

## click BOARD 6DOF IMU click User Manual

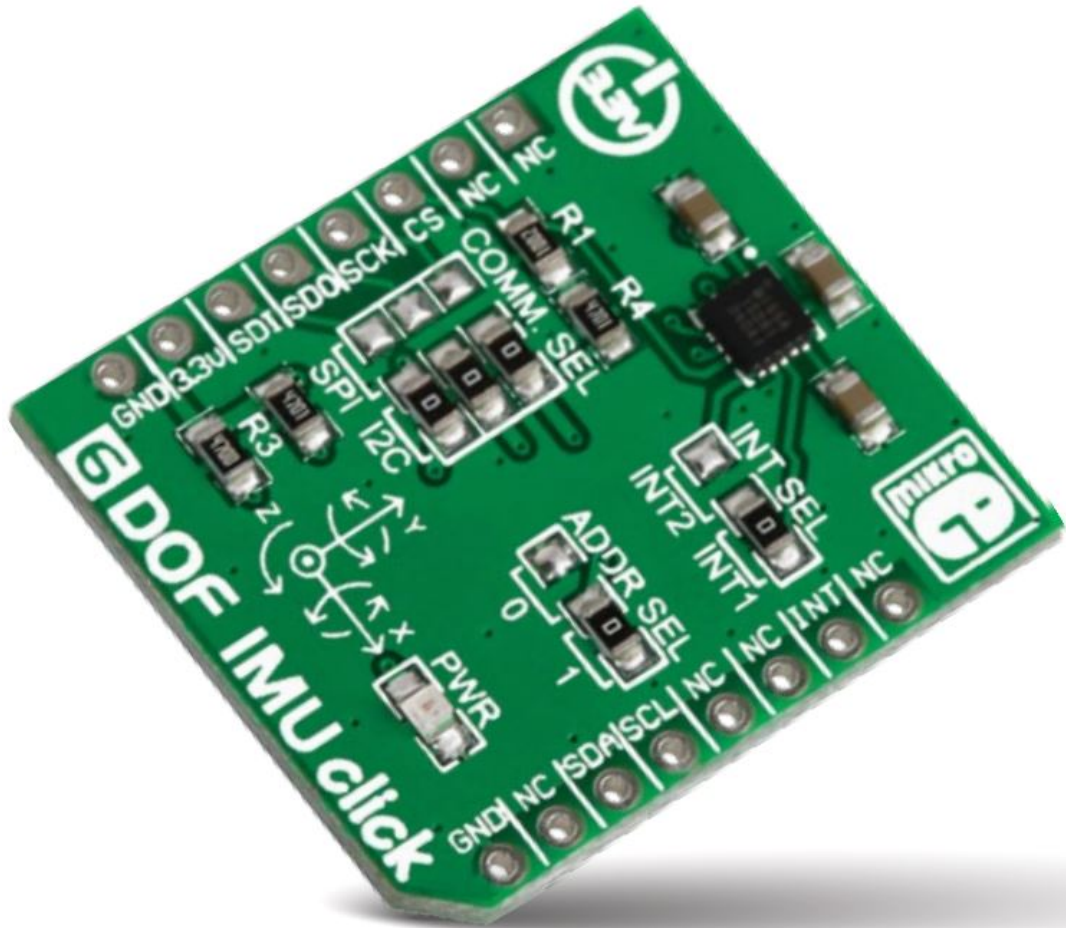
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**click**  
BOARD™

click BOARD 6DOF IMU click



## Product Information

The 6DOF IMU click is a click board that carries Maxim's MAX21105 6-axis inertial measurement unit. It consists of a 3-axis gyroscope and a 3-axis accelerometer. The chip provides highly accurate measurements and operates stably over a wide temperature range. The board can communicate with the target MCU through mikroBUSTM SPI or I2C interfaces. It requires a 3.3V power supply.

## Product Usage Instructions

### 1. Soldering the headers:

- Before using the click board, solder 1×8 male headers to both the left and right sides of the board.
- Turn the board upside down and place the shorter pins of the header into the appropriate soldering pads.
- Turn the board upward and align the headers perpendicular 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 mikroBUSTM socket.
- Align the cut in the lower-right part of the board with the markings on the silkscreen at the mikroBUSTM socket.
- If all the pins are aligned correctly, push the board all the way into the socket.

### 3. Code examples:

Once you have done all the necessary preparations, you can start using your click board. Examples of mikroCTM, mikroBasicTM, and mikroPascalTM compilers can be downloaded from the Livestock website.

