

Power Line Development Support Kit (PL DSK 2.3)

Get a fast start designing
LONWORKS® power line
devices



A must-buy to get started with designs based on PL 3120® / 3150® / 3170 Smart Transceivers, the PL DSK includes a variety of resources to reduce your development time and engineering effort.

With multiple power line device reference designs included, design engineers have the flexibility to pick a design that suits their application with a high degree of confidence that components will be available to meet their design goals from both cost and size perspectives,

FEATURES

Reference Designs

- Provides schematics and layouts for the external discrete interface circuitry that needs to be implemented with the Echelon Power Line Smart Transceiver IC.
- Eight reference designs included.
- New, smaller PL 3120 / PL 3170 single in-line package (SIP) design included.
- Available as a download for fast access, providing a quick start for PL design projects.

Design Features

- Manages heat dissipation with optimally designed traces, component selection, and placement.
- Ensures proper circuit operation with controlled trace capacitances based on the crystal's oscillation frequency.
- Provides verified communications performance for receive sensitivity and transmit power.
- Deals with interference and noise impairments.
- Provides flexibility with two- and four-layer designs; and one- and two-sided designs.

Design Content

- Layout files for P-CAD®, OrCAD®, PADS®/PowerPCB, Altium, PDF (Adobe), PDIF, ASCII, and Gerber

formats for fast and accurate reference design porting.

- Bill of Materials and schematics in OrCAD & PDF format.
- Technical details on supported layout tools is available in the PL 3120 / PL 3150 / PL 3170 Power Line Smart Transceiver Data Book

Hardware

- Hardware is not included, but is available separately in the Echelon Model 10000R-40-27 Mini FX/PL Evaluation Kit.
- The separate Mini FX/PL kit includes: two evaluation boards with universal power supplies, two I/O boards, U20 USB Network Interface, Neuron C Compiler, and example software.

SPECIFICATIONS

PL 3120 / PL 3170 Power Line Smart Transceiver Approximate Design

Dimensions:

- 2 layer 1 sided (rectangular format): 0.9 in x 2.5 in (23 mm x 63 mm)
- 2 layer 1 sided (square format): 1.3 in x 1.5 in (33 mm x 38 mm)
- 4 layer 2 sided (SIP design): 0.7 in x 1.5 in (17 mm x 38 mm)
- 4 layer 2 sided: 0.8 in x 1.5 in (20 mm x 38 mm)

- 4 layer 2 sided with 2A p-p transmit amplifier: 1.2 in x 2.1 in (31mm x 53mm)
- 4 layer 2 sided (SIP design): 0.7 in x 1.1 in (17 mm x 28 mm)

PL 3150 Power Line Smart Transceiver:

- 4 layer 2 sided: 1.4 in x 1.9 in (36 mm x 49 mm)
- 4 layer 2 sided with 2A p-p transmit amplifier: 1.9 in x 2.6 in (48 mm x 66 mm)

DOCUMENTATION

Introduction to the LONWORKS Platform

PL 3120 / PL 3150 / PL 3170 Power Line Smart Transceiver Datasheet

PL 3120 / PL 3150 / PL 3170 Power Line Smart Transceiver Data Book

PL 3120 Evaluation Board Schematic

PL 3150 Evaluation Board Schematic

MiniGizmo Board Schematic

ORDERING INFORMATION

Power Line Development Support Kit
(PL DSK) 2.3
17050R-23-27

