

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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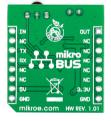




IR click™

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 boardTM, 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.

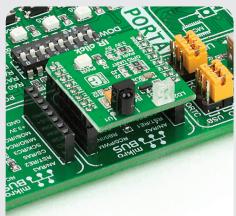




Turn the board upside down so that bottom side is facing you upwards. Place shorter parts of the header pins in both soldering pad locations.

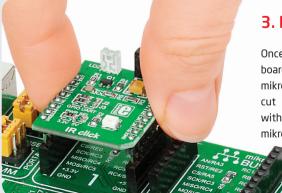


Turn the board upward again. Make sure to align the headers so that they are perpendicular to the board, then solder the pins carefully.



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.

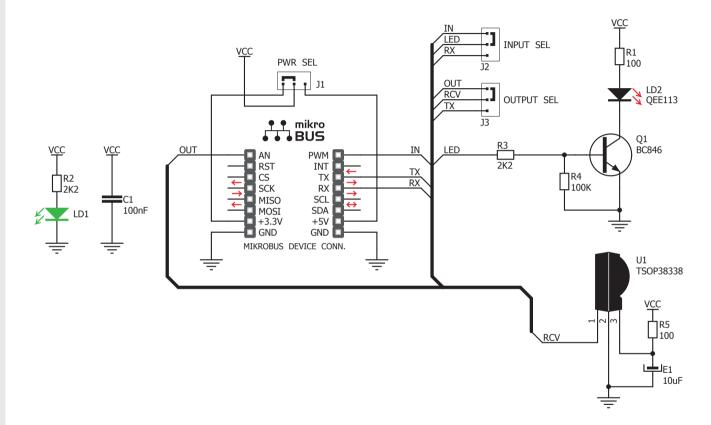


3. Plugging the board in

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



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.



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!