## 1. SMD Jumpers:

The board has three sets of jumpers:

- **INT SEL:** Used to specify which interrupt line will be used.
- **COMM SEL:** Used to switch from I2C to SPI.
- **ADDR SEL:** Used to select the I2C address.

## 2. Support:

MikroElektronika offers free tech support until the end of the product's lifetime. If you encounter any issues, visit [www.mikroe.com/support](http://www.mikroe.com/support) for assistance.

**Note:** The information provided above is based on the user manual for the 6DOF IMU click. For the most accurate and up-to-date information, refer to the official user manual or contact the manufacturer directly.

## Introduction

6DOF IMU click carries Maxim's MAX21105 6-axis inertial measurement unit comprising a 3-axis gyroscope and a 3-axis accelerometer. The chip is a highly accurate inertial measurement unit with long-term stable operation over a wide temperature range. The board communicates with the target MCU either through mikroBUS™ SPI (CS, SCK, MISO, MOSI pins) or I2C interfaces (SCL, SDA). Additional INT pin also available. Uses 3.3V power supply only.

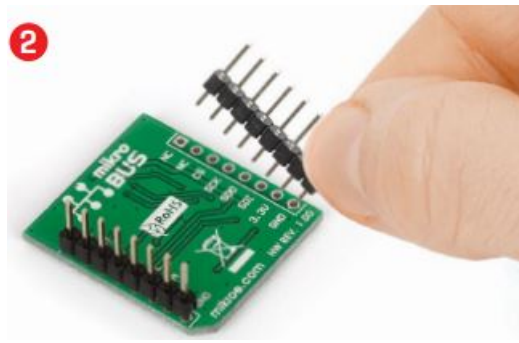


## Soldering the headers

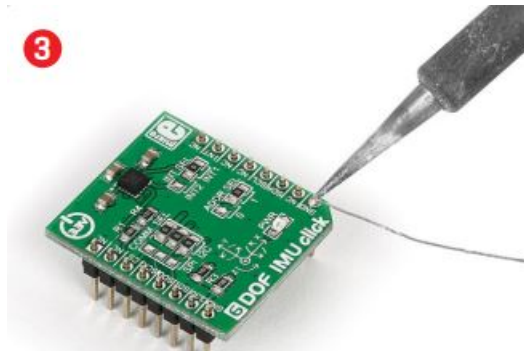
Before using your click board™, make sure to solder 1×8 male headers to both left and right side of the board. Two 1×8 male headers are included with the board in the package.



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.

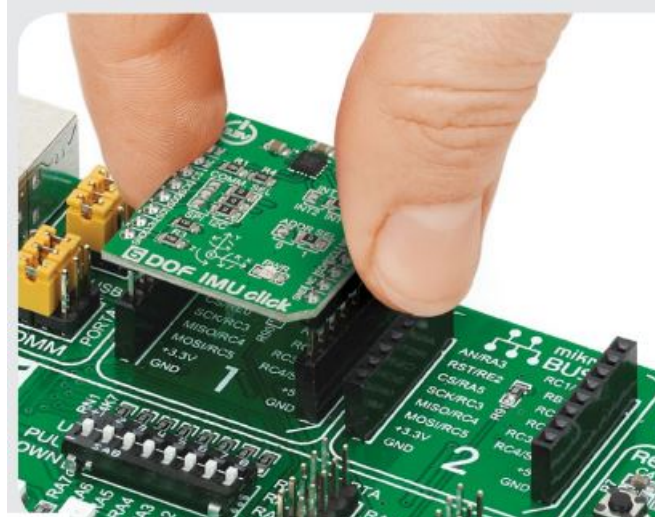


Turn the board upward again. Make sure to align the headers so that they are perpendicular to the board, then solder the pins carefully.



