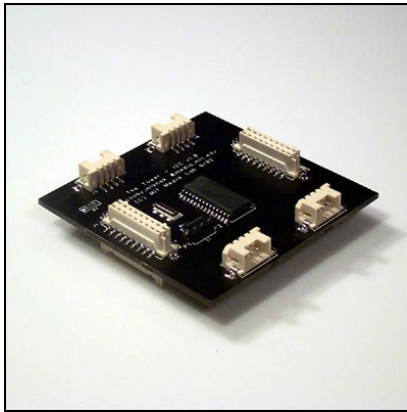


I²C Layer

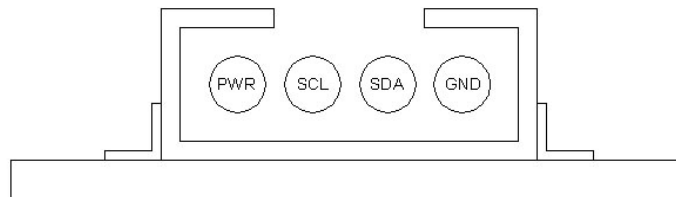


Description

The I²C layer has four ports to which any off-board Tower layer can be connected via a 4-wire I²C cable. The clock and data pins are connected directly to the Tower's main I²C bus, so boards connected through cables will appear to be directly on the Tower-stack when it is scanned. These layers are also useful for large-scale systems, because cables can be run at lengths up to 60 feet with no signal loss.

Hardware Detail

The I²C layer uses 4-pin Hirose surface mount connectors, providing power, ground, clock and data signals. A pin diagram of the connector is shown below:



Power to off-stack I²C devices can be tapped from the primary or secondary bus, as selected by the switch located on the board.

While not actually needed for operation, there is a PIC processor on this layer. The PIC is present for the sole purpose of letting the foundation know when this layer is on the stack. While this may seem unnecessary, it builds upon our goal of a fully modular system, and gives the user program full knowledge and control over everything connected to the Tower.

Layer Code

Since this board provides no functionality on its own, there are no procedures available that communicate directly with the board.

Examples of Use

Being primarily a connectivity point, there are no examples of how to use this board on its own. For using devices connected to it, please refer to their respective documentation.