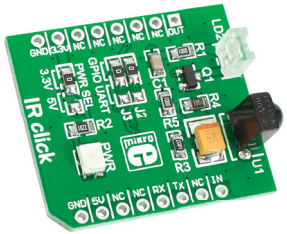
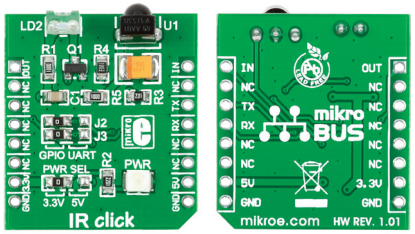


IR click™

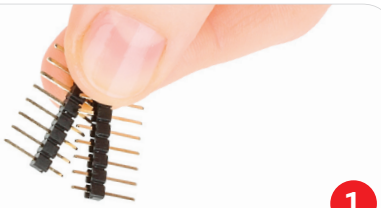
1. Introduction



IR Click™ is an add-on board in **mikroBUS™** form factor. It's a compact and easy solution for adding infrared (IR) module to your design. It features **TSOP38338** IR receiver module as well as **QEE113** IR emitting diode. IR Click™ communicates with the target board microcontroller via **mikroBUS™** UART (Tx, Rx), AN, and PWM lines. The board is designed to use 3.3V and 5V power supply. LED diode (GREEN) indicates the presence of power supply.

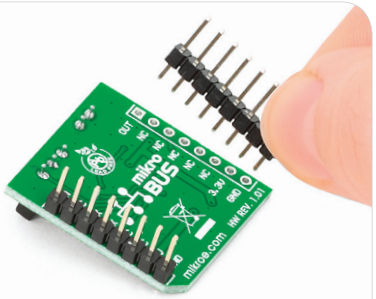
2. Soldering the headers

Before using your click board™, make sure to solder 1x8 male headers to both left and right side of the board. Two 1x8 male headers are included with the board in the package.



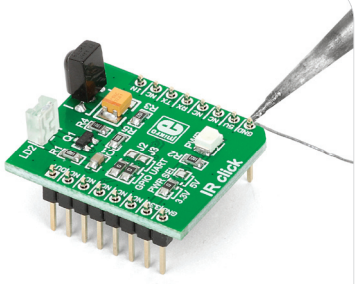
1

2

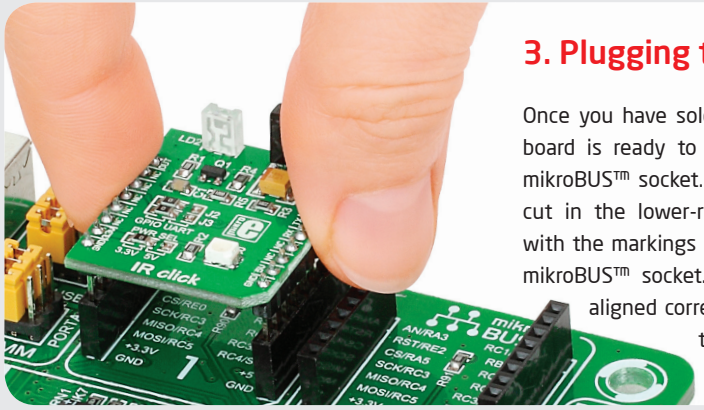


Turn the board upside down so that bottom side is facing you upwards. Place shorter parts of the header pins in both soldering pad locations.

3

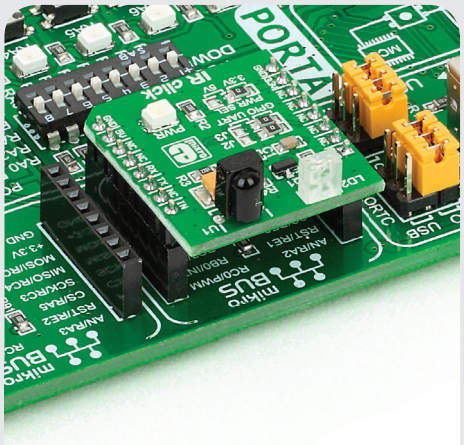


Turn the board upward again. Make sure to align the headers so that they are perpendicular to the board, then solder the pins carefully.



3. Plugging the board in

Once you have soldered the headers your board is ready to be placed into 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 of the pins are aligned correctly, push the board all the way into the socket.



