max. 100 mA
Temperature range (OTR)	Operating	°C	- 40		+ 85	
	Storage	°C	- 40		+ 85	
RF input impedance		ohm	50			
Module weight		Kg / lbs	0.27 / 0.6			Transmitter and Receiver
Module dimensions		mm / inches	90 x 95 x 23 / 3.5 x 3.7 x 0.9			Transmitter and Receiver
RF connectors			QMA / SMA female			

### Optical Data

Parameters	Value			Remarks
	Min.	Typ.	Max.	
All specifications at 25°C case Temperature T <sub>c</sub> , unless otherwise specified				
Fiber optic connectors		FC/APC		
Fiber		Single mode fiber 9/125 um		
Optical power in fiber	mW	6	8	10
Side mode suppression ratio	dB	30	40	

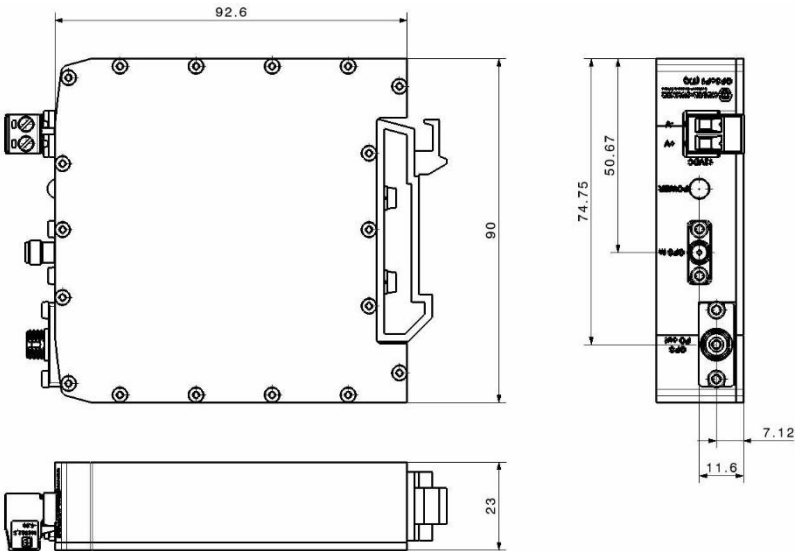
GPS-over-Fiber  
GPSoF1 – 1.5 GHz

Mechanical Data

**GPSoF1 - 1.5 GHz (TX)**

Dimensions Outline Drawing: DOU-00392104

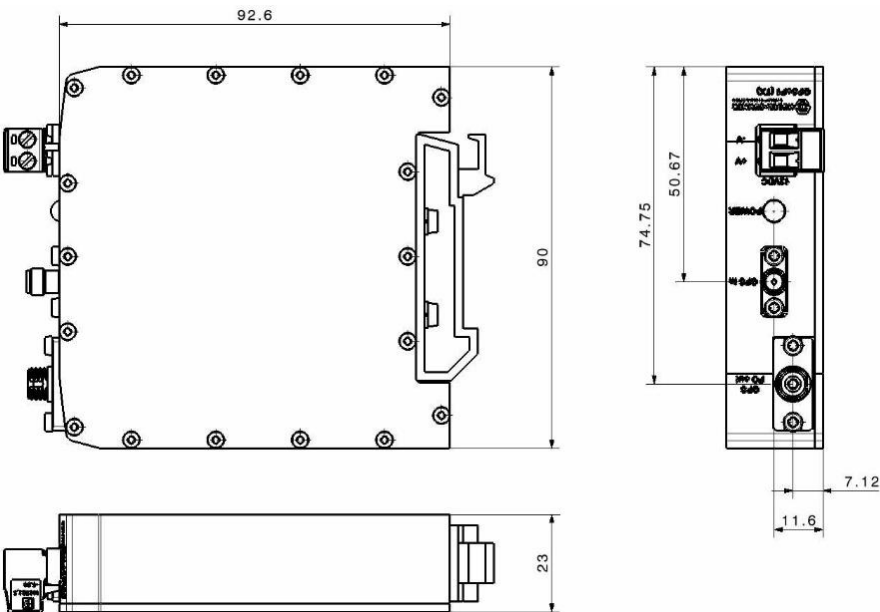
	Input	Output	Description	Interface	
	X		GPS In	SMA (female)	
		X	FO Out	FC/APC (Adapter)	
	X		12 VDC In	3pol connector plug	



**GPSoF1 - 1.5 GHz (RX)**

Dimensions Outline Drawing: DOU-00392105

	Input	Output	Description	Interface	
		X	GPS Out	SMA (female)	
	X		FO In	FC/APC (Adapter)	
	X		12 VDC In	3pol connector plug	



## GPS-over-Fiber GPSoF1 – 1.5 GHz

### Additional Information

- 4 Port receiver available (Picture on the right)
- All modules are RoHS Compliant
- All modules are EMV 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
- All modules are single packaged

#### 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/>

### Application Notes



All of the products required for a GPS-over-Fiber solution are available at HUBER+SUHNER.

#### Potential Applications

- Single structures (e.g. buildings) requiring a point-to-point GPS solution
- Multiple facilities (fixed and mobile) requiring single and multiple-point GPS solutions (e.g. time synchronisation and antenna remoting)
- Mines requiring a multiple-point GPS solution for time / location signal distribution
- Subways requiring a multiple-point GPS solution for time / location signal distribution

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HUBER+SUHNER:

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