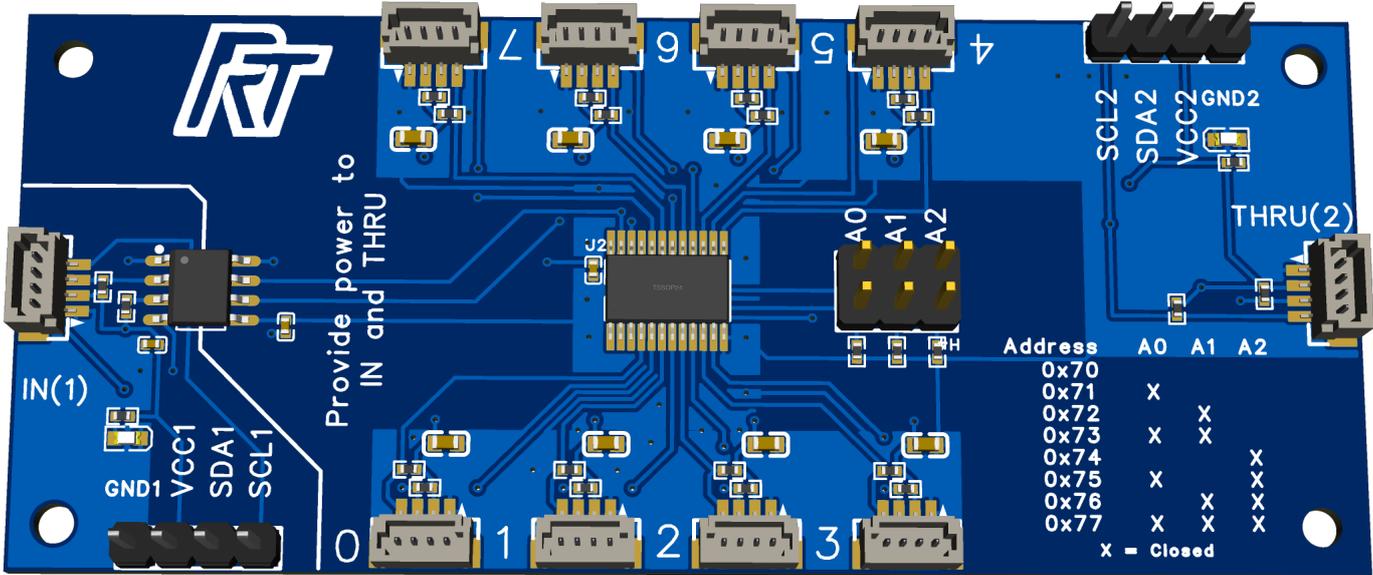




RT I2C Iso Mux



This board is an I2C isolated multiplexer.

It provides 8 multiplex channels and the provision for continuing the I2C buss after the isolator.

The board electrically isolates the mcu or I2C master from the buss to prevent damage to the mcu or I2C master from incorrect voltage.



In use.

The board is at I2C address 0x70 by default. The address can be changed by adding shunts at the A0-A2 jumpers.

Addresses are:

Address	A0	A1	A2
0x70	Open	Open	Open
0x71	Closed	Open	Open
0x72	Open	Closed	Open
0x73	Closed	Closed	Open
0x74	Open	Open	Closed
0x75	Closed	Open	Closed
0x76	Open	Closed	Closed
0x77	Closed	Closed	Closed

The multiplex channels are connected via a Qwiic/Stemma QT socket on each side of the board.

The I2C master or mcu can be connected via a Qwiic/Stemma QT socket IN(1) or the 4 pads on the side of the board marked GND1, VCC1, SDA1, SCL1.

The I2C buss can be continued to another device via the Qwiic/Stemma QT socket THRU(2) or the 4 pads on the side of the board marked GND2, VCC2, SDA2, SCL2.

Operating voltage at IN(1) can be 3-5V DC depending on your I2C master or mcu.

Operating voltage at THRU(2) can be 3-5V DC depending on your I2C slave devices. All slave devices are operated at the same voltage.

OPERATING MANUAL



VCC2 and GND2 need to be connected to a power supply 3-5V DC. There is no polarity protection so make sure the connections are correct.

Alternatively this can be provided by a device connected to THRU(2).

All devices connected to the multiplex Qwiic/Stemma QT sockets (0-7) are then powered by the VCC2/GND2 power supply.

If using the RT_I2C_ISO_MUX with a DCC-EX command station then see the reference at the end of this document for more information.



Addendum



References.

RT_I2C_ISO_MUX

https://rosscoe.com/shop/index.php?main_page=product_info&cPath=5&products_id=23

DCC-EX I2C multiplexer information:

<https://dcc-ex.com/reference/hardware/i2c-multiplexers.html#gsc.tab=0>