MIKROE-1985 USB I2C Click User Guide

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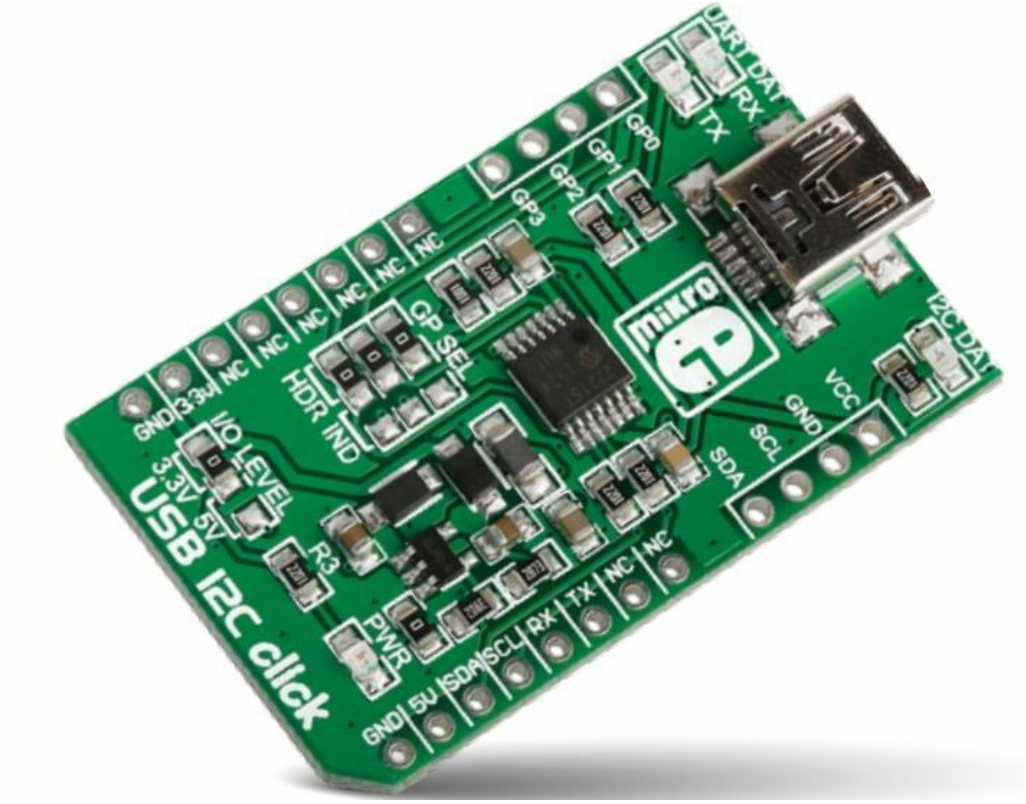
DEVELOPMENT TOOLS | COMPILERS | BOOKS

MIKROE-1985 USB I2C Click



Product Information

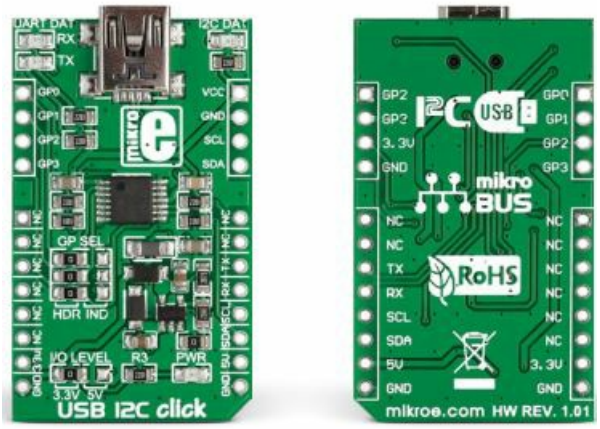
The USB I2C click is a board that carries an MCP2221 USB-to-UART/I2C protocol converter. It allows communication with a target microcontroller through mikroBUS™ UART (RX, TX) or I2C (SCL, SDA) interfaces. The board also features additional GPIO (GP0-GP3) and I2C pins (SCL, SDA) along with VCC and GND connections. It supports both 3.3V and 5V logic levels. The chip on the board supports full-speed USB (12 Mb/s), I2C with clock rates up to 400 kHz, and UART baud rates between 300 and 115200. It has a 128-byte buffer for USB data throughput and supports up to 65,535-byte long Reads/Writes Blocks for the I2C interface. The board is compatible with Microchip's configuration utility and drivers for Linux, Mac, Windows, and Android.

