MCU UART Switch for Dual Serial Port Applications

Sunrom Part#
1226

If your MCU has only 1 UART and want to use it application which can switch between two UART source use this digital switch to select which UART you can connect to.

User's Manual

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http://www.sunrom.com/m/1226

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Introduction

If your microcontroller has only one UART Serial port and you wish to interface with two devices each having one serial port then you are left with three options. First difficult option is to search for a microcontroller having dual UART. Second option is to implement software UART but it is not so reliable and resource consuming. Third option is a digital switch that we have designed which can be used to switch same microcontroller UART pins to each serial device as required.

Microcontroller has access to a SEL pin which when made high or low switches between the two interfaced devices.

When SEL pin is made high the MCU serial port gets connected to TX2-RX2 and while it is low the MCU port gets connected to TX1-RX1.

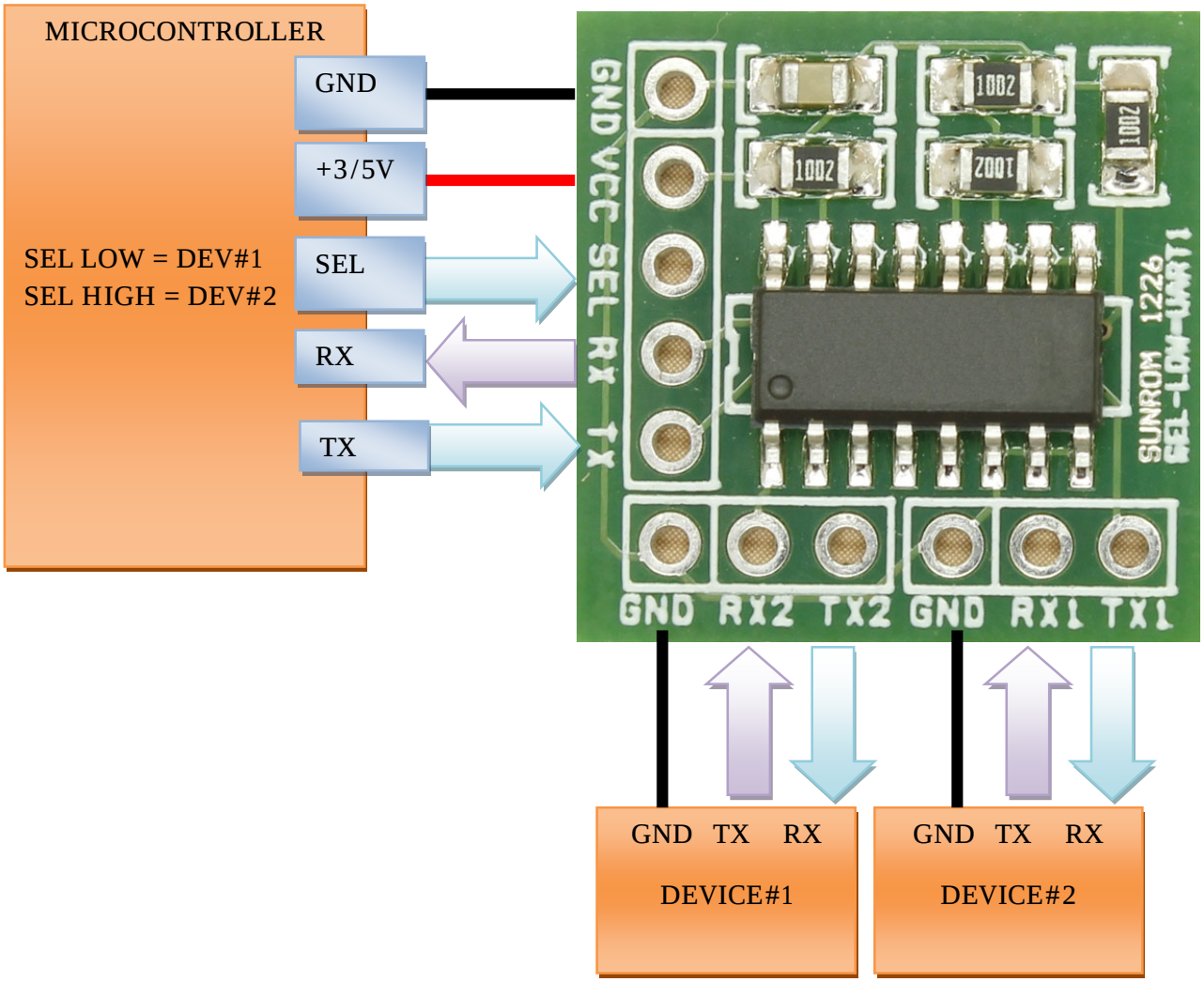
Connections to board are simple and will not need any major change in hardware or your software, except the MCU has to control a SEL digital input pin to decide which device it wants to connect to.

