

SPI Isolator click

PID: MIKROE-2583



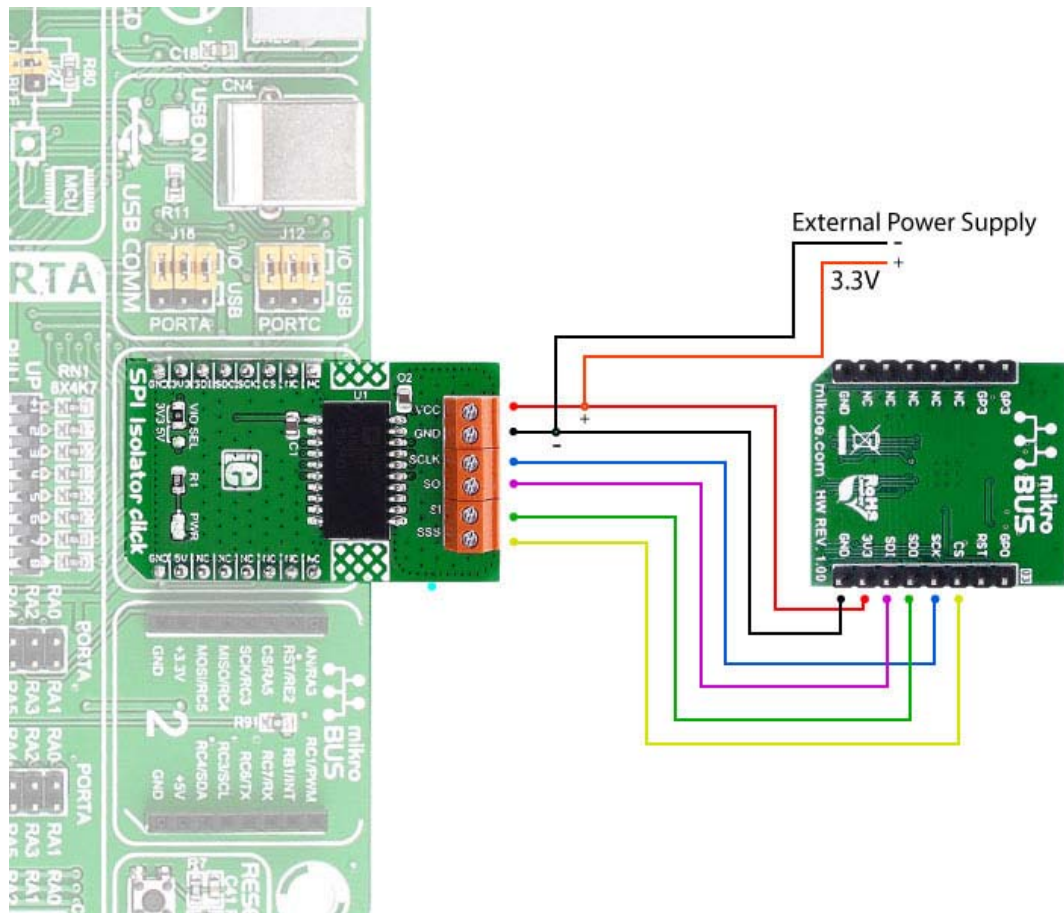
SPI Isolator click carries the ADuM4154 **5kV** digital isolator optimized for a serial peripheral interface (SPI). The click is designed to run on either 3.3V or 5V power supply. It communicates with the target microcontroller over SPI interface.

ADuM4154 features

The **ADuM4154** has four high-speed channels. The first three channels, CLK, MI/SO, and MO/SI (the slash indicates the connection of the particular input and output channel across the isolator) are optimized for either low propagation delay in the B grade, or high noise immunity in the A grade.

Note: For more information about the A and B grade specifications see the datasheet.

Take a look at how the click can be connected in the picture below:



Note: For this example we used the ccRF 3 click and the EasyPIC v7 development board

SPI communication

SPI (**Serial Peripheral Interface**) communication is one of the most popular protocols for sending data between microcontrollers and different peripherals.

It is a synchronous protocol; the clock signal is provided by the master.

For more information take a look at our Learn article about SPI communication.

Key features


- ADuM4154 module
 - Supports up to 17 MHz SPI clock speed
 - 4 high speed, low propagation delay, SPI signal isolation channels
- SPI interface
- 3.3V or 5V power supply

Specification

Product Type	SPI isolator
Applications	Sensor isolation, industrial programmable logic controllers (PLCs)
MCU	ADuM4154 digital isolator optimized for SPI
Key Features	The module supports up to 17 MHz SPI clock speed, 4 high speed, low propagation delay, SPI signal isolation channels
Key Benefits	The ADuM4154 supports up to 4 slave devices
Interface	SPI
Power Supply	3.3V or 5V
Compatibility	mikroBUS

Pinout diagram

This table shows how the pinout on **SPI Isolator click** corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin	 mikroBUS™				Pin	Notes
Not connected	NC	1	AN	PWM	16	NC	Not connected
Not connected	NC	2	RST	INT	15	NC	Not connected
Slave Select from the Master	MSS	3	CS	TX	14	NC	Not connected
SPI Clock from the Master Controller	MCLK	4	SCK	RX	13	NC	Not connected
SPI Data from the Slave to the Master MI/SO Line	MI	5	MISO	SCL	12	NC	Not connected
SPI Data from the Master to the Slave MO/SI Line	MO	6	MOSI	SDA	11	NC	Not connected
Power supply	+3.3V	7	3.3V	5V	10	+5V	Power supply
Ground	GND	8	GND	GND	9	GND	Ground