

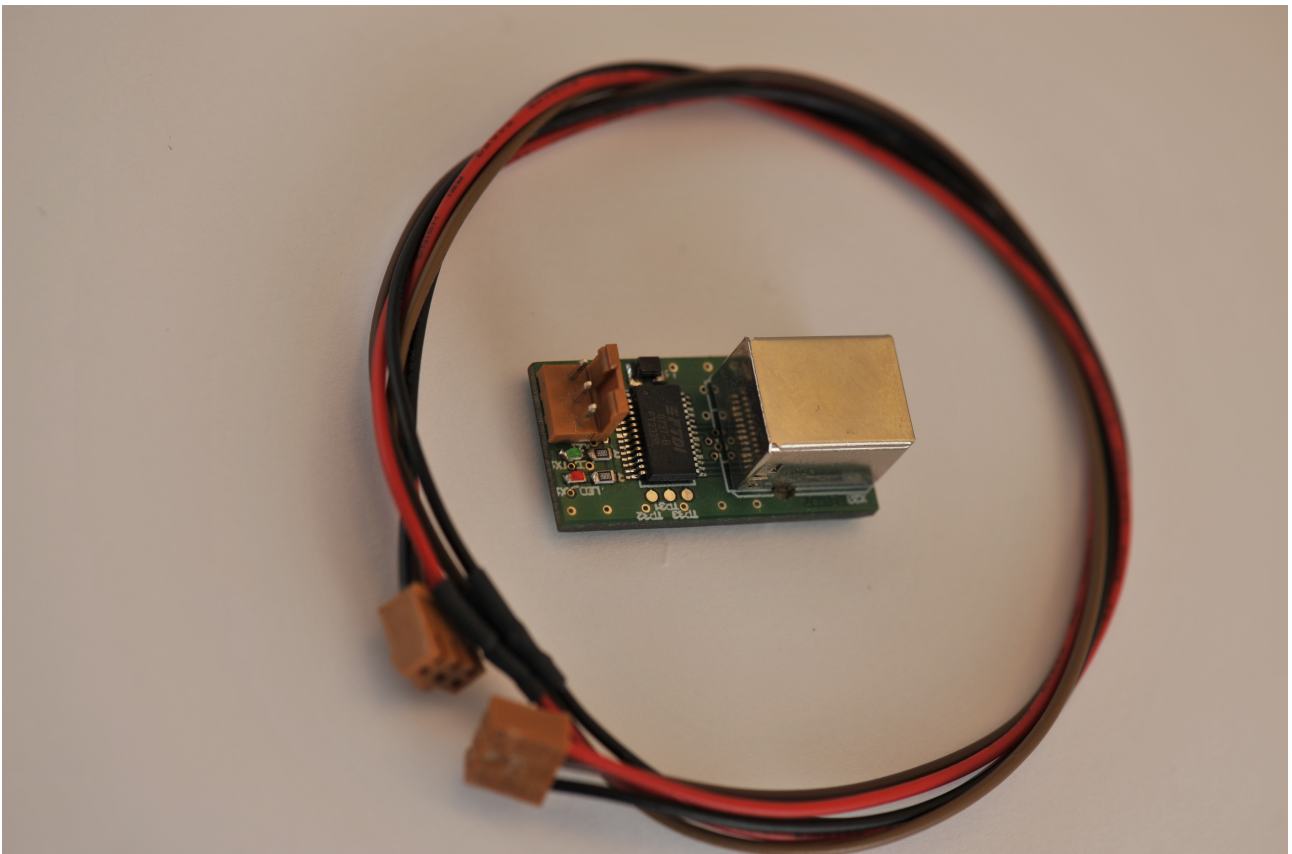
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MC-UART Operating Manual



Rev. 1.0; June 2009; subject to change without notice.

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Introduction

Developing micro controller software often requires a data exchange between the micro controller target and the development PC. Because PCs are no longer equipped with a RS232 interface (used for this purpose in the past) the voltage level of the RS232 requires a double level shifting (USB → RS232, RS232 → 5/3.3V). The need for a modern and simple solution which can be used with every modern PC or notebook is clear.

For a simple handling of the RS232 communication, Inventronik GmbH created a small MC-UART module which handles the required data exchange with the micro controller target via a modern USB interface. The double level shifting is no longer necessary. The logic level on the target hardware side is selectable between TTL (5V) or LVTTTL (3.3V). The MC-UART module represents, with it's small footprint of about 35mm x 18mm, a very compact and reliable alternative solution to the classic RS232 interfacing.

Installation of the Drivers

Normally, modern operating systems do not require an installation of a driver.

Should Windows™ not automatically detect the MC-UART hardware, a driver should be available at the FTDI website (<http://www.ftdichip.com/>). For proper operation there is a virtual com port driver necessary which can be downloaded here: <http://www.ftdichip.com/Drivers/VCP.htm>. If the driver is installed successfully, the MC-UART appears as com port x. You can look up the port number "x" is allocated by the Windows™ operating system in the hardware manager.

If Linux is your operating system, the driver is included in all modern Linux distributions and can be used by the device /dev/ttyUSB0 or /dev/ttyUSB1 etc.

Operation

The operation of the MC-UART is fairly simple.

1. Connect the module with a USB port of the development PC and on the other side with the 3 pin connecting cable with the target. The layout of the 3 pin header of the MC-UART is as follows:

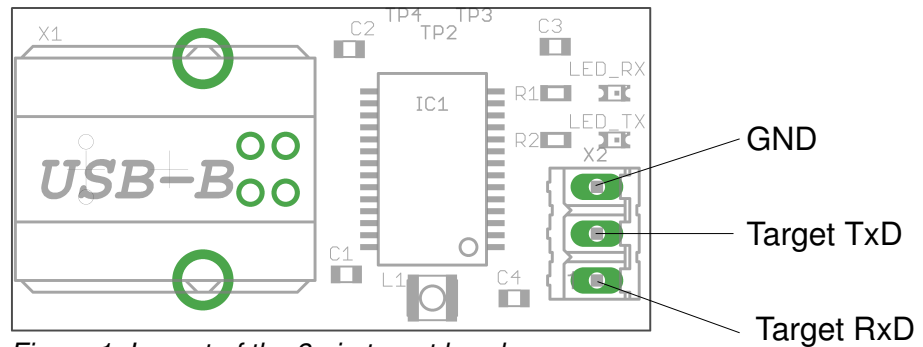


Figure 1: Layout of the 3 pin target header

2. On the soldering side of the MC-UART there is a small sliding button for the selection of the logic level TTL (5V) or LVTTTL(3.3V). Chose this setting according to the requirements of the target hardware.
3. When these preparations are done, the data exchange between micro controller and PC can be established using appropriate software. There is information in the Internet about programs which are suitable for this purpose (terminal programs). See for example: (<http://www.mikrocontroller.net/articles/RS-232>).

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