

Digital Fiber Optic Links "Signal Transporter"

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Features:

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



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 5×10^7 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 multimode 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.



Terahertz Technologies Inc.
169 Clear Rd, Oriskany NY 13424
Phone: 885-TTI-TEAM (884-8326)
Fax: 315-736-4078
email: sales@teratec.us
www.teratec.us



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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 - 50/125 μ and 300 M - 62.5/125 μ	250 M - 50/125 μ and 150 M - 62.5/125 μ
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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