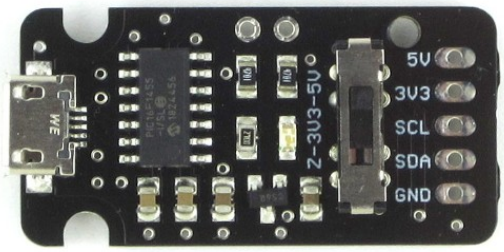
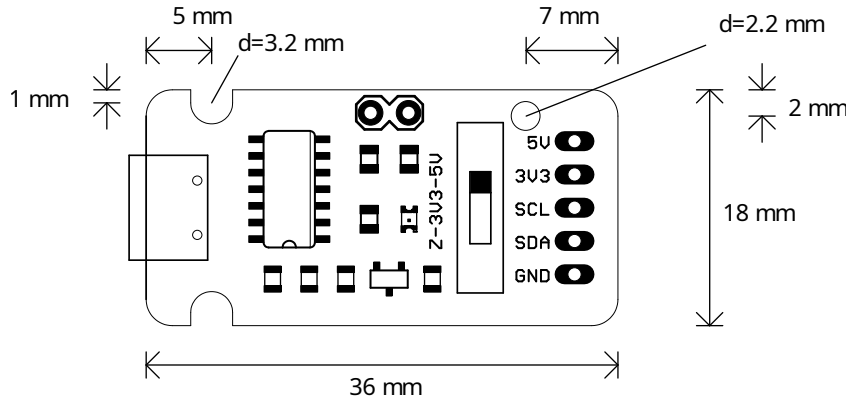
I2C-MP-USB EB – I2C to USB Interface

Datasheet

I2C-MP-USB is an interface to connect I²C devices via USB to a host system. It aims to easily control I²C slaves with highly portable code.





Features

- Open source Python library (Windows, MacOS, Linux)
- Native Linux support (compatible with kernel driver "i2c-tiny-usb")
- Wide signal voltage range (input high level: 2.1V - 5V)
- Integrated 4.7kOhm pullups switchable: 5V, 3.3V and off/Hi-Z
- Baudrate configuration via software (46k - 1M, default: 100k)
- Firmware sources available; bootloader for firmware updates

Parametrics

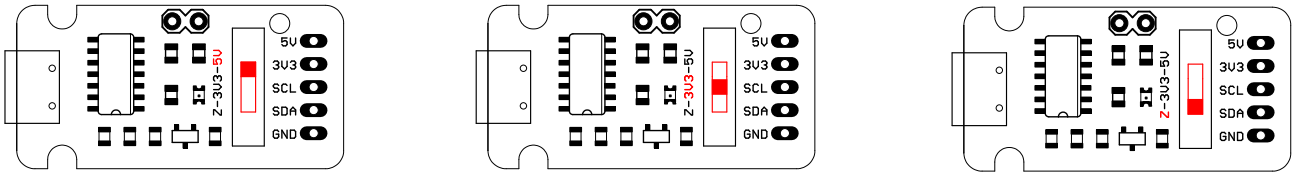
- Supply voltage (Powered via Micro USB-B): 5 V
- Supply current: 15 mA
- Input Low Voltage SCL/SDA (max): 0.8 V
- Input High Voltage SCL/SDA (min): 2.1 V
- Current sunk/sourced by SCL/SDA (max): 25 mA
- Pin capacitance SCL/SDA (max): 50 pF
- I²C bus capacitive loading (max): 400 pF
- Output current 3V3 / 5V (max): 80 mA

Power

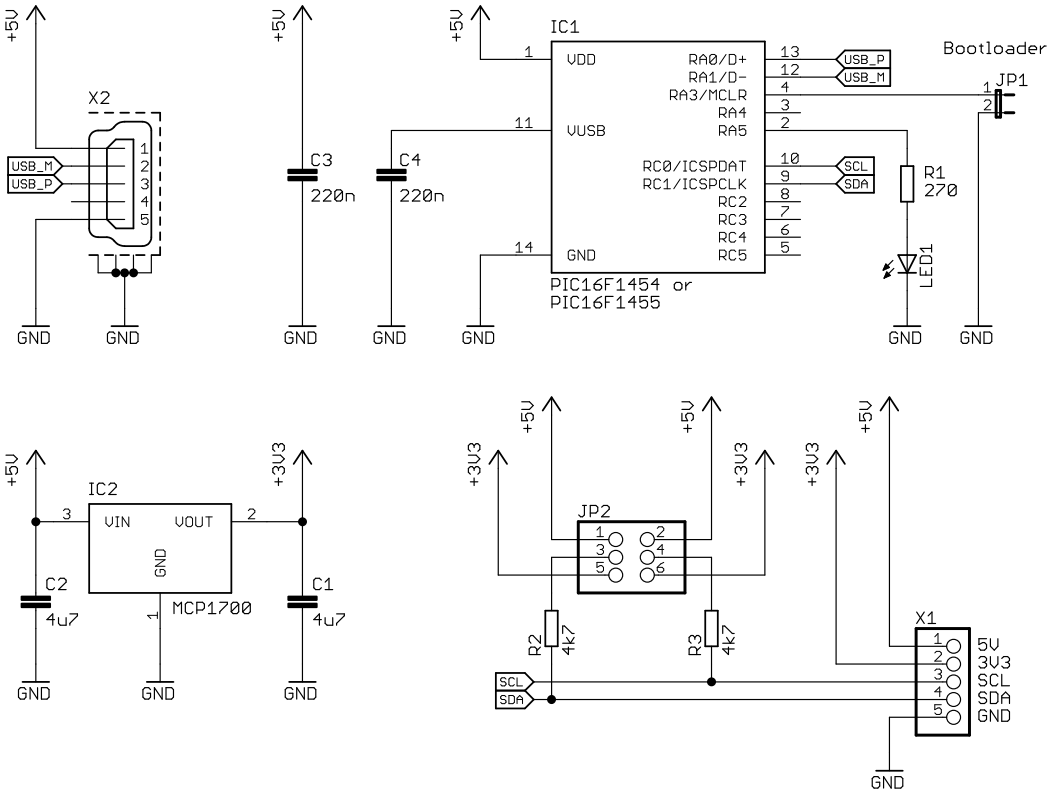
The board is powered via USB, therefore no external power supply is required. 3.3V are generated via an integrated LDO. This voltage and the USB voltage (5V) are available on the board connector and can be used for external circuits. Maximum current that can be drawn: 80mA.

Pullup resistors

The board is equipped with 4.7kOhm pullup resistors, which can be set to 5V, 3.3V or off/Hi-Z via a selector switch:



Schematics diagram



Evaluation board notice

I2C-MP-USB EB is an evaluation board intended for use for engineering development or evaluation purposes in laboratory enviroment only. It is not considered as an end user application. If you intend to use it in an end-product, you have to ensure in your own responsibility that the device meets the relevant regulations (e.g. CE, FCC).