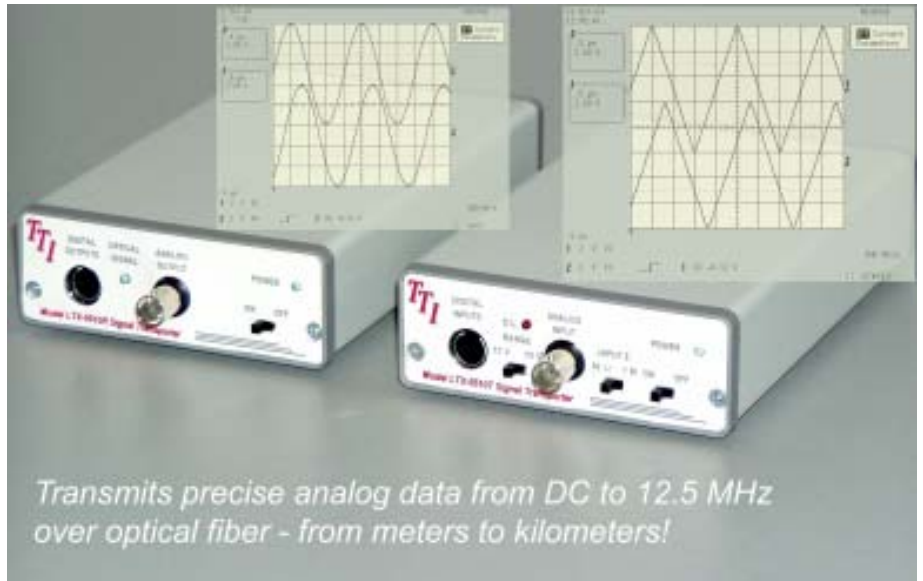




## LTX-5510

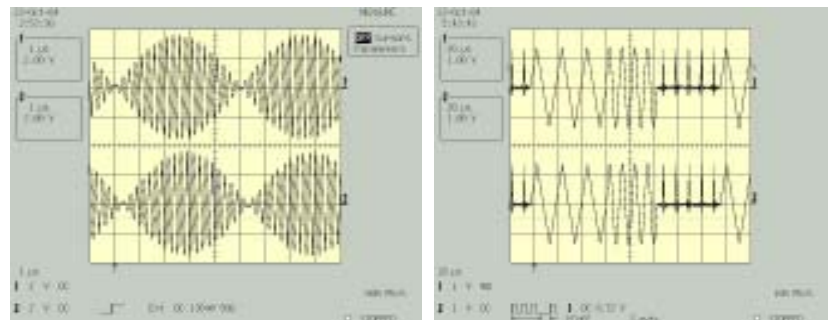
### “Signal Transporter”

E/O - O/E Converter Pair



### Benefits

- Transmits analog and digital simultaneously
- DC to 12.5 MHz analog bandwidth
- Two input ranges, +/- 1 V and +/- 5 V
- Analog signal digitized to 12 bit precision
- Four independent digital channels
- DC to 20 MHz digital bandwidth



The LTX-5510 enables the precise conveyance of analog plus four channels of digital information over fiber optic links ranging from meters to more than 10 kilometers.

Incoming analog data is digitized to 12-bit precision at 50 mega-samples per second and transmitted over optical fiber at a 1 Gb/s data rate. The receiver acquires this digital data and accurately reconstructs the analog signal at the far end of the fiber optic link.

The analog signal bandwidth is from DC to 12.5 MHz (-3 dB). Two input voltage ranges are provided, +/- 1 Volt and +/- 5 Volts. The input impedance of the transmitter analog channel may be set to 50 ohms or 1 megohm (75 ohms is optional).

Multiplexed along with the analog data, are four independent TTL/CMOS/LVTTL digital signals that may be toggled at rates in excess of 20 MHz.

Two models are available. Selection depends on the fiber type and the length of the fiber optic link that is required. The LTX-5510-850 transmits at 850 nm over multi-mode fiber optic links of up to 500 meters in length, while the LTX-5510-1310 transmits at 1310 nm over single-mode fiber to cover distances in excess of 10 kilometers.

Applications include data acquisition for plasma physics experiments, signal transmission and control of equipment at high voltage potentials, transmission of high quality video, and precise noise-free signal transmission in hostile EMI environments.

# LTX-5510 Specifications

TTI reserves the right to change specifications w/o notice

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Analog Signal Bandwidth.....	DC to 12.5 MHz (-3dB)
Input Voltage Ranges.....	+/- 1 V and +/- 5 V Full Scale
Resolution.....	12 - bits
Transfer Accuracy.....	+/- 0.1 %
Signal Latency (with one meter of fiber).....	~300 nS
Sampling Rate.....	50 Ms/s
Input Impedance.....	50 Ohms or 1 Megohm, selectable
Output Drive Capability.....	+/- 5V open circuit, +/- 2 V into 50 Ohms
Output Impedance.....	50 Ohms
Anti-Aliasing Filter.....	4 - Pole Chebyshev
Digital Inputs.....	TTL, LVTTTL, CMOS compatible
Digital Outputs.....	LVTTTL (0 - 3.3 V)
Digital Switching Rates.....	0 - 12 MHz
Digital Signal Edge Uncertainty.....	+/-10 nS
Laser Wavelength.....	LTX-5510-850: 850 nm +/- 20 nm, LTX-5510-1310: 1310 nm +/- 20 nm
Optical Transmission Rate.....	1.0 Gb/s
Loss Budget.....	0 - 15 dB
Optical Return Loss.....	> 15 dB
Laser Safety Classification.....	Class I safety per FDA/CDRH and IEC-825-1 regulations
Typical Transmission Distances (850 nm).....	500 M with 50/125 MM fiber, 300 M with 62.5/125 MM fiber
Typical Transmission Distances (1310 nm).....	10 KM with 9/125 SM fiber
Fiber Optic Connectors.....	ST Type standard, FC available on request
LED Indicators Provided.....	Input Overload (transmitter), Optical Signal - ON (receiver)
Power Supplies.....	Wall Mount, Universal, US, UK, Continental Europe, and Australian Plugs Included
Power Requirements.....	95-260 VAC, 50-60 Hz, 16 VA Max
Operating Temperature Range.....	0 - 40 C
Transmitter Dimensions (mm).....	175 L x 104.5 x 40 H
Receiver Dimensions (mm).....	175 L x 104.5 x 40 H
Weight Each.....	0.46 Kg
Standard Warranty.....	Two years, Components and Workmanship, 30 Day Satisfaction Guarantee

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*We welcome the challenge of custom applications.  
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