WARRANTY & LIABILITY

All fiber optic transmission systems, products and accessories manufactured by Liteway, Inc. and it's subsidiaries are fully tested prior to shipment and are warranted against defective materials and workmanship for a period of five full years from the date of the original shipment. Should a problem occur, a Return Material Authorization Number (RMA) must be obtained from Liteway Inc. at (516) 931-2800 and the item returned to Liteway, Inc. 166 Haverford Road, Hicksville, NY 11801, USA, prepaid. Liteway Inc. will then, at its option repair or replace the defective item.

Liteway, Inc. maximum liability under this warranty is limited to the cost of the defective item only. No contingent liabilities of any kind are either assumed or implied.

Any items returned to Liteway, Inc. that have been misused, abused, damaged, modified, connected or adjusted in any way contrary to the instructions furnished by Liteway, Inc. or repaired by unauthorized personnel will not be covered by this warranty. Any non-warranty repairs required will be quoted at the current rate for such services.

Important Notices

CAUTION ! AVOID DIRECT EXPOSURE TO BEAM.
All –5, -7, -8, and -9 Models use laser diodes. These solid-state laser diodes are located in the optical ports of these units. Laser diodes produce invisible radiation that may be harmful to human eyes. Never look directly into the optical port of any fiber optic unit designed to operate with single-mode optical fiber.

NOT FOR LIFE SUPPORT SYSTEMS
Liteway, Inc. does not authorize or warrant any of its standard products or accessories for use in critical life support systems or applications of any kind. Please contact us for this critical specialty equipment.

 106206 Rev H

OPERATING INSTRUCTIONS

LuxLink®
Fiber Optic High Speed TTL/ECL Transmission System

Models DT-7301, DR-7301

The DT/DR-7301 system consists of the DT-7301 transmitter and DR-7301 receiver and will transmit standard high-speed TTL, ECL or PECL signals. The unit may also be used for protocol conversion.

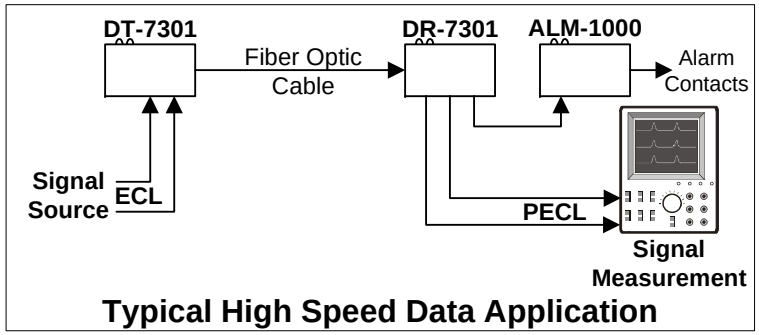
Technical Specifications

Data Rate	1 Mb to 200 Mb/s (50Mb/s TTL)
Protocols supported	TTL(50 ohms/Hi-Z), ECL, PECL, LVTTL
Duty Cycle	50/50 to 80/20 (AC coupled)
Rise / Fall Time (ECL)	0.5ns typical, 2.5ns maximum
Minimum Pulse Width	5 ns (ECL)
Bit-error Rate	1 x 10^{-9} (worse case)
Jitter	3.0 ns maximum
System delay	35 ns typical with 1 meter of fiber
Operating Wavelength	1310 nm (-3,-7) or 1550 nm (-9)
Optical Output Power	-14 dBm (multimode) -10 dBm (single-mode)
Optical Loss Budget	0–15 dB (multimode) 0-18 dB (single-mode)
Fibers Accommodated	1 Multimode (-3), 1 Single-mode (-7,-9)
Signal Connectors	BNC
Operating Temperature	-35º to +75ºC
Power Requirements	11-24 VAC/DC @ 210 mA
Physical Size (mm)	5.0"(127)L x 3.0"(76)D x 1.0"(25.4)W

All specifications measured with 1Km of 62.5u multimode fiber.
All specifications are subject to change without prior notice.

Installation Instructions

The diagrams below show the location of the connectors and mode configuration switches for the DT-7301 and the DR-7301. For proper operation, the units should always be connected exactly as shown.



Typical High Speed Data Application

Configuration DIP Switch Settings

Before applying power, set the 10 position DIP switch for the mode of operation desired as follows:

Protocol	1	2	3	4	5**	6	7	8	9	10
TTL 50ohm	*	Off	On	Off	On	Off	Off	Off	Off	***
TTL Hi-Z	*	Off	On	Off	Off	Off	Off	Off	Off	***
PECL	*	Off	Off	On	Off	Off	On	Off	Off	***
Diff PECL	*	On	Off	On	Off	Off	On	Off	Off	***
ECL (-)	*	Off	Off	On	Off	Off	On	On	Off	***
Diff ECL	*	On	Off	On	Off	Off	On	On	Off	***

* Switch 1 is used to set the input operating power range;
ON = 11-18VAC/DC, OFF = 24VAC/DC

** Switch 5 switches and internal 50Ohm load on to the signal inputs or outputs. This must be set according to your application.
ON = 50 Ohms
OFF = High Impedance.

If your application has an external 50 ohm load you must set switch 5 = OFF. If your application does not have a 50 ohm load you must set switch 5 = ON

*** Switch 10 is used to select or defeat the Alarm mode.
ON = Alarm defeated enabled, (alarm mode not active)
OFF = Alarm defeated disable, (alarm mode active)

Switch 6 & 9 are reserved for future use and are set to OFF.

Signal Input /Output Considerations

The TTL 50-ohm mode presents a 50-ohm load in the DX-7301 and requires that the DR-7301 be terminated in 50 or 75 ohms.

The Hi-Z TTL mode presents a 3K TTL load in the DX-7301 and requires that the DR-7301 be terminated in 3K TTL load.

The Differential ECL or PECL mode uses both BNC connectors to accommodate the differential signal.

The Single-end ECL or PECL mode uses one BNC connector.

Since all signals are high speed, proper cable and terminations are required to achieve full performance from this system.

The unit is AC coupled and requires a data rate symmetry from 50:50 to 80:50. In addition the minimum data rate is 10Mb/s.

Power

For **24 VAC/DC** operation DIP Switch 1 must be OFF

Power Terminal Block Connections

Pin	Function
1	Alarm output for use with optional Alarm Sensing Unit ALM-1000. No other connections should be made to this terminal
2	+11 to 24 DC or AC Volts input
3	AC or DC return (Common to Housing)

Be certain to check all connections, settings and voltages before applying power

Indicator Lights

Indicator	Lights when
Pwr	Proper power is present.
Alm	The loss of data alarm is activated any failure mode is present.
Sig	A data signal is being transmitted or received.

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