4. Essential features

IR Click™ with it's **TSOP38338** and **QEE113** IC's is an easy and compact solution for infrared remote control communication protocol. The **TSOP38338** - 38 kHz (carrier frequency) receiver is recommended for RCMM, NEC, RC5, RC6, r-step and XMP codes. It is not sensitive to supply voltage ripple and noisy environments. It has improved immunity against ambient light and shielding against EMI.

click™
BOARD
www.mikroe.com

IR click Manual
ver. 1.01

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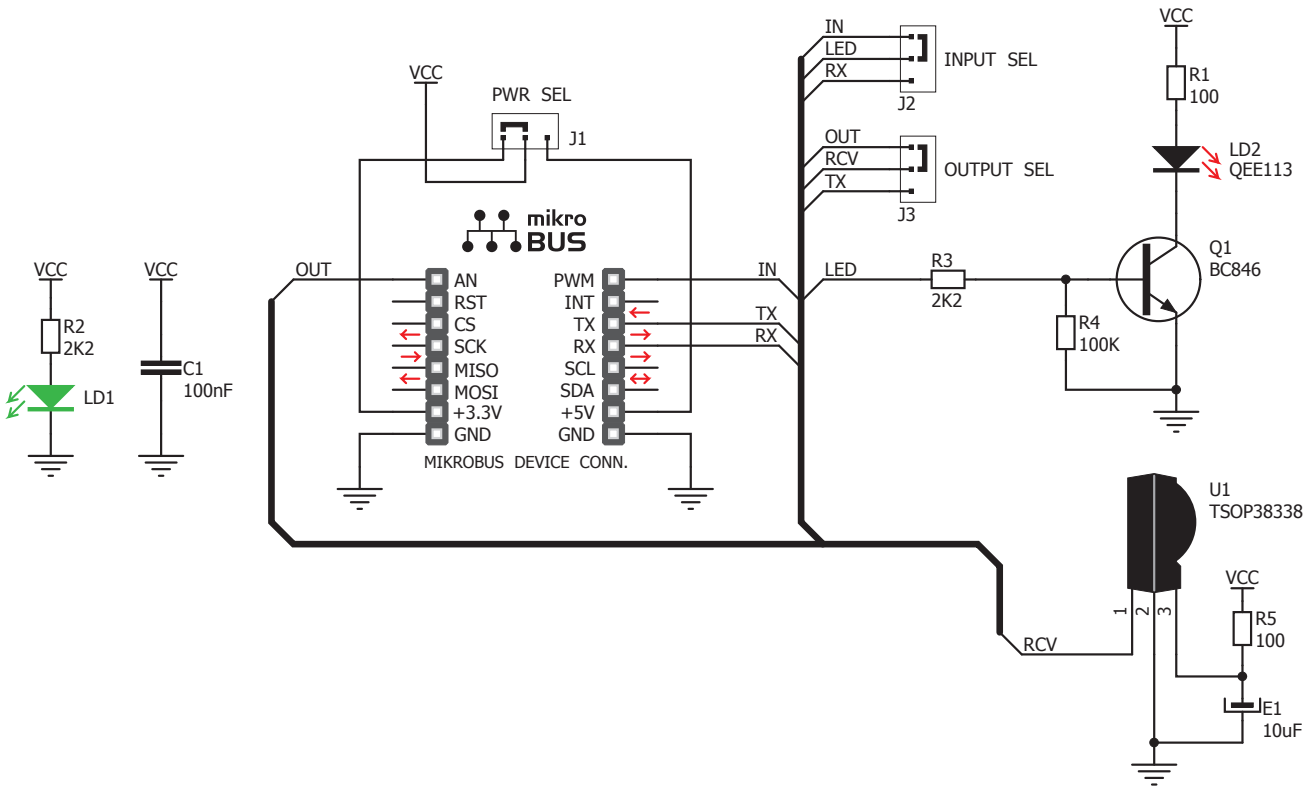
5. IR Click™ Board Schematic



6. SMD Jumpers

Target board microcontroller can transmit signal to IR emitting diode via PWM (IN) or RX as well as receive signal from IR receiver via AN (OUT) or TX mikroBUS™ pins. Jumpers **J2** and **J3** enable you to choose between these two ways. **J1** zero-ohm SMD jumper is used to select between 3.3V or 5V power supply. **J1** jumper is soldered in 3.3V position by default.

7. Code Examples

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

LIBSTOCK.com

8. Support

MikroElektronika offers **Free Tech Support (www.mikroe.com/esupport)** until the end of product lifetime, so if something goes wrong, we are ready and willing to help!

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