



## Description

The PSI-3600-20NL series is a family of high-performance microwave photonic links and components that offer the highest level of system performance available on the market. Optimized for operation with channelized bandwidths of less than one octave, the PSI-3600-20NL is a unique *RF amplifier-free link* offering superior dynamic range and intrinsic low noise figure. This system completely eliminates the need for an electrical RF amplifier in many applications. These levels of system performance are enabled through leading-edge component design powered by world class system design. Custom packaging and specification configurations are commonly provided to meet application needs. For more information, please contact PSI.

## Features

- » Highest Dynamic Range
- » Lowest NF without RF Amps
- » Extremely Wideband >20 GHz
- » Fully Integrated System
- » Customization Available

## Applications

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

## RF Link Performance Summary

Parameter	3601-20NL	Units
Bandwidth	.1 - 20	GHz
Link Gain	-10	dB
Noise Figure	14	dB
Input IP3	15	dBm
Spur Free Dynamic Range	115	dB/Hz <sup>2/3</sup>
Gain Flatness	±3	dB
	±0.5	dB

Note: Typical RF link performance with PSI-3601-20NR receiver and 3m fiber jumper

## Ordering Information

PSI Part Number	Description
PSI-3601-20NL	Microwave Photonic Link <ul style="list-style-type: none"> <li>• PSI-3601-20NT Transmitter Rack</li> <li>• PSI-3601-20NR Receiver Module</li> </ul>

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### RF Characteristics

Parameter	Condition	Min	Typ	Max	Units
Frequency Range		0.10		20	GHz
RF Output Impedance			50		$\Omega$
RF Input & Output Connectors		SMA Female			

### Optical Characteristics

Parameter	Condition	Min	Typ	Max	Units
Wavelength		1520	1550	1556	nm
TX Optical Output Power				10	mW
Connector Return Loss		55			dB
Optical Output Connector		FC/APC (Others Available Upon Request)			

Note: The user supplied fiber optic cable should be singlemode Corning SMF-28 or equivalent. In order to minimize distortion caused by optical reflections the optical cable return loss should be >55 dB (angled-polished connectors).

### Environmental Characteristics

Parameter	Condition	Min	Typ	Max	Units
Operating Temperature	Within Specifications	-5		50	$^{\circ}\text{C}$
Storage Temperature	No damage	-5		50	$^{\circ}\text{C}$

### Typical Link Performance Characteristics