Product Usage Instructions

1. **Soldering the headers:**
    - Before using your click board, solder 1×8 male headers to both the left and right sides of the board.
    - Turn the board upside down so that the bottom side is facing upwards.
    - Place the shorter pins of the header into the appropriate soldering pads.
    - Turn the board upward again and align the headers perpendicularly to the board.
    - Carefully solder the pins.
2. **Plugging the board in:**
    - Once you have soldered the headers, your board is ready to be placed into the desired mikroBUS™ socket.
    - Align the cut in the lower-right part of the board with the markings on the silkscreen at the mikroBUS™ socket.
    - If all the pins are aligned correctly, push the board all the way into the socket.
3. **Code examples:**
    - After completing the necessary preparations, download code examples for mikroC™, mikroBasic™, and mikroPascal™ compilers from the Libstock website to start using your click board.

Introduction

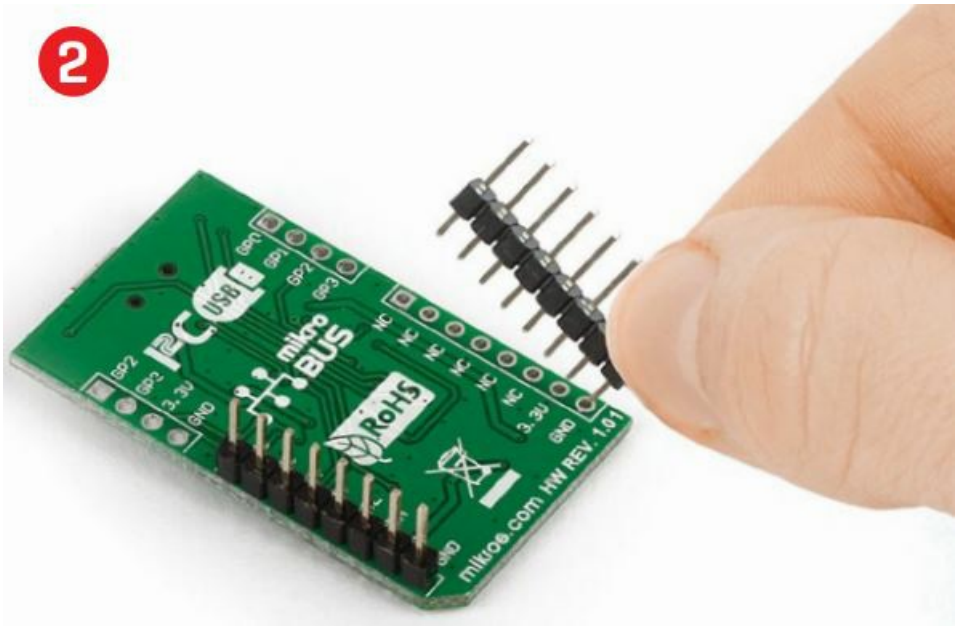
USB I2C click carries an MCP2221 USB-to-UART/I2C protocol converter. The board communicates with the target microcontroller through mikroBUS™ UART (RX, TX) or I2C (SCL, SDA) interfaces. In addition to mikroBUS™, the edges of the board are lined with additional GPIO (GP0-GP3) and I2C pins (SCL, SDA plus VCC and GND). It can operate on 3.3V or 5V logic levels.



