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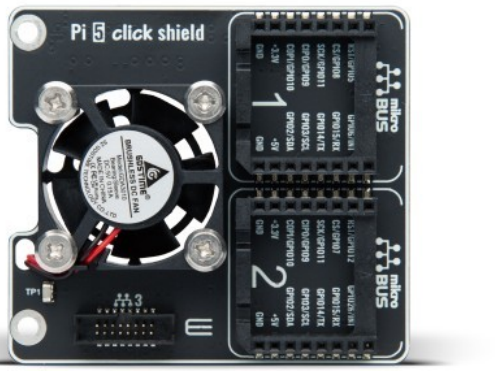
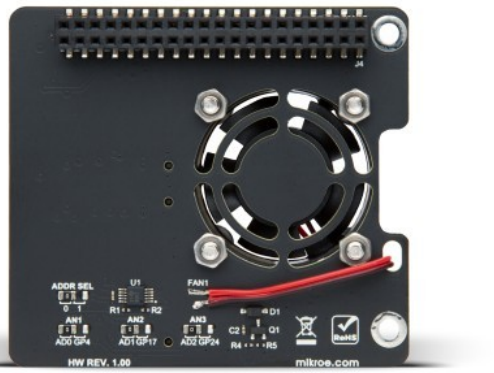
VAT: SR105917343 Registration No. 20490918
Phone: + 381 11 78 57 600 Fax: + 381 11 63 09 644 E-mail: office@mikroe.com
www.mikroe.com

Pi 5 Click Shield





PID: MIKROE-6423

Pi 5 Click Shield

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ISO 27001: 2013 certification of informational security management system.
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Time-saving embedded tools

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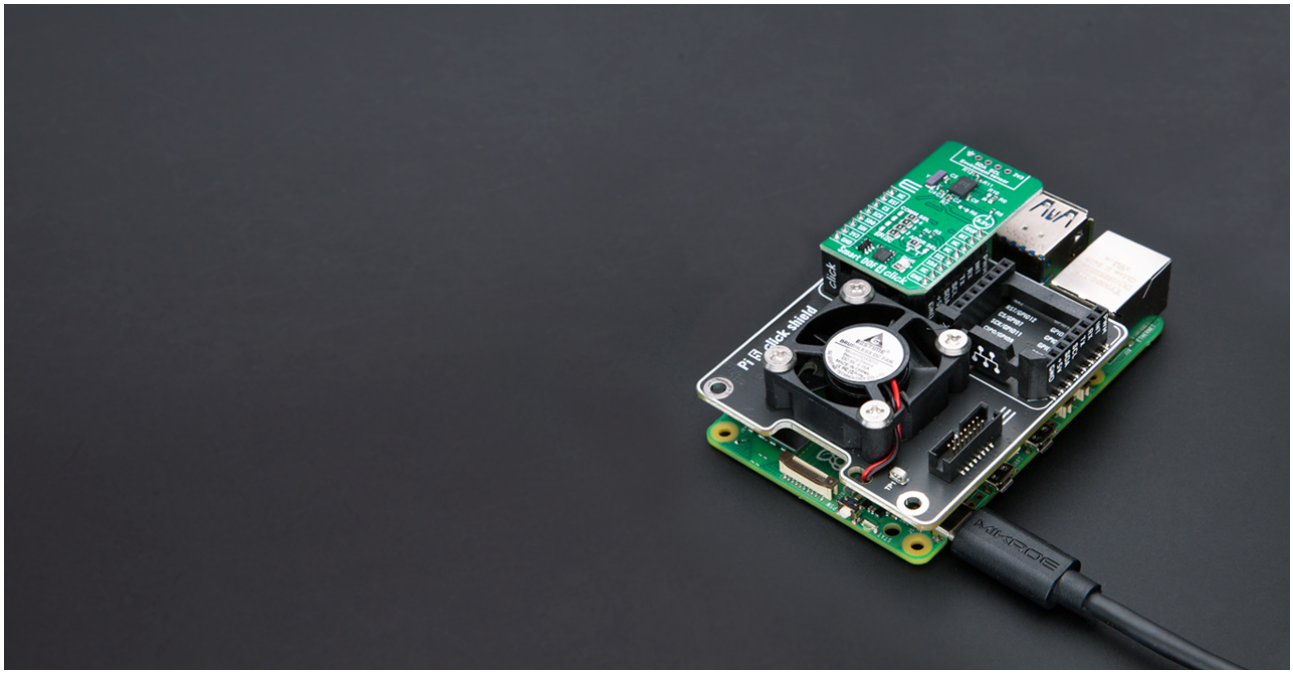

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Overview

Pi 5 Click Shield is the perfect solution for quickly and easily expanding the capabilities of the Raspberry Pi 5 host board with many Click boards™, enabling the creation of complex and unique projects. The Pi 5 Click Shield provides two mikroBUS™ and one Shuttle socket to add any functionality from our ever-growing range of Click boards™. We are fully stocked with everything, from sensors and WiFi transceivers to motor control and audio amplifiers.

The Raspberry Pi 5 is a powerhouse of performance, featuring a Broadcom BCM2712 quad-core Cortex-A76 processor at 2.4GHz and up to 16GB of RAM, offering three times the speed of its predecessor. With an in-house designed RP1 I/O controller, it supports USB 3.0 for 5Gbps data transfers, interchangeable camera and DSI connectors, dual 4Kp60 video output, a real-time clock, UART debug port, and PCI Express (PCIe) for M.2 SSDs, ensuring blazing-fast data transfers and unmatched versatility for demanding applications.

