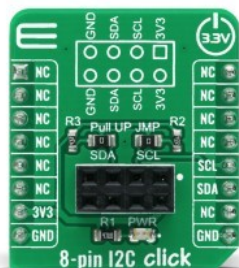


## 8-pin I2C Click



PID: MIKROE-4241

8-pin I2C Click is a compact add-on board that represents a breakout board that simplifies the connection of add-on boards with 8 pin Female Connector to mikroBUS™ socket. This board can be used as I2C Adapter with no main component on itself, with only an on-board connector for connection establishing. 8-pin I2C Click has no regional restrictions, no need for special permits, and it is possible to use this Click board™ worldwide. Being compatible with MFI (Made for iPod) is the most important feature of the 8-pin I2C Click board™ which ensures its proper operation with additional Apple accessories. This Click board™ is suitable for expanding the connectivity of the development system with the mikroBUS™, and ideal for communication with numerous devices that share the identical slave address on the same bus.

8-pin I2C Click is supported by a mikroSDK compliant library, which includes functions that simplify software development. This Click board™ comes as a fully tested product, ready to be used on a system equipped with the mikroBUS™ socket.

### How does it work?

8-pin I2C Click is a breakout board that simplifies the connection of add-on boards to the mikroBUS™ socket. This Click board™ represents a small-size PCB that can be connected to the mikroBUS™ socket like any other Click board™, with a 2x4 female header placed on itself. Each of the header pins is corresponding to a pin on the mikroBUS™ socket being used such as I2C lines (SCL, SDA) with two jumpers for I2C lines pull-up function selection, 3V3 power supply, and ground. This Click board™ allows easy pin access and manipulation while retaining a perfect connection quality at all times.

Mikroe produces entire development toolchains for all major microcontroller architectures.

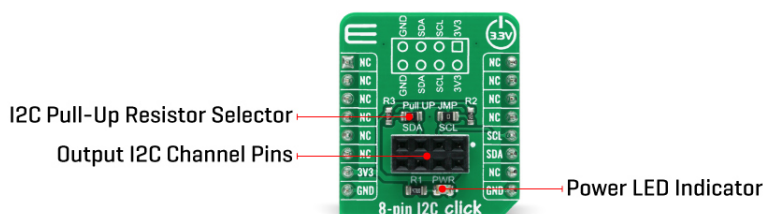
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ISO 27001: 2013 certification of informational security management system.  
ISO 14001: 2015 certification of environmental management system.  
OHSAS 18001: 2008 certification of occupational health and safety management system.



ISO 9001: 2015 certification of quality management system (QMS).



Being compatible with Apple's MFI is the most important feature of the 8-pin I2C Click board™ which ensures its proper operation with additional Apple accessories. The name is a shortened version of the long-form Made for iPod, the original program that ultimately became MFI which refers to peripherals that work with Apple's iPod, iPad, and iPhone.

8-pin I2C Click communicates with MCU using the standard I2C 2-Wire interface. Lines of the mikroBUS™ to which this Click board™ is attached, are shared through the top 8-pin female header, which mirrors the pins of the connected mikroBUS™ socket. The 8-pin I2C Click also shares the 3V3 power rails, which makes it compatible with any other power compatible Click board™ and development systems.

This Click board™ is designed to be operated only with a 3.3V logic voltage level. A proper logic voltage level conversion should be performed before the Click board™ is used with MCUs with different logic voltage levels. However, the Click board™ comes equipped with a library that contains easy to use functions and a usage example that may be used as a reference for the development.

## Specifications

Type	Adapter
Applications	Can be used for for expanding the connectivity of the development system with the mikroBUS™, and ideal for communication with numerous devices that share the identical slave address on the same bus.
On-board modules	8-pin I2C Click is a compact add-on board that represents a breakout board that simplifies the connection of add-on boards with 8 pin Female Connector to mikroBUS™ socket.
Key Features	MFI compatibility, no regional restrictions, expanding connectivity, retaining a perfect connection quality at all times, and more.
Interface	I2C
Feature	No ClickID
Compatibility	mikroBUS™

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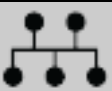


ISO 9001: 2015 certification of quality management system (QMS).

Click board size	S (28.6 x 25.4 mm)
Input Voltage	3.3V

## Pinout diagram

This table shows how the pinout on 8-pin I2C Click corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin					Pin	Notes
	NC	1	AN	PWM	16	NC	
	NC	2	RST	INT	15	NC	
	NC	3	CS	RX	14	NC	
	NC	4	SCK	TX	13	NC	
	NC	5	MISO	SCL	12	<b>SCL</b>	I2C Clock
	NC	6	MOSI	SDA	11	<b>SDA</b>	I2C Data
Power Supply	<b>3.3V</b>	7	3.3V	5V	10	NC	
Ground	<b>GND</b>	8	GND	GND	9	<b>GND</b>	Ground

## Onboard settings and indicators

Label	Name	Default	Description
LD1	PWR	-	Power LED Indicator
J1	HF 2x4	-	8 pin Female Connector(MFI)
JP1-JP2	-	-	I2C Pull-Up Resistor Selector

## Software Support

We provide a library for the 8-pin I2C Click on our [LibStock](#) page, as well as a demo application (example), developed using MikroElektronika [compilers](#). The demo can run on all the main MikroElektronika [development boards](#).

## Library Description

The library contains a basic functions for using 8 pin I2C click.

Key functions:

- void c8pini2c\_i2c\_write(uint8\_t slave\_addr, uint8\_t \*data\_buf,uint16\_t len, uint8\_t end\_mode) - I2C Write function
- void c8pini2c\_i2c\_read(uint8\_t slave\_addr, uint8\_t \*data\_buf,uint16\_t len, uint8\_t end\_mode) - I2C Read function
- void c8pini2c\_i2c\_start ( void ) - I2C Start function

## Examples description

The application is composed of three sections :

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- System Initialization - Initializes I2C module
- Application Initialization - Initializes driver init and set up another click for test
- Application Task - Reads temperature and logs on the USB UART
- NOTE: Surface temp click board used for demonstrating work 8 pin I2C click-a

The full application code, and ready to use projects can be found on our [LibStock](#) page.

Other mikroE Libraries used in the example:

- I2C Library
- UART Library
- Conversions library

## Additional notes and informations

Depending on the development board you are using, you may need [USB UART click](#), [USB UART 2 click](#) or [RS232 click](#) to connect to your PC, for development systems with no UART to USB interface available on the board. The terminal available in all MikroElektronika [compilers](#), or any other terminal application of your choice, can be used to read the message.

## mikroSDK

This Click board™ is supported with [mikroSDK](#) - MikroElektronika Software Development Kit. To ensure proper operation of mikroSDK compliant Click board™ demo applications, mikroSDK should be downloaded from the [LibStock](#) and installed for the compiler you are using.

For more information about mikroSDK, visit the [official page](#).

## Resources

[mikroBUS™](#)

[mikroSDK](#)

[Click board™ Catalog](#)

[Click boards™](#)

## Downloads

[8-pin I2C click 2D and 3D files](#)

[8-pin I2C click example on Libstock](#)

[8-pin I2C click schematic](#)

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