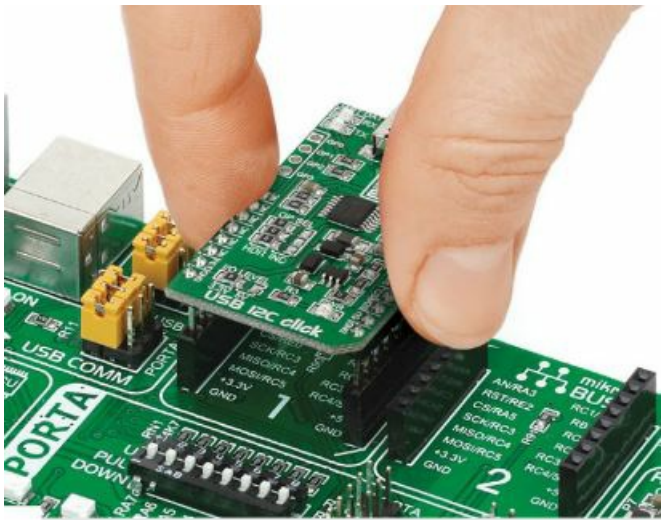
Soldering the headers

Before using your click board™, make sure to solder 1×8 male headers to both left and right side of the board. Two 1×8 male headers are included with the board in the package.

Turn the board upside down so that the bottom side is facing you upwards. Place shorter pins of the header into the appropriate soldering pads.

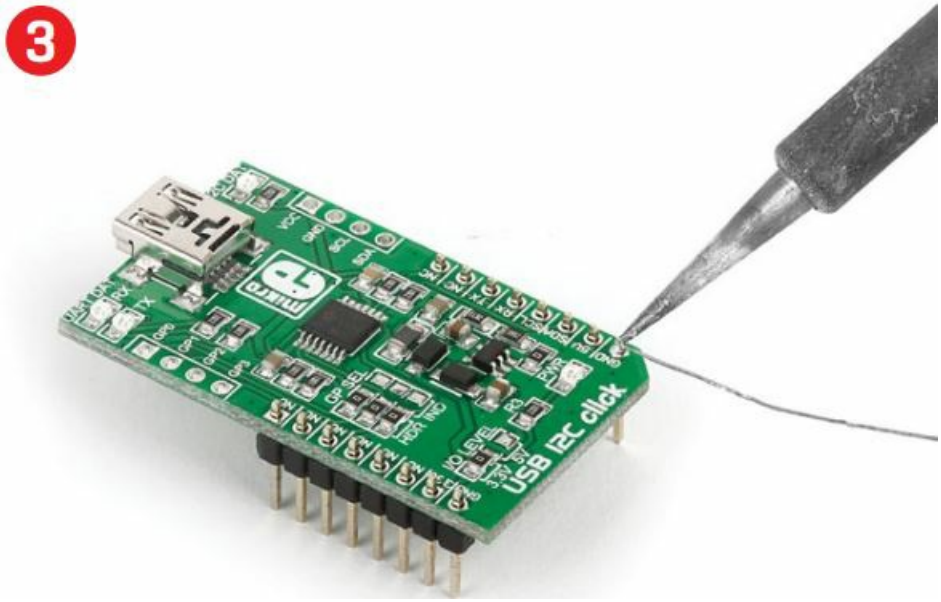


Turn the board upward again. Make sure to align the headers so that they are perpendicular to the board, then solder the pins carefully.



