



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,

## Reference Design Features

- 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), PDF, 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