IR gesture click

1. Introduction

IR gesture click carries a **APDS-9960 IC**, which a digital proximity, ambient light, RGB and gesture sensor. The sensor integrates an LED and four directional photodiodes that receive the reflecting light. An internal gesture engine deduces the velocity, direction and distance of nearby objects (while cancelling the ambient light). The board communicates with the target board MCU through the mikroBUS™ I2C interface, with an additional hardware inerrupt pin (INT). Gesture click uses a 3.3V power supply.
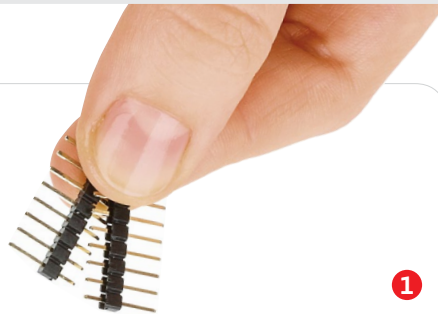
2. Soldering the headers

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.
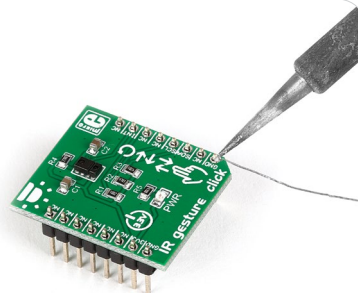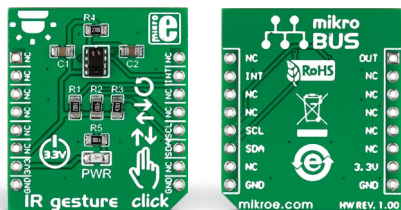
❶

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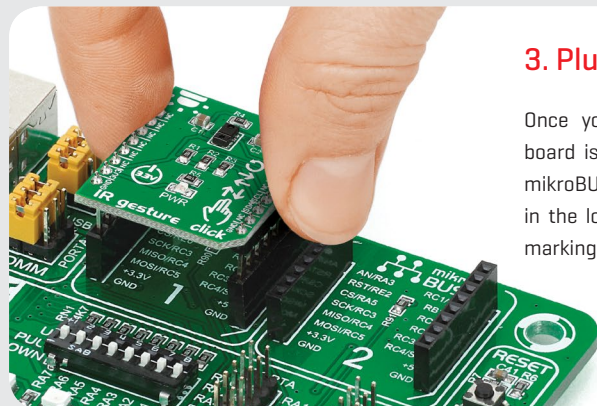
❸ Turn the board upward again. Make sure to align the headers so that they are perpendicular to the board, then solder the pins carefully.

3. Plugging the board in

Once you have soldered the headers your board is ready to be placed into 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.
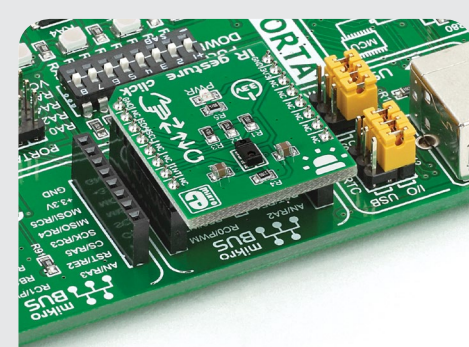
4. Essential features

With APDS-9960 chip can be configured to recognize a number of contactless gestures. From basic directional swipes (up, down, left or right) to more complex combinations. Since the chip can work as a proximity sensor, the gesture engine can be configured to wake up automatically when a user's hand approaches. Power consumption can be further optimized with adjustable IR LED timing. Beside gesture detection, the IC can be implemented for color sensing, ambient light sensing and proximity applications, potentially simplifying your design.
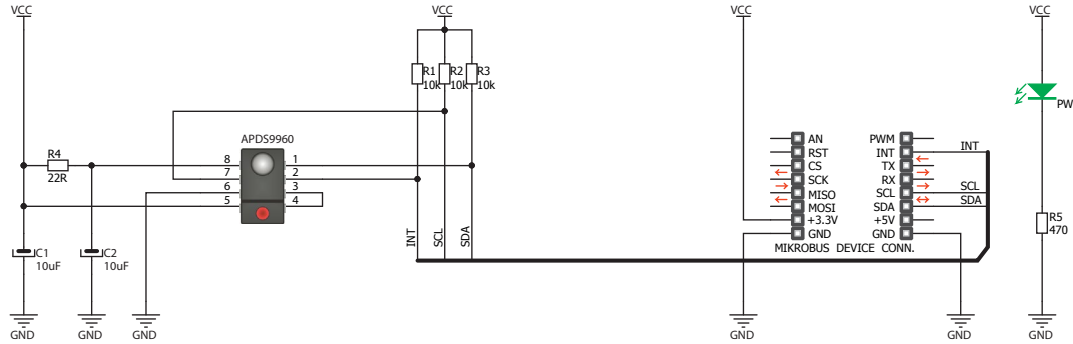

click BOARDS™
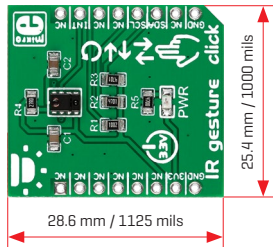
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5. Schematic

8. 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.

9. 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!

DEVELOPMENT TOOLS | COMPILERS | BOOKS

6. Dimensions

	mm	mils
LENGTH	28.6	1125
WIDTH	25.4	1000
HEIGHT*	3.3	130

* without headers

7. Alternatives

IR gesture click is quite a versatile board. For more click boards™ with gesture recognition, light or proximity sensing capabilities, visit the official page:

www.mikroe.com/click

10. 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.