

# LTX-552X Digital Fiber Optic Link

## Features:

- Channel capacity up to 50 Mb/S
- Outputs are LVTTTL (0 - 3.3 V)
- Accepts LVTTTL and/or CMOS/TTL inputs
- 1310 nm version for SM links up to 10 KM
- 850 nm version for multimode links up to 500 Meters
- Transmits 16 independent TTL signals over a single fiber
- Paired with LTX-551x to configure remote high speed 12 or 14-bit A/D and D/A converter modules



## Digital Fiber Optic Link

The LTX-552x conveys sixteen independent channels of digital information over a fiber optic link ranging from meters to more than 10 kilometers.

Each of the 16 incoming TTL channels is sampled at up to  $5 \times 10^7$  times per second, multiplexed and transmitted serially over an optical fiber at up to 2 gigabit per second. The receiver acquires this digital data and de-multiplexes it to 16 separate output ports. Each of these channels may be toggled at rates ranging from 0 to 48 Mb/S.

Two models are available. The LTX5520 transmits serially at 1 gigabit and the LTX5525 transmits at 2 gigabit over either SM or MM fibers. The distance between units determines the fiber required to complete the link. 850 nm units operate on multi-mode fiber up to 500 meters in length, while 1310 nm units operate with single-mode fiber to span distances exceeding 10 kilometers.

The LTX-5510 precision analog fiber optic link was the first in our series of "Signal Transporters". It digitizes an analog signal at a 50 Ms/S rate with 12-bit precision and reconstructs the signal at the LTX-5510 receiver by means of a fast D/A converter. If the user employs the LTX-5520 receiver with the LTX-5510 transmitter, the result is a remote fiber-coupled 12-bit data acquisition system.

Similarly one can employ the LTX-5520 transmitter with the LTX-5510 receiver to generate fast high-resolution analog signals at a remote location.

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



Made In the USA

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# LTX-552X-Specifications

	LTX-5520	LTX-5525
Number of independent Channels	16	
Signal Latency (with one meter of fiber)	Approximately 300 ns	
Input Impedance	50 Ohms or 1 Megohm    20 pF, selectable	
Output Drive Capability	+/- 5 V open circuit, +/- 2 V into 50 ohm load	
Output Impedance	50 Ohms	
Digital Inputs	TTL, LVTTTL, CMOS compatible	
Digital Outputs	LVTTTL (0 - 3.3 V)	
Digital switching Rates	0-12.5 MHz (up to 24 Mb/s)	0-24 MHz (up to 48 Mb/s)
Digital Signal Edge Uncertainty	0 - 20 ns	0 - 10 ns
Laser Wavelength	850 nm +/- 20 nm or 1310 nm +/- 20 nm	
Optical Transmission Rate	1.0 Gb/S	2.0 Gb/S
Loss Budget	15 dB max	
Optical Return Loss	> 15 dB	
Laser Safety Classification	Class I safety per FDA/CDRH and IEC-825-1 regulations	
Typical Trans. Distances MM	500 M - 50/125μ and 300 M - 62.5/125μ	250 M - 50/125μ and 150 M - 62.5/125μ
Typical Trans. Distances SM	10 KM with 9/125 micron fiber	
Fiber Optic Connectors	ST standard, FC optional	
Signal Connectors	DB25 on input and output	
Power Requirements	9 VDC (Optional 9 - 24 VDC, 500mA)	
Power Supply Included	95 - 260 VAC, 50 - 60 Hz, 16 VA Max - Output 9VDC/.67A with Universal, US, UK, Continental Europe and Australian plugs included	
LED Annunciators Provided	Input Overload ( transmitter ), Optical Signal - ON ( receiver )	
Operating Temperature	0 - 40 C	
Tx and Rx Dimensions	175 L x 105 W x 40 H	
Weight (each)	0.46 Kg	
Standard Warranty	Two Years, Components and Workmanship, 30 day Satisfaction Guarantee	
Accessories Supplied	DB25 connectors for digital inputs/outputs	

TTI reserves the right to change specifications without notice.

To Order:

LTX-552X-X-X

Optical Transmission Rate:

0 = 1 gigabit  
5 = 2 gigabit

Laser Wavelength:

850 = 850nm Multimode  
1310 = 1310nm Singlemode

Optical Connector

Blank = ST  
FC = FC



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