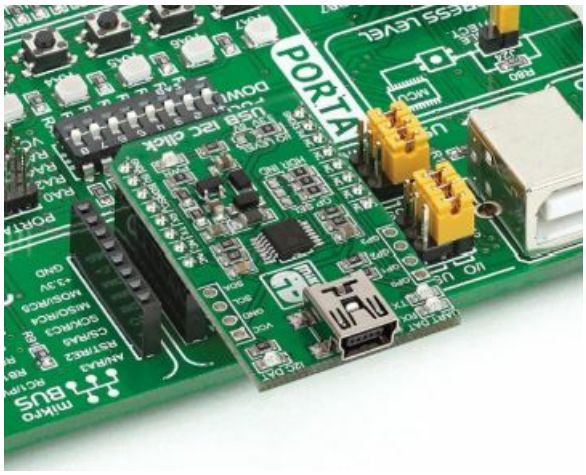
Plugging the board in

Once you have soldered the headers your board is ready to be placed into the desired mikroBUS™ socket. Make sure to align the cut in the lower-right part of the board with the markings on the silkscreen at the mikroBUS™ socket. If all the pins are aligned correctly, push the board all the way into the socket.

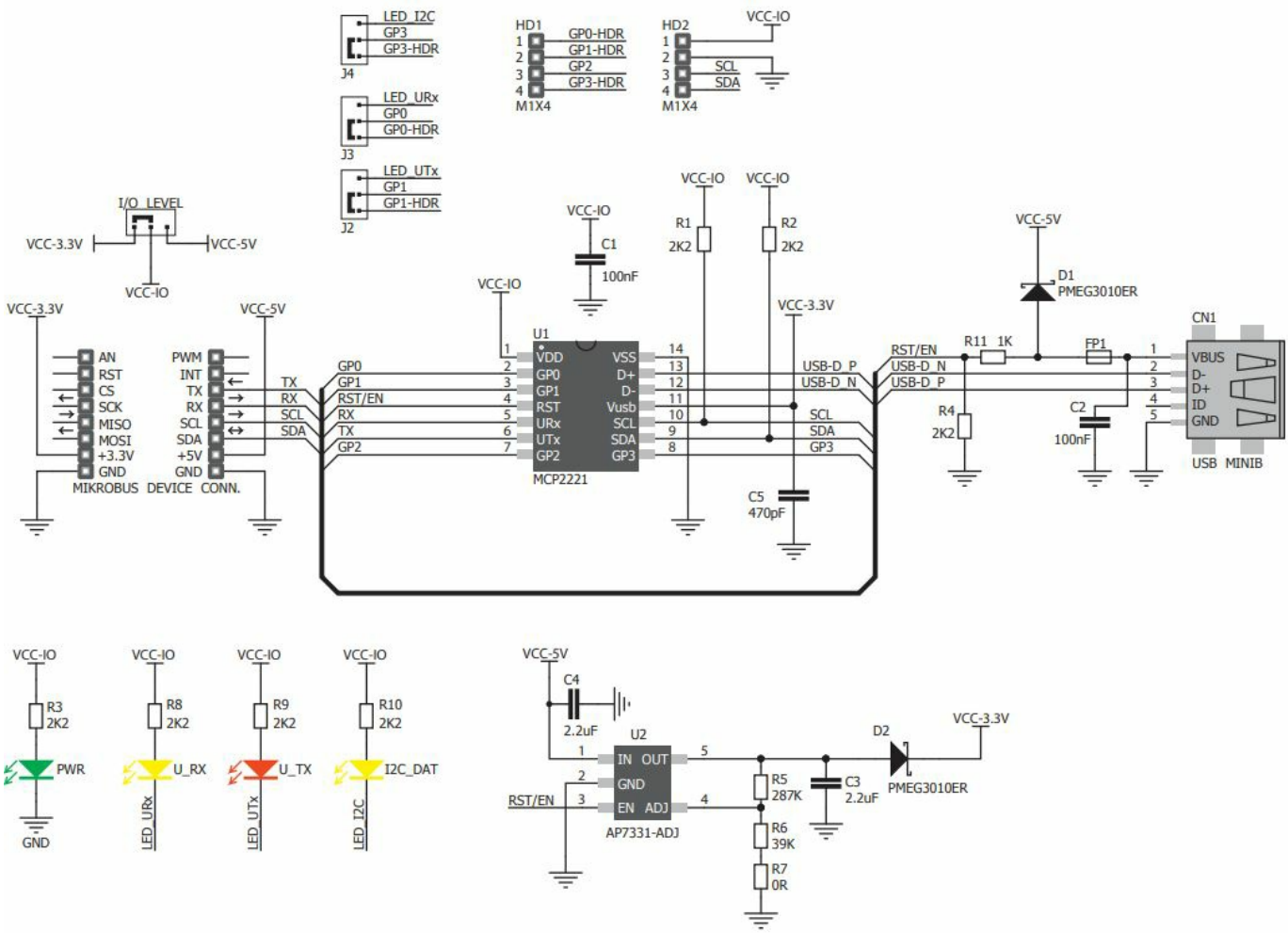


Essential features

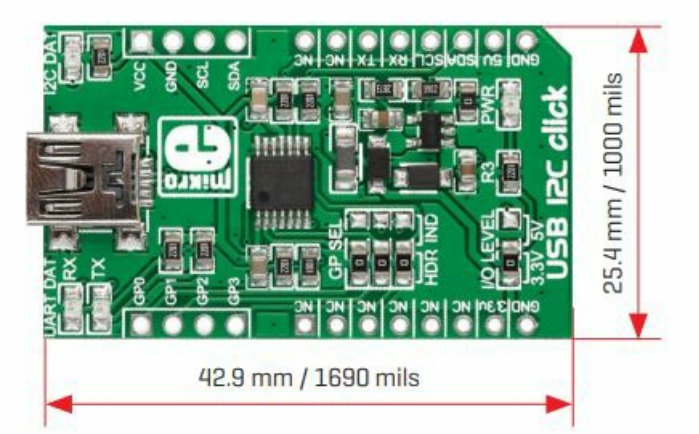
The chip supports full-speed USB (12 Mb/s), I2C with up to 400 kHz clock rates and UART baud rates between 300 and 115200. The USB has a 128-byte Buffer (64-Byte Transmit and 64-byte Receive) supporting data throughput at any of those baud rates. The I2C interface supports up to 65,535-byte long Reads/Writes Blocks. The board is also supported with Microchip's configuration utility and drivers for Linux, Mac, Windows and Android.



Schematic



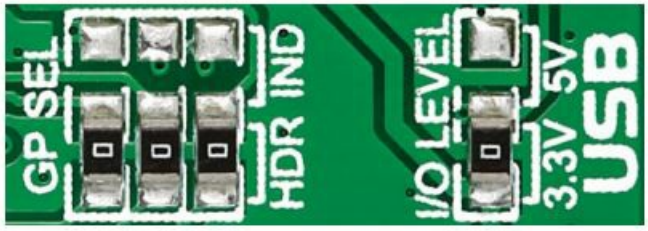
Dimensions



	mm	mils
LENGTH	42.9	1690
WIDTH	25.4	1000
HEIGHT*	3.9	154

without headers

Two sets of SMD jumpers



GP SEL is for specifying whether the GPO I/Os will be connected to the pinout, or used to power signal LEDs. I/O LEVEL jumpers are for switching between 3.3V or 5V logic.

Code examples

Once you have done all the necessary preparations, it's time to get your click board™ up and running. We have provided examples for mikroC™, mikroBasic™, and mikroPascal™ compilers on our Libstock website. Just download them and you are ready to start.

Support

MikroElektronika offers free tech support **(www.mikroe.com/support)** until the end of the product's lifetime, so if something goes wrong, we're ready and willing to help!

Disclaimer

- MikroElektronika assumes no responsibility or liability for any errors or inaccuracies that may appear in the present document.
- Specification and information contained in the present schematic are subject to change at any time without notice.

Documents / Resources

	**MIKROE MIKROE-1985 USB I2C Click** [pdf] User Guide MIKROE-1985 USB I2C Click, MIKROE-1985, USB I2C Click, I2C Click, Click

References

- **MikroElektronika support is here to help - MIKROE**