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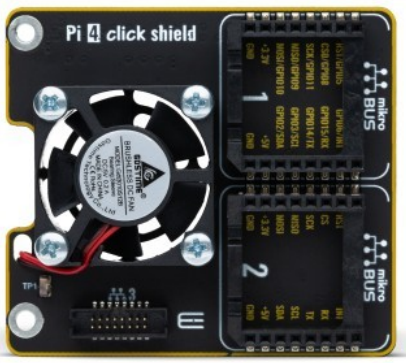
Pi 4 Click Shield



PID: MIKROE-4122

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Time-saving embedded tools

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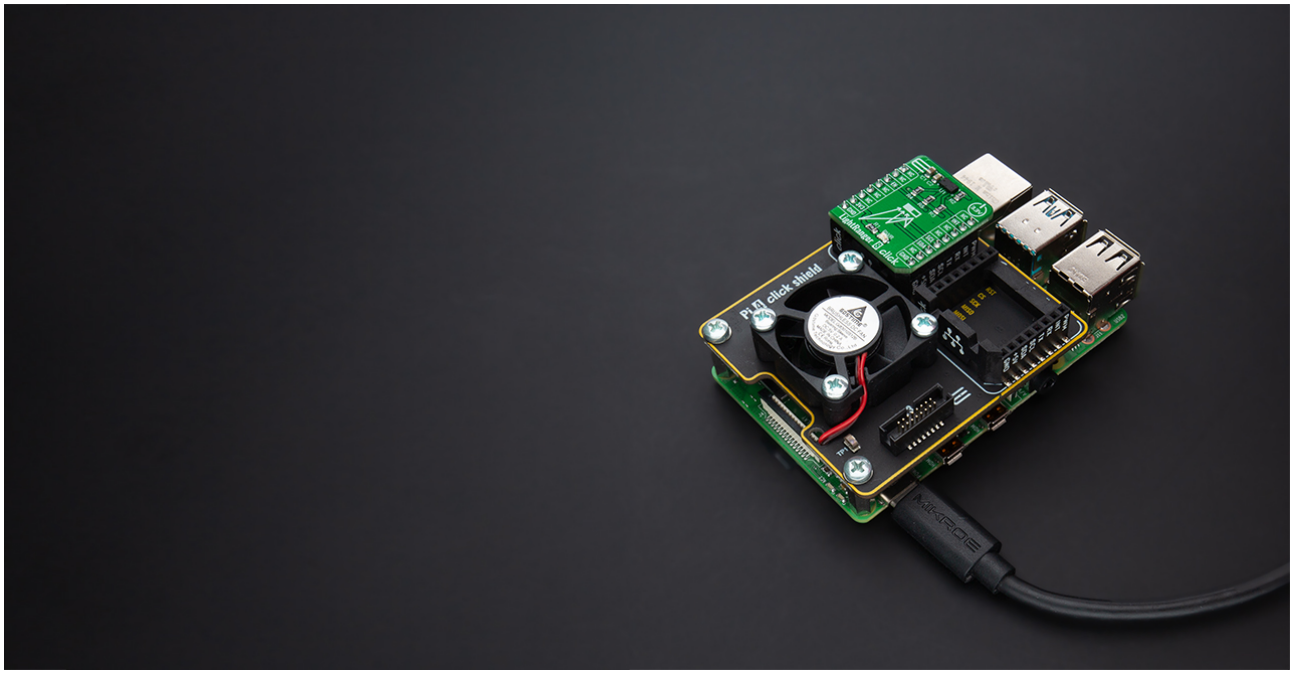

Mikroe produces entire development toolchains for all major microcontroller architectures.
Committed to excellency, we are dedicated to helping engineers bring the project development up to speed and achieve outstanding results.

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).

