



I2C Isolation Barrier

Many processors support i2c (inter IC control) communications which is a simple bi-directional 2 wire bus. But, at times you might desire to isolate this bus for various reasons. The above circuit will allow for a bi-directional communications with optical isolation, and provide drive capabilities for long distances. The circuit was used in conjunction with a PIC micro-controller, which acted in a multi-drop communication scheme.

The opto-couplers along with an isolated power supply allow a complete isolated communication link, which can be used, in harsh environments.

The P82B715 is an i2c bus extender. This enables i2c systems to be extended over long distances with out degradation of system performance or requiring special cabling. Our application was in a high noise environment of several hundred feet.