# OP5650 Installation and Configuration

## Installation

Follow this simple installation procedure. Make sure to respect proper grounding, as described in Connecting the Ground Screw.

- Place the OP5650 on a shelf or a desktop, or install in a traditional rack
- Connect the power cable to the nearest power outlet
- Connect the OP5650 to the same network used by the host PC, using the cables

## Connecting the Ground Screw

You must connect a grounding cable from the OP5650 ground screw to the rack (or any other strong ground) to ensure that the OP5650 terminates securely in a ground. Proper grounding helps prevent electric shocks, protects the OP5650 from voltage spikes (from a variety of causes, including lightning strikes), and provides increased immunity from EMI by lowering noise levels and emissions.

1. Select a flat braided grounding strap of adequate length (as short as possible provides the best protection), with ring terminals on each
2. Attach one ring terminal to the ground screw on the OP5650
3. Attach the other ring terminal to the rack using a nut and lock washer
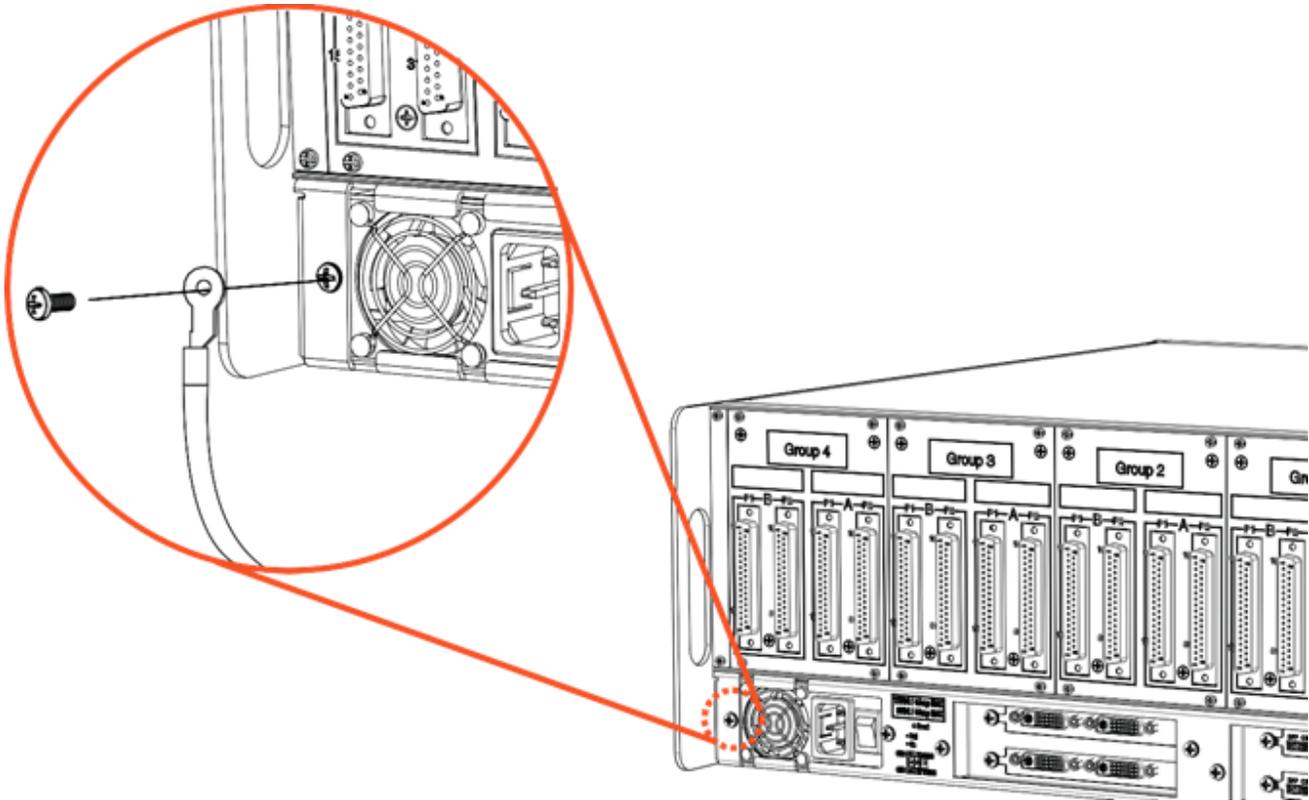


## Connecting the I/O Loopback Kit

**Note:** The following procedure is only used for test purposes when no external source is available.

The loopback kit included in the starter kit allows users to test system signals. The connection is made easy with a custom flat cable that matches OPAL-RT standard DB37 pin assignments.