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Overview

Pi 4 Click Shield is the perfect way to expand your development board's functionalities compatible with Raspberry Pi 4 pinout. The Pi 4 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 Pi 4 Click Shield is compatible with Raspberry Pi 4 Model B that comes with a 1.5GHz 64-bit quad-core ARM Cortex-A72 processor, onboard 802.11ac Wi-Fi, Bluetooth 5, full gigabit Ethernet, two USB 2.0 and 3.0 ports, and dual-monitor support via a pair of micro HDMI (HDMI Type D) ports for up to 4K resolution. The Raspberry Pi 4 can also be powered via a USB-C port, enabling additional power to be provided to downstream peripherals when used with an appropriate PSU. The pinout of the Pi 4 Click Shield not only supports the Raspberry Pi 4 Model B but is also compatible with the Raspberry Pi 5. This Click Shield also comes with a small onboard fan that keeps your Raspberry Pi 4 board at a comfortable operating temperature even under heavy load.

This development platform provides users with an effortless and common way to combine the Raspberry Pi 4 footprint compatible development board with their favorite Click boards™ in their upcoming projects.

Note: Raspberry Pi 4 is not included in the package.

CLICK BOARD
COMBINATIONS

Main features

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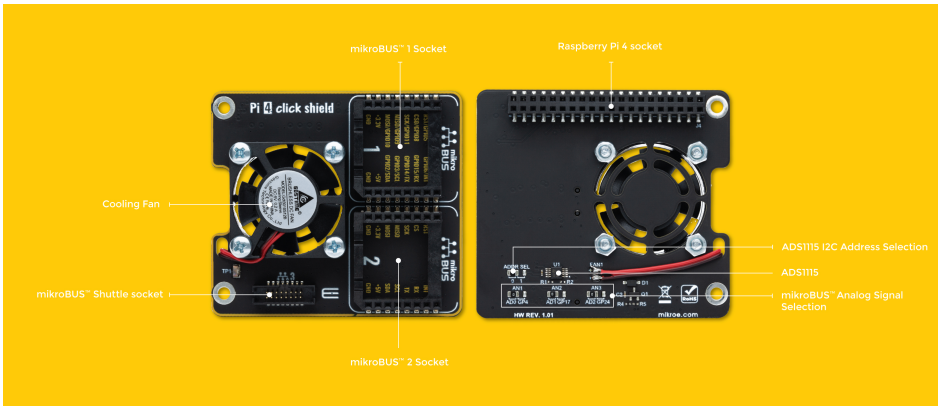

Pi 4 Click Shield comes equipped with two proprietary mikroBUS™ sockets, allowing all the Click board™ devices to be interfaced with the Raspberry Pi 4 board with no effort at all. This way, Mikroe allows its users to add any functionality from our ever-growing range of Click boards™, such as WiFi, GSM, GPS, Bluetooth, ZigBee, environmental sensors, LEDs, speech recognition, motor control, movement sensors, and many more. More than 990 Click boards™, which can be stacked and integrated, are at your disposal.

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.

As mentioned before, the Pi 4 Click Shield also comes with a small onboard fan that keeps your Raspberry Pi 4 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 4 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 4 board with our Pi 4 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 4 board, please open our Click Shop filter. Our Click boards™ is equipped with a library containing functions and example source codes for Mikroe compilers available on LibStock, which can be used, as a reference, for further development.

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Specifications

Type	Adapter,Raspberry Pi,Shield
Applications	Pi 4 Click Shield allows you to use Click boards™ on your Raspberry Pi 4 board.
Key Features	2x mikroBUS connectors, 1x Shuttle connector, connector for connecting compatible Raspberry Pi 4 board, ADS1115 ADC
Interface	Analog,GPIO,I2C,PWM,SPI,UART
Compatibility	mikroBUS™,Raspberry Pi,Shuttle
Input Voltage	3.3V,5V

Resources

mikroBUS™

mikroSDK

Click board™ Catalog

Click boards™

Downloads

ADS1115 datasheet

Pi 4 Click Shield schematic

Pi 4 Click Shield 2D and 3D files

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