

# “Signal Transporters”

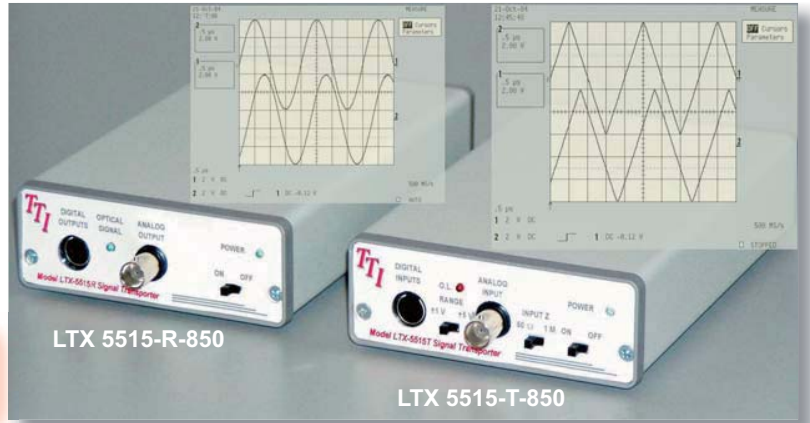
Analog to Digital

Digital to Analog

Digital to Digital

Analog To Analog

**Fiber Optic Converters**



## Analog Signal Transporters

- One Analog w/Four Independent Digital Channels
- DC to 25 MHz Analog Bandwidth
- Analog Signal Digitized to 12 Bit Precision
- DC to 48Mb/s Data Rate Per Digital Channel
- Input ranges of +/-1V F.S. or +/-5V F.S.
- Multimode and Singlemode Versions Available

The LTX-55XX Series of Signal Transporters convert your analog and digital electronic signals over fiber for up to 10 kilometers. The LTX5510 and LTX5515 units carry 1 analog and 4 digital channels over a single fiber and the LTX5520 and LTX5525 units carry 16 digital channels over a single fiber.

Analog signals are transmitted at 12 bit precision at up to 100 Ms/S, while digital signals are transmitted 0-48 Mbs per channel. The LTX5510 and the LTX5520 have transmission rates of 1.0Gb/s and the LTX5515 and the LTX5525 have transmission rates of 2.0Gb/s. The units may be used interchangeably for analog to digital or digital to analog conversion.

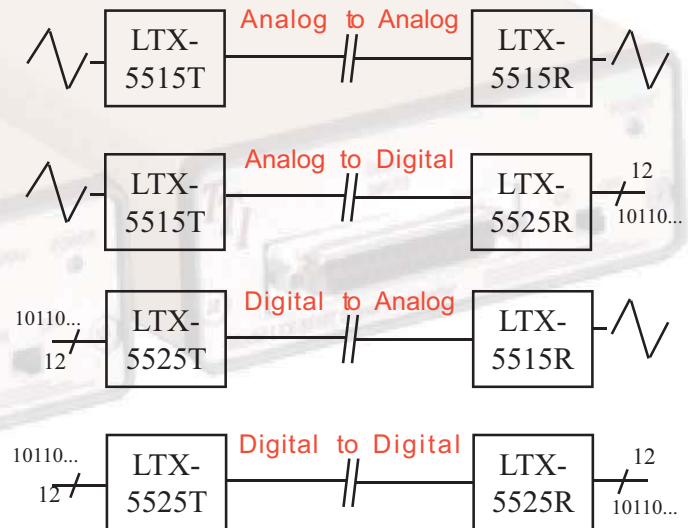
They are available in multi mode or single mode version for fiber optic links exceeding 10 kilometers.

The LTX series is excellent for data acquisition for plasma physics experiments, signal transmission and control of equipment at high voltage potentials, operation through Faraday shields and of fiber a precise noise-free signal transmission in hostile EMI environments.