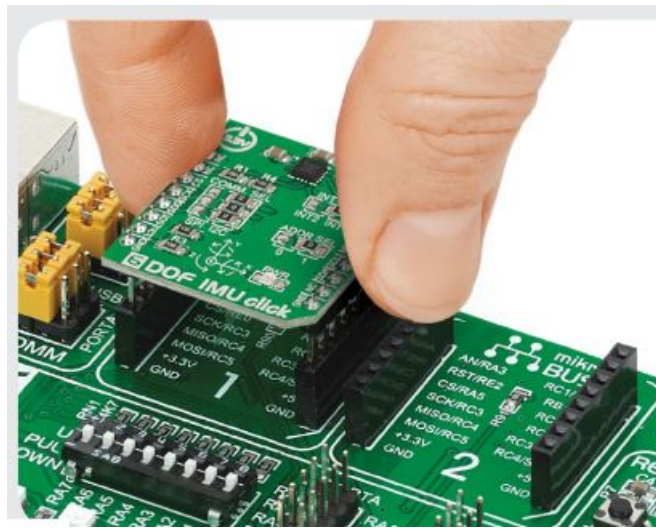
### Plugging the board in

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.

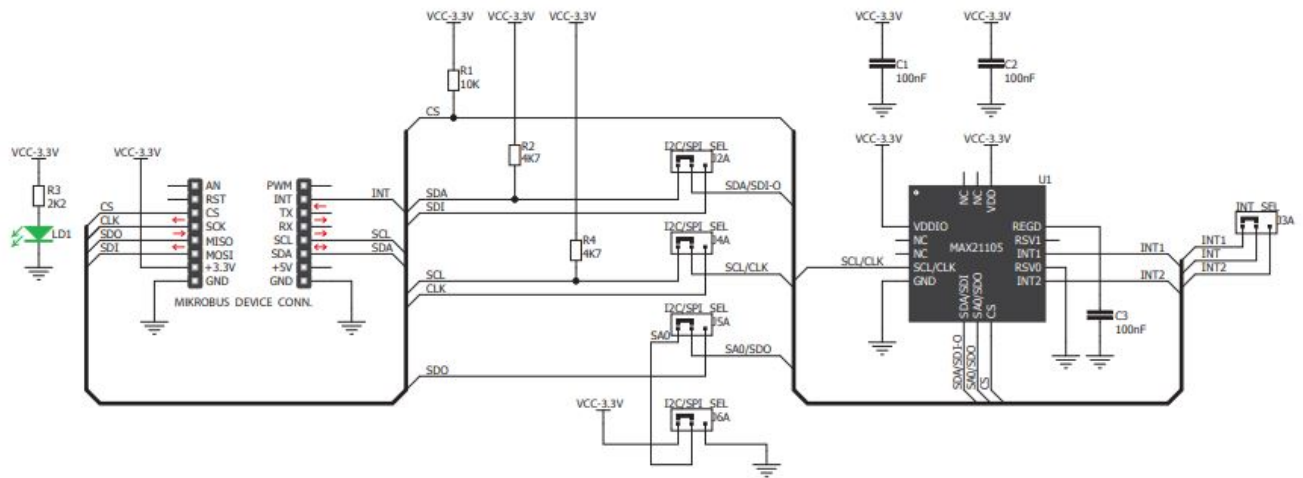


### Essential features

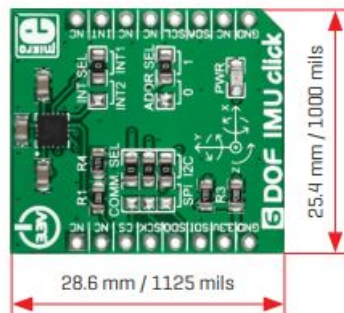
6DOF IMU click is suitable for designing platform stabilization systems, for example in cameras and drones. The MAX21105 IC has a low and linear gyroscope zero-rate level drift over temperature, and low gyroscope phase delay. 512-byte FIFO buffer saves resources of the target MCU. The gyroscope has a full-scale range of  $\pm 250$ ,  $\pm 500$ ,  $\pm 1000$ , and  $\pm 2000$  dps. The accelerometer has a full-scale range of  $\pm 2$ ,  $\pm 4$ ,  $\pm 8$ , and  $\pm 16g$ .



## Schematic



## Dimensions



	mm	mils
LENGTH	28.6	1125
WIDTH	25.4	1000
HEIGHT*	3	118

without headers

## 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 Livestock website. Just download them and you are ready to start.

## Support


MikroElektronika offers free tech support ([www.mikroe.com/support](http://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.

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- [www.mikroe.com](http://www.mikroe.com)
- Downloaded from [Arrow.com](http://Arrow.com).

## Documents / Resources

	<a href="#">click BOARD 6DOF IMU click</a> [pdf] User Manual MAX21105, 6DOF IMU click, 6DOF IMU, 6DOF, IMU, click
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## References

- [☰ MikroElektronika support is here to help - MIKROE](#)