

WARRANTY & LIABILITY

All fiber optic transmission systems, products and accessories manufactured by Liteway, Inc. and its 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 www.liteway.com and the item returned to a USA Liteway, Inc. Location 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.

OPERATING INSTRUCTIONS

LuxLink® Fiber Optic GPS NMEA/1PPS Transceiver

Model GPSX-1001



The GPSX-1001 is designed to transmit, receive and repeat standard GPS NMEA and 1 PPS time signals at data rates from DC to 100 Kb/s on a single optical fiber. The unit may be used for point-to-point or in drop and repeat applications.

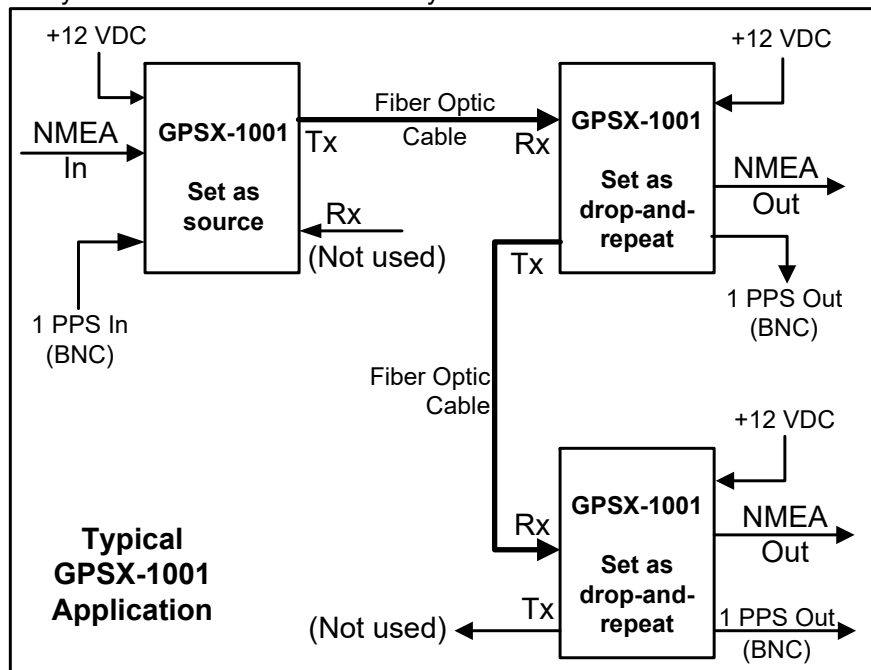
Technical Specifications

NMEA 0183 Data Rate	DC-100 Kb/s
Operating Modes	Simplex or Drop and Repeat
NMEA 0183 Interface	EIA Standard RS-232 or RS-422
Optical Wavelength (nm)	850 (-1), 1300 (-3,-7), 1550 (-9)
1 PPS Interface	5 Volts TTL
1 PPS Jitter	+ 250 nanoseconds max
1 PPS Rise/Fall time	10 nanoseconds max
Temperature Range	-35° to +75°C
Power Requirements	11-24 VAC/DC @300 mA
Physical Size (mm)	5.0"(127)L x 3.0"(76)D x 1.0"(25.4)W

All specifications are subject to change without prior notice.

Installation Instructions

The diagrams below show the fiber optic and signal connections for the GPSX-1001 when used as a signal source and for drop-and-repeat signal distribution applications. For proper operation, the GPSX-1001 units must always be connected and set exactly as shown.



Dip Switch Settings

Signal protocol and input/output modes are selected by means of the 10 position DIP switch.

Signal Input settings when used as a source

Protocol	1	2	3	4	5	6	7	8	9	10
RS-232	Off	Off	Off	Off	On	Off	*	*	Off	Off
RS-422	On	On	Off	Off	Off	Off	*	*	Off	Off
1 PPS	-	-	-	-	-	-	On	Off	-	-

*Switches 7 and 8 refer to the 1 PPS signal only

Signal Output settings when used as a drop and repeat (repeater).

Protocol	1	2	3	4	5	6	7	8	9	10
RS-232	Off	Off	Off	Off	Off	On	*	*	On	On
RS-422	Off	Off	On	On	Off	Off	*	*	On	On
1 PPS	-	-	-	-	-	-	Off	On	-	-

*Switches 7 and 8 refer to the 1 PPS signal only

Signal Terminal Block (RS-232 or RS-422)

Note that the input or output function of the pins depend on the DIP switch settings.

Pin	Connection
1	RS-422 + Input or Output
2	RS-422 - Input or Output
3	Ground (common)
4	RS-232 Input or Output
5	Ground (common)*

*Ground (common) is also connected to the housing.

The 1PPS signal input or output is via the BNC connector on the unit

Note that the input or output function of the BNC connector depends on the DIP switch settings.

Power Terminal Block Connections

Pin	Function
1	Not used. (no connection required)
2	10 to 14 VDC (300 mA max)
3	DC return (common)*

*Ground (common) is also connected to the housing.

Indicator Lights

Indicator	Lights when
Pwr	Proper power is present.
Link	A valid optical link is present**
1 PPS	1 PPS data is present*
NMEA	NMEA data is present**

*Note that the 1 PPS LED indicator will blink at the 1 PPS rate.

** The LINK LED indicator will not light when the unit is set as a source but the 1PPS and NMEA LED indicators will light when data is present.

Be certain to check all connections, DIP switch settings and voltages before applying operating power.