LonWorks Option Card Installation Guide

OEMCtrl®

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Introduction

LonWorks

LonWorks is an open protocol that was originally developed by Echelon Corporation. It is now maintained by Echelon in collaboration with members of the LonMark Interoperability Association. It requires the use of Echelon's Neuron microprocessor to encode and decode the LonWorks packets.

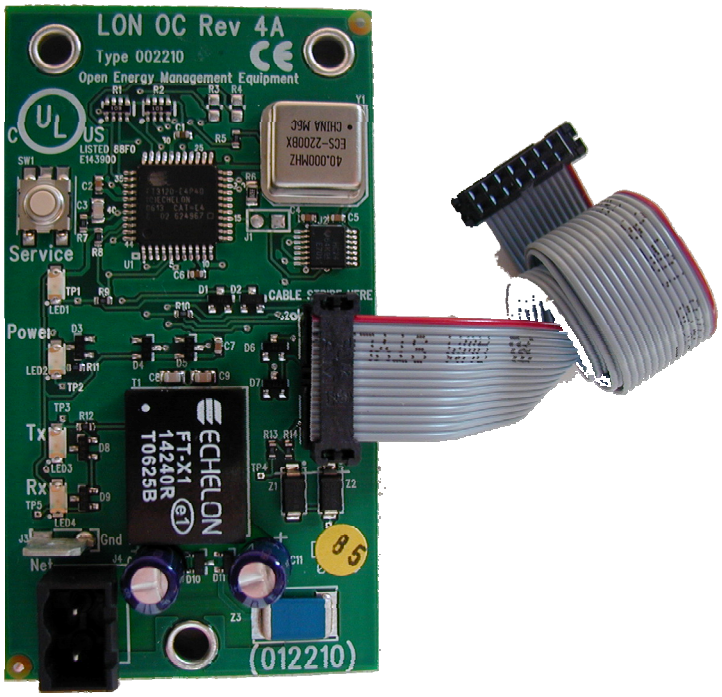
The LonWorks protocol is based on the concept of using standardized functional profiles to control similar pieces of equipment. ALC translators are LonWorks compatible devices, but are not LonMark devices. A LonMark device has been thoroughly tested by Echelon (LonMark.org) and has been given the LonMark logo indicating compliance with the LonWorks profile specification. All LonMark devices require the use of proprietary hardware manufactured by Echelon Corp. In order to reduce the cost of adding that hardware on every module, ALC formats the data packets in a manner specified by the LonWorks documentation.

The FT 3120 Free Topology Smart Transceiver is fully compatible with the TP/FT-10 channel and can communicate with devices using Echelon's FTT-10A Free Topology Transceiver. The free topology transceiver supports polarity insensitive cabling using a star bus, daisy-chain, loop, or combination topology.

Specifications

Cable Port	14-pin communication port for cable attachment
Network Polarity	Polarity insensitve
Connection	Supplied by 10in ribbon cable to be connected to the LON port of the device.
Protection	• Echelon-recommended ESD/surge protection • DC blocking capacitors for compatibility with free topology link power transceivers
Status indicators	LED's indicate status of communications, running, errors, and power.
Environmental operating range	-40° to 150°F (-40° to 65.6°C), 10–95% relative humidity, non-condensing
FT3120 Smart Transceiver FT X-1 Communication Transformer	Compatible with TP/FT-10 channels using FTT-10 and/or FTT-10A Free Topology Transceivers and LPT-10 Link Power Transceivers