Specifications

Parameter	Value
Working Voltage	3.3V to 5V DC regulated power supply
Current Consumption	5 mA
Serial Baud rate	2400 bps to 15200 bps
Baud rate format	Any format supported

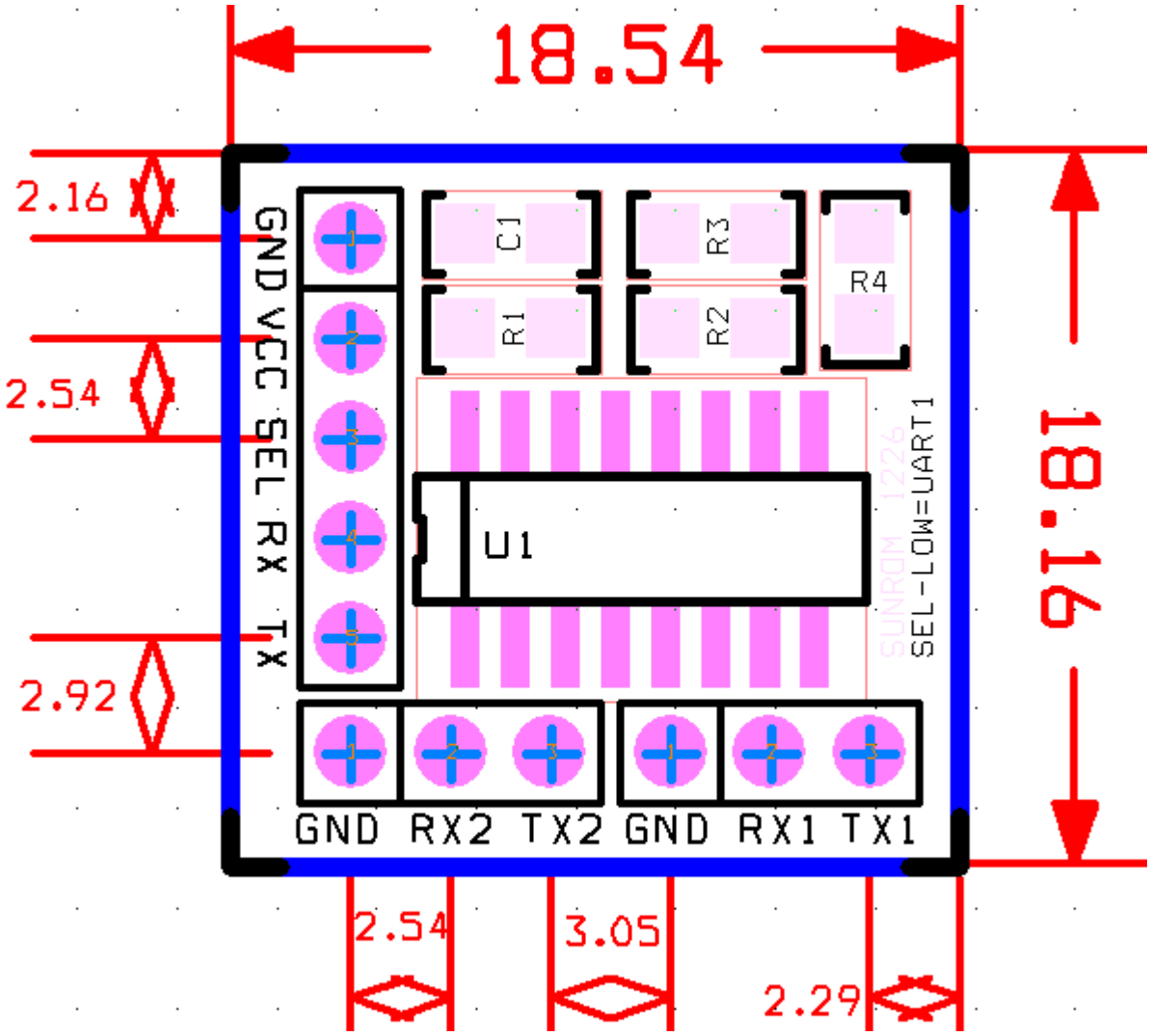
Module Pin Details & Interfacing Diagram

	Pin	Type	Details
MICROCONTROLLER	GND		Common Ground
	VCC		Regulated positive power input 3.3V to 5V DC
	SEL	IN	Select Input, Pulled High Internally LOW = MCU TX/RX <=> TX1/RX1 HIGH = MCU TX/RX <=> TX2/RX2
	RX	OUT	Connect to RXD pin of your microcontroller
	TX	IN	Connect to TXD pin of your microcontroller
DEVICE #1	GND		Common Ground
	RX1	IN	Connect to TXD pin of your device UART #1
	TX1	OUT	Connect to RXD pin of your device UART #1
DEVICE #2	GND		Common Ground
	RX2	IN	Connect to TXD pin of your device UART #2
	TX2	OUT	Connect to RXD pin of your device UART #2



Product Dimensions

Board Dimensions in mm



Support

Sunrom Electronics offers **free technical support (www.sunrom.com/contact)** for customers, until the end of the product's lifetime, so if something goes wrong, we're ready and willing to help!

Technical Support is available by email only and scope is limited to problem faced during use of the use of product and does not cover end user programming and hardware troubleshooting.

Each product passes through strict quality checks before it reaches you. So if something is not working out right, the first thing to doubt is the connections or programming of your hardware.

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