## Digital Signal Transporters

- 16 Independent TTL Signals Over a Single Fiber
- 0 to 50Mb/s Per Channel
- Accepts LVTTTL and or CMOS/TTL Inputs
- LVTTTL (0-3.3V) Output
- Multimode and Singlemode Versions Available

**Pair Analog Units  
With Digital Units For  
High Speed 12 bit A/D And D/A  
Converter Modules**



## Terahertz Technologies Inc.

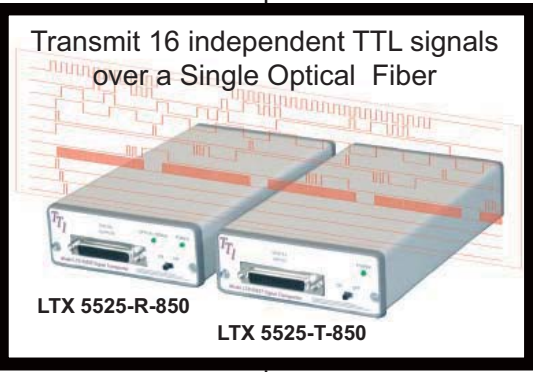
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| <b>LTX Comparison Chart</b>                 | <b>LTX-5510</b>  | <b>LTX-5515</b>                          | <b>LTX-5520</b>                            | <b>LTX-5525</b>                          |
|---|--|--|--|--|
| <b>Analog Channels</b>                      | 1  |  |  |  |
| Input Voltage Ranges                        | +/-1 V or +/-5 V Selectable  |  |  |  |
| Resolution                                  | 12 Bits  |  |  |  |
| Transfer Accuracy                           | +/-0.1% Full Scale, +/-10mV offset<br>Measured with 100Hz Sine Wave 8v p-p     |  |  |  |
| Input Impedance                             | 50 Ohms or 1 Meg ohm    20 pf, Selectable                                      |  |  |  |
| Output Impedance                            | 50 Ohms  |  |  |  |
| Output Drive Capability                     | +/-5V open circuit, +/-2V into 50 Ohm load                                     |  |  |  |
| <b>Digital Channels</b>                     | 4  |  | 16   | 16                                       |
| Optical Transmission Rate                   | 1.0 Gb/s   | 2.0 Gb/s                                 | 1.0 Gb/s                                   | 2.0 Gb/s                                 |
| Digital Signal Edge Uncertainty             | 0-20 ns  | 0-10 ns                                  | 0-20ns                                     | 0-10ns                                   |
| Digital Input Switching Rate                | 0-24 Mbs   | 0-48 Mbs                                 | 0-24 Mbs                                   | 0-48Mbs                                  |
| Input Sampling Rate                         | 50 Ms/S  | 100 Ms/S                                 | 50 Ms/S                                    | 100 Ms/S                                 |
| Typical Transmission Distance @ 850nm       | 50/125 f ber 500M<br>62.5/125 f ber 300M                                       | 50/125 f ber 250M<br>62.5/125 f ber 150M | 50/125 f ber 500M<br>62.5/125 f ber 300M   | 50/125 f ber 300M<br>62.5/125 f ber 175M |
| Transmission Distance @ 1310nm              | 10Km   | 10Km                                     | 10Km                                       | 10Km                                     |
| Signal Connectors                           | 5 Pin Miniature DIN  |  | DB25                                       |  |
| LED Indicators                              | Input Overload (transmitter)<br>Optical Signal (receiver)                      |  | Optical Signal (receiver)                  |  |
| Accessories Supplies                        | 5 Pin DIN connectors for digital inputs /outputs                               |  | DB25 Connectors for Digital inputs/outputs |  |
| Digital Inputs                              | TTL, LVTTTL, CMOS compatible   |  |  |  |
| Digital Outputs                             | LVTTTL (0-3.3V)  |  |  |  |
| Signal Latency (with one meter f ber)       | ~ 300 ns   |  |  |  |
| Loss Budget                                 | 0-15dB   |  |  |  |
| Operating Wavelength                        | 850 nm+/- 20 nm or 1310 +/- 20 nm  |  |  |  |
| Fiber Optic Connector                       | ST standard (FC upon request)  |  |  |  |
| Power Requirements                          | 95-260 VAC, 50-60 Hz , 16 VA max.  |  |  |  |
| Operating Temperature                       | 0-40 C   |  |  |  |
| Transmitter/Receiver Dimensions (each) (mm) | 175L x 105 w 40 h  |  |  |  |
| Weight (each)                               | 0.46 kg  |  |  |  |
| Warranty                                    | One year, Components and Workmanship, 30 day Satisfaction Guarantee            |  |  |  |
| Power Supply                                | Wall Mount Universal, US, UK, Continental Europe and Australian Plugs Included |  |  |  |



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**PHOTO  
TECHNICA**

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