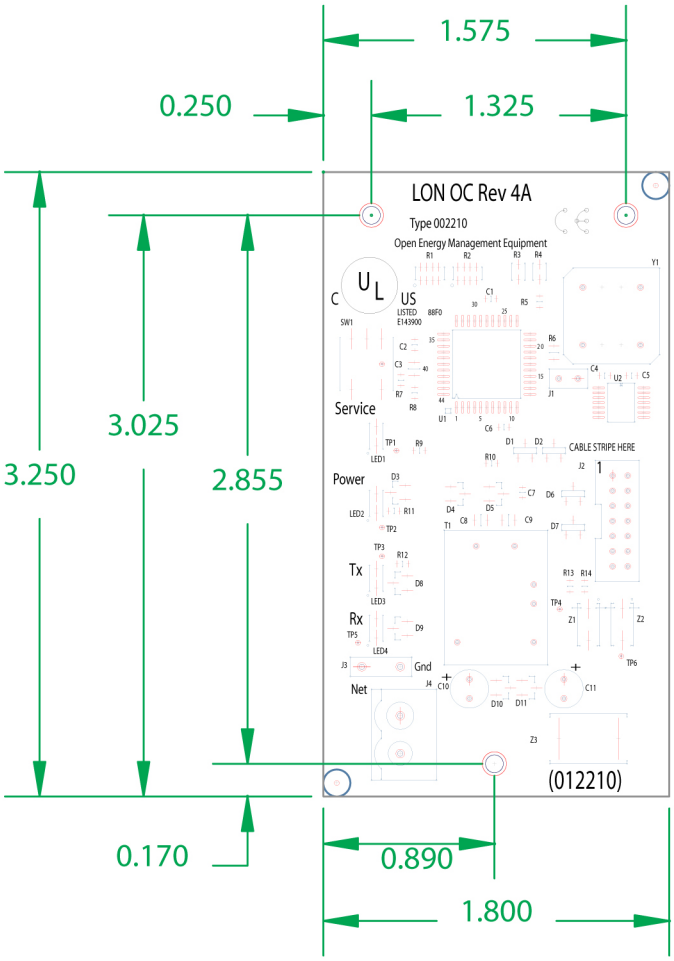
Wiring	• supports polarity insensitive free topology star, bus, daisy-chain, loop, or mixed topology wiring • Echelon 78 kbps bit rate free topology twisted pair on 2 position pluggable screw terminal	
Physical - Mounting stand-offs	Tin plated steel	
Overall dimensions	Width: Height: Depth:	1.8 in. (45.72mm) 3.25 in. (82.55mm) 1.5 in. (38.1mm) Distance from module cannot exceed ribbon cable: 10 in. (254mm)
Mounting hole dimensions	Width: Height:	Top 2 standoff holes: 1.325in (33.66mm) apart - top 2 holes .475in (12.07mm) from edge Bottom standoff holes: .89in (22.61mm) bottom hole - from edge
Recommended panel depth	1.75 in. (51mm)	
Listed by	UL 916 and C22.2 No. 205-M1983 (cUL for Canada)	



Mounting and Connecting the LonWorks Option Card

To mount the LonWorks Option Card

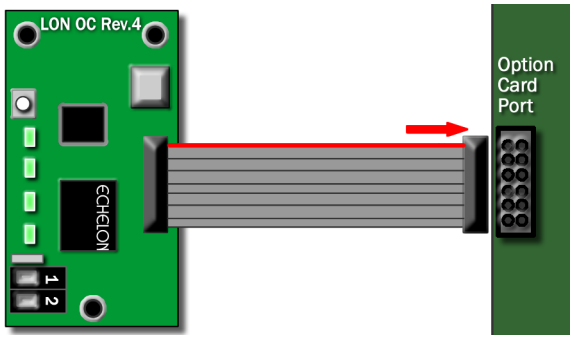
1. Screw the LonWorks Option Card into an enclosed panel using the standoff mounting holes on the plate. Maximum distance from the controller is 10 inches.
2. Connect 2-position pluggable screw terminal to the LON network.
3. Turn **OFF** your controller before connecting to the LonWorks Option Card. Leaving the power on when connecting can destroy the LonWorks Option Card.
4. Connect the supplied ribbon cable to your LonWorks Option Card and to your controller.



To connect the LonWorks Option Card

1 Turn off the controller's power.

2 Plug the LonWorks Option Card into the Comm Option Card Port of the controller.



3 Turn on the controller's power.

Troubleshooting

If you have problems mounting, wiring, or addressing the LonWorks Option Card, contact your account engineer.

Communication LED's

The LED’s indicate if the translator is speaking to the devices on the network

LED's	Status
Service	Blinking indicates communication.
Power	Lights when power is being supplied to the LonWorks Option Card. If light does not come on, check that cable is inserted properly and right side up.
Tx	Lights when the LonWorks Option Card transmits data to the network segment
Rx	Lights when the LonWorks Option Card receives data from the network segment

Manufacture date

When troubleshooting, you may need to know the LonWorks Option Card's manufacture date.

Obtain the manufacture date from a...	Notes
Sticker on the back of the main LonWorks Option Card board	The first three characters on the sticker show the LonWorks Option Card's type. The next three characters show the year, month, and day of manufacture. (The month digit is in hexadecimal format.)

Compliance

FCC Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION Changes or modifications not expressly approved by the responsible party for compliance could void the user's authority to operate the equipment.

BACnet Compliance

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