



CBL™ Intelligent Lon Fibre Router

Features



- ❖ Connect twisted pair LonWorks nodes to fibre optic LonWorks backbones, links or subnets
- ❖ High speed LonTalk® traffic at 1.25Mbps
- ❖ Large networks supported +750 nodes
- ❖ Available with 880nm and 1320nm Multi Mode
- ❖ 3Km to 15 Km fibre segments possible, without Repeaters
- ❖ Uses CBL's patented transmit and receive on a single fibre core technology reduces installation costs by 50%
- ❖ Linear and ring network topology
- ❖ Fully compatible with CBL's Lon Fibre Physical Layer Repeaters and can be combined with them to extend self healing fibre rings
- ❖ On board Neuron allows Link monitoring and diagnostics for high reliability
- ❖ Simple installation, no network administration required
- ❖ Panel mountable
- ❖ Operating voltage: 9V to 28V AC/DC
- ❖ CE, FCC, ETL and C-Tick certified

Description

The Fibre router implements the full set of LonWorks® router functions: Configured, Learning, Bridge or Repeater. It connects LonWorks twisted pair copper networks to LonWorks fibre optic networks, or extends twisted pair networks over long distances or through harsh environments. The Fibre router can be used to create links and back-bones that connect copper LonWorks subsystems. This Fibre router implements the open standard LonTalk® EIA 709 communications protocol. They are simple to install out of the box being fully compatible with all LNS based Network management tools.

Fibre optic interconnection is ideal for applications needing high throughput up to 2.5Mbps, expandability and immune to electromagnetic interference or long distances. Maximum LonWorks communication throughput is maintained on the fibre optic network regardless of distance or number of nodes attached. A single fibre optic ring can be implemented for multiple subnets with several hundred fibre optic nodes (the allowable number is a function of average link length, cable characteristics but 750 to 3,000 node capacity is possible).

The approach of creating links and back-bones using Ethernet relies upon a shared network connection. In contrast, a LonFibre based network delivers predictable and consistent performance being dedicated to LonWorks only. Ethernet link latency and throughput will degrade as non-LonWorks traffic increases. Worse still an Ethernet link is a single point of failure if its supporting file server fails.

Ring topology provides fault tolerance

- 1) All data is transmitted and received via a single fibre optic cable (bi-directional single-fibre)
- 2) Data is transmitted in one direction when the ring is intact, eventually closing on itself. Nodes are assigned a transparent token to assure they participate in the ring topology. Network hardware provides and manages token assignment with no impact to users or client devices.
- 3) If the fibre ring is broken (either physical damage to a fibres link or some network node is damaged or powered off), data will then travel in both directions on each fibre so all nodes remain connected in the presence of a single fault.
- 4) Continuous link monitoring – flags a marginal link signal problem before failure

Also available as an option is a Link Discrete capability. An additional connector is added to the endplate which makes available a switch closure, indicating that either one of the fibre ports does not have light present. If there is a fibre break in the system, each router on either side of the failed fibre will provide an external switch closure via a relay so that the failure will be easily isolated. The devices on either side of the failed fibre will re-configure and continue to operate seamlessly.

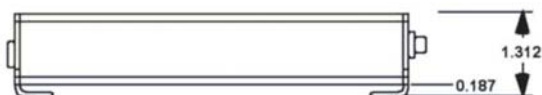
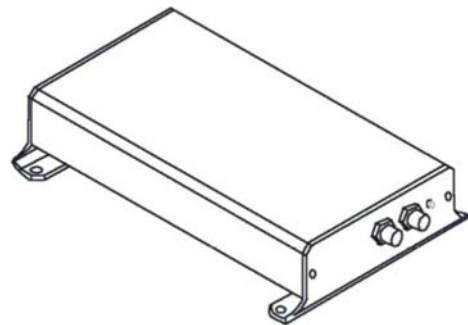
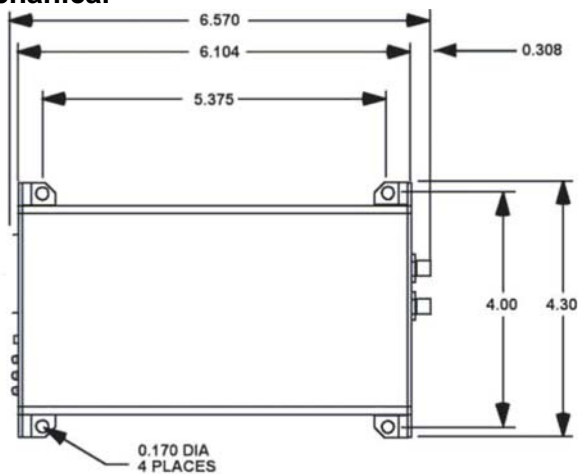
Installation

Connections

Fibre ports must always be connected so that a left port is connected to a right port of the next device in the ring. Segments must obey the same rules; i.e. even if only two nodes are connected, the left port of one must connect to the right port of the next. All connections must be made with multimode or single mode fibre optic cable, using ST style termination. Good quality terminations (optical loss of 0.5dB or less, typical) are required. Minimum use of patch panel connections is recommended, as each patch introduces optical loss. See "Typical Optical Power" document on web site or contact CNS directly as below.

Specification

Mechanical -



Panel Mounting is accomplished using the four holes provided
Dimensions: 6.1"(15.5cm) L x 4.0"(10.2cm) W x 1.3"(3.3cm) H
Weight: 0.8 lbs (0.36Kgs)

Electrical –

Operating voltage: 9 to 28 VDC or VAC, 1 watt operating power

Network –

Two ST connectors for fibre network connection, 880nm and 1320nm Multi Mode Fibre supported. The unit is compatible with 62.5/125 micron and 100/140 micron multimode fibre. 50/125 may be used with reduced optical link budgets.

Environmental-

Operating temperature: -20C to +85C
Humidity: 95% non-condensing

Optical Performance Information

MultiMode 880nm	Performance	Comment (62.5/125micron)
Coupled Power	-10 to -12 dBm	
Receive Sensitivity	-26dBm	
Link Budget	14-16dBm	
Maximum Distance between nodes	3km	Assumes insertion loss for 2 connections (0.6dB) and 3.2dB fiber loss/km. 3dB margin

MultiMode 1320nm	Performance	Comment (62.5/125micron)
Coupled Power	-12 to -14 dBm	
Receive Sensitivity	-28dBm	
Link Budget	13-15dBm	
Maximum Distance between nodes	15km	Assumes insertion loss for 2 connections (0.6dB) and 0.45dB fiber loss/km. 3dB margin

Ordering Information

Model No – CNS7X0YY-Z

X = 5 for 880
2 for 1320

Z = 3 for ST/TPT1250
4 for ST/FTT-10A

YY = 90 for standard configuration

Contact Details

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