



Features

- » Extremely Wideband >20 GHz
- » High Dynamic Range
- » Customization Available
- » Fully Integrated Module
- » Complete Link Option

Applications

- » Replaces Coax Cable
- » Radio Over Fiber
- » Radio Astronomy
- » Remote Antenna Sites
- » Phased Array Radar
- » EW/ECM
- » Optical Delay Lines
- » SATCOM

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Description

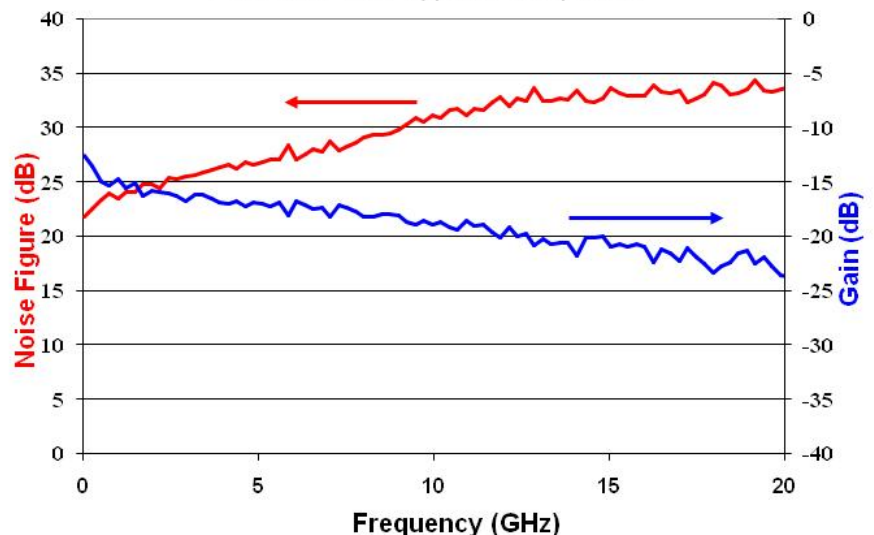
The PSI-2600-20UT is a high performance microwave photonic transmitter providing wideband electrical to optical (E/O) conversion for RF input signals beyond 20 GHz. Along with a PSI-2600-xR receiver module, the PSI-2600-20UT provides a complete fiber optic link solution designed to replace low loss coaxial cable or microwave repeaters for applications in military systems, satellite communications, radio astronomy, optical delay lines, cellular/wireless base stations or other RF/Microwave related systems. Part of the PSI-2600 series of microwave links, the PSI-2600-20UT transmitter does not incorporate any RF pre-amplification. Custom packaging, connectors and link gain configurations are also available. **Please contact PSI with your application needs.**

RF Link Performance

Parameter	Condition	Min	Typ	Max	Units
Operating Bandwidth		0.10		20	GHz
Link Gain	@ 10 GHz	-22	-20		dB
Noise Figure	@ 10 GHz		32	35	dB
Input IP3	@ 10 GHz	20	22		dBm
Spur Free Dynamic Range	1 Hz band @ 10GHz	106	110		dB/Hz ^{2/3}
Gain Flatness	1-20 GHz			±5	dB
	Any 100 MHz band			±0.5	dB

Note: RF link specifications with PSI-2600-20UR and a 3m optical jumper (PSI-2601-20L Link)

PSI-2601-20L Typical Response



RF Characteristics

Parameter	Condition	Min	Typ	Max	Units
Maximum RF Input				20	dBm
1 dB Compression Point		11			dBm
RF Input Impedance			50		Ω
RF Return Loss		9.5	15		dB
RF Input Connector	SMA Female				

Optical Characteristics

Parameter	Condition	Min	Typ	Max	Units
Wavelength		1520	1550	1556	nm
Optical Output Power		0.5		10	mW
Connector Return Loss		55			dB
Optical Output Connector	FC/APC				

Notes:

1. User supplied fiber optic cable should be singlemode Corning SMF-28 or equivalent
2. To minimize distortion caused by optical reflections the optical cable return loss should be >55 dB using angled-polished connectors
3. ITU channel wavelength selection is possible, please contact PSI with requirements