- Connect one end of the flat cable to the loopback board
- Connect the loopback board to the simulator DB37 Output signal

- Connect the other end (DB37 connector) of the flat cable to the simulator DB37 Input signal
- Connect the VUser (required to preserve isolation) from the loopback board to the OP5700
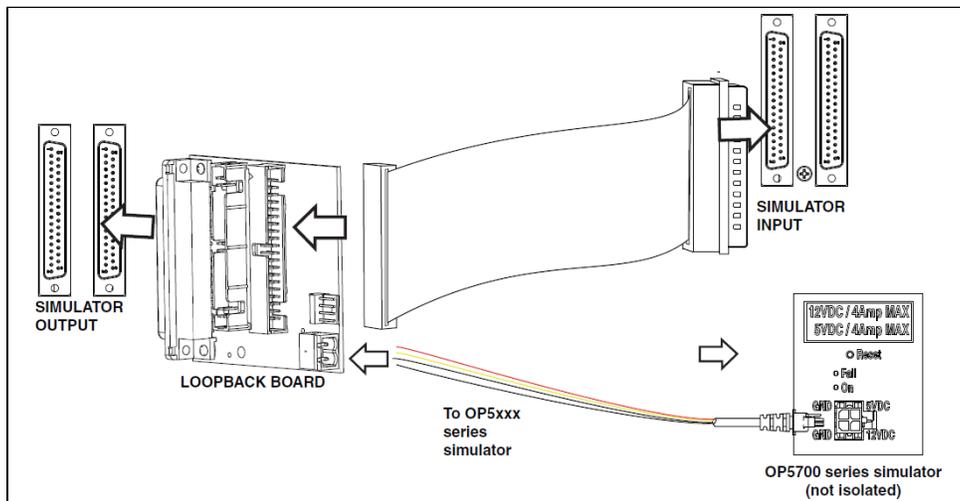


**Note:** Although some boards do provide a power source, using that would compromise the isolation. OPAL-RT recommends using external power source: the user must connect the power wires (provided) to either a 5 or 12 V power source. Make sure that the Vuser source switch on the loopback board is set to "External".

The breakout board provided allows users to access each pin of the DB37 separately through the screw terminals. Simply insert the breakout board DB37 connector onto the desired DB37 connector on the simulator.
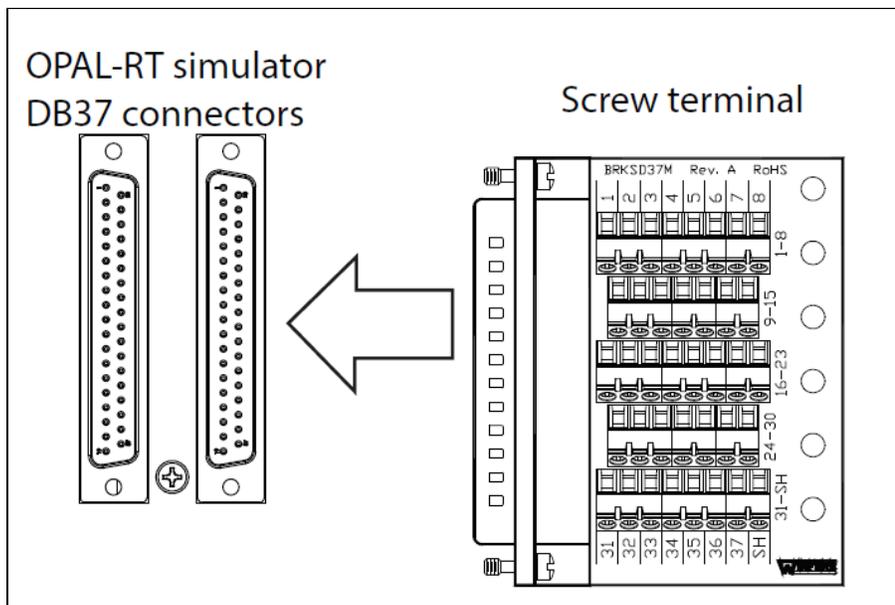


Refer to the system description document or the user manual of the OP5300 Mezzanine Modules installed in the system for exact pin assignments.