This extension board allows users to combine the Raspberry Pi 5 footprint-compatible board with their favorite Click boards™ in their upcoming projects.

Note: Raspberry Pi 5 is not included in the package.

CLICK BOARD
COMBINATIONS

Main features

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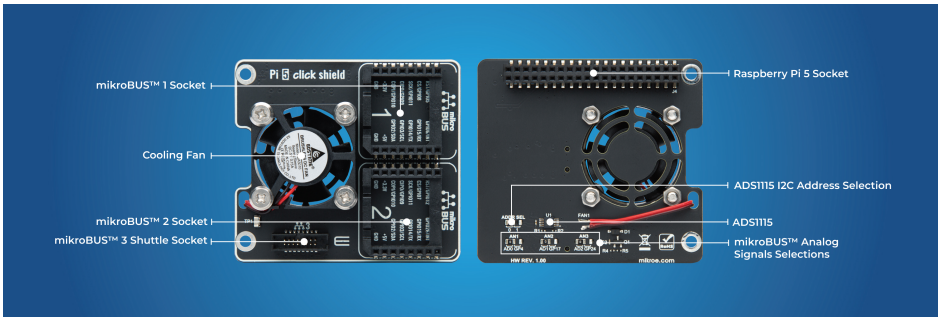

Pi 5 Click Shield comes equipped with two proprietary mikroBUS™ sockets, allowing all the Click board™ devices to be interfaced with the Raspberry Pi 5 board with no effort at all. This way, MIKROE allows its users to add any functionality from our ever-growing range of Click boards™, such as WiFi, GSM, GPS, Bluetooth, ZigBee, environmental sensors, LEDs, speech recognition, motor control, movement sensors, and many more. More than 1600 Click boards™, which can be stacked and integrated, are now available.

In addition to the mikroBUS™ sockets, this Click Shield also has one additional ICD BOX header intended to be used with mikroBUS™ Shuttle. mikroBUS™ Shuttle, which carries one mikroBUS™ slot, is an ideal solution when there is a demand to have more Click boards™ than the development system can support. Being connected with the flat ribbon cable mikroBUS™ Shuttle allows being freely positioned according to the application's requirements.

The Pi 5 Click Shield also comes with a small onboard fan that keeps your Raspberry Pi 5 board at a comfortable operating temperature even under heavy load. The 30mm×30mm×10mm ultra-quiet powerful brushless DC fan is driven from the +5V pin on the GPIO header and makes it possible to bring the CPU temperature down to 45°C and keep it temperature-stable. The temperature-controlled fan delivers up to 3.45CFM of airflow over the processor, memory, and power management IC.

This Click Shield has an onboard ADC, the ADS115, precise low-power 16-bit I2C compatible analog-to-digital converter from Texas Instruments, which enables measuring the analog levels. Since the Raspberry Pi doesn't have an analog pin on the expansion connector, by adding an ADC, we've helped the usage of any Click board™ from our offer. It also has several jumper selectors, JP1-JP3 which allows whether the GPIO pin from Raspberry Pi 5 board or ADC pin from ADS115 will be directed to the AN pin of the mikroBUS™ or mikroBUS Shuttle socket. In addition to these jumpers, a jumper labeled as JP4 enables the I2C address selection of the ADS1115.

Once you connect Raspberry Pi 5 board with our Pi 5 Click Shield, it will allow you access to hundreds of Click boards™ working with 3.3V or 5V logic voltage level. For checking which Click boards™ is compatible with Raspberry Pi 5 board, please open our Click Shop filter. Our Click boards™ is equipped with a library containing functions and example source codes for MIKROE compilers which can be used, as a reference, for further development.

Raspberry Pi 5 TO MIKROBUS™ PINOUT

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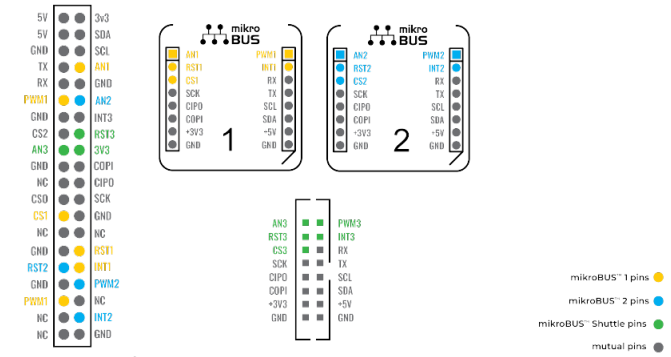

Raspberry Pi 5

Specifications

Type	Adapter,Raspberry Pi,Shield
Applications	Pi 5 Click Shield allows you to use Click boards™ on your Raspberry Pi 5 board
Key Features	2x mikroBUS connectors, 1x Shuttle connector, connector for connecting compatible Raspberry Pi 5 board, ADS1115 ADC, GND hook for testing purposes, and more
Interface	Analog,GPIO,I2C,PWM,SPI,UART
Compatibility	mikroBUS™,Raspberry Pi
Input Voltage	3.3V,5V

Resources

mikroBUS™

mikroSDK

Click board™ Catalog

Click boards™

Downloads

Pi 5 Click Shield 2D and 3D files v100

Pi 5 Click Shield schematic v100

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