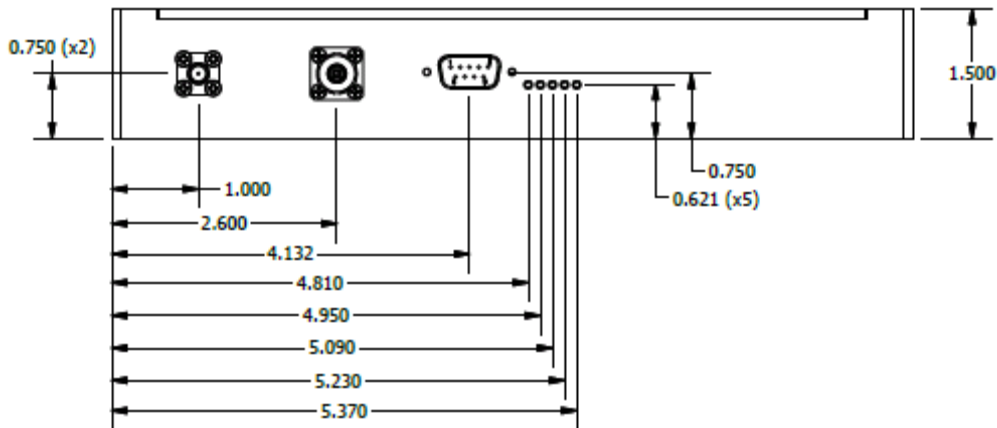
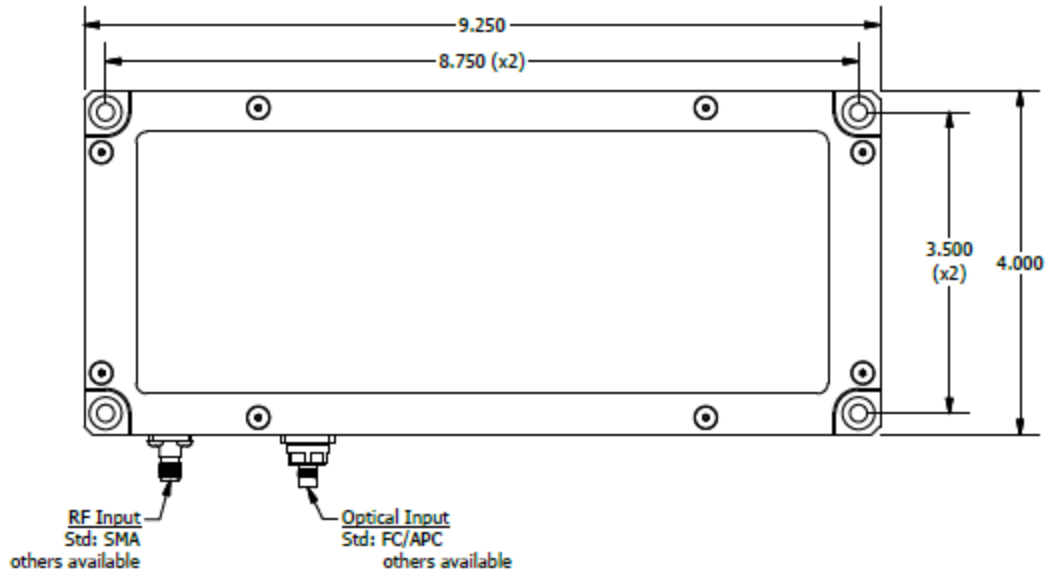
Environmental Characteristics

Parameter	Condition	Min	Typ	Max	Units
Operating Temperature	Within Specifications	-10		60	$^{\circ}\text{C}$
Storage Temperature	No damage	-20		70	$^{\circ}\text{C}$
Humidity		0		95	%

DC Power and Pin

Pin	Description
1	+15 V _{DC} at 80mA max.
2	Ground
3	+5 V _{DC} at 1500mA max.
4	-5 V _{DC} at 1500mA max.
5	-15 V _{DC} at 80mA max.
6	Laser Disable
7	Ground
8	Ground
9	Reset

Mechanical Dimensions



Ordering Information

PSI Part Number	Description
PSI-2600-20UT	E/O Transmitter Module
PSI-2601-20L	Microwave Photonic Link Includes: <ul style="list-style-type: none"> • PSI-2600-20UT Transmitter Module • PSI-2600-20UR Receiver Module
PSI-2603-20L	Microwave Photonic Link Includes: <ul style="list-style-type: none"> • PSI-2600-20UT Transmitter Module • PSI-2600-20AR Amplified Receiver Module