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Click shield for Pi 400



PID: MIKROE-4970

Click shield for Pi 400

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.





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Overview

Click Shield for Pi 400 is the perfect way to expand your development board's functionalities compatible with <u>Raspberry Pi 400</u> pinout. The Click Shield for Pi 400 provides two <u>mikroBUS</u>[™] and one Shuttle socket to add any functionality from our ever-growing range of <u>Click boards</u>[™]. We are fully stocked with everything, from sensors and WiFi transceivers to motor control and audio amplifiers.

The Click Shield for Pi 400 is compatible with Raspberry Pi 400, a complete personal computer built into a compact keyboard. It features a 1.8GHz 64-bit quad-core ARM Cortex-A72 processor, dual-band (2.4GHz and 5.0GHz) IEEE 802.11b/g/n/ac wireless LAN, Bluetooth 5.0, full gigabit Ethernet, two USB 3.0 and one 2.0 ports, and dual-monitor support via a pair of micro HDMI ports for up to 4K resolution. The Raspberry Pi 400 can also be powered via a USB-C port, enabling additional power to be provided to downstream peripherals when used with an appropriate PSU.

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 400 is not included in the package.

CLICK BOARD COMBINATIONS

Main features

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Click Shield for Pi 400 comes equipped with two proprietary mikroBUS[™] sockets, allowing all the Click board[™] devices to be interfaced with the Raspberry Pi 400 board with no effort at all. This way, Mikroe allows its users to add any functionality from our ever-growing range of <u>Click</u> <u>boards[™]</u>, such as WiFi, GSM, GPS, Bluetooth, ZigBee, environmental sensors, LEDs, speech recognition, motor control, movement sensors, and many more. More than 1147 Click boards[™], which can be stacked and integrated, are at your disposal.

Beside two main mikroBUS[™] sockets for adding peripheral devices this shield also has an additional Shuttle socket, intended to be used with <u>mikroBUS Shuttle Board</u>. This small add-on board has one mikroBUS[™] equipped on itself and connects to the Click shield for Pi 400 via the <u>flat ribbon cable (20cm)</u>. This allows for easy use of moving peripherals as well as an additional range outside the fixed board, such as connecting peripherals to remote place.

This Click Shield has an onboard ADC, the <u>ADS115</u>, precise low-power 16-bit I2C compatible analog-to-digital converter from <u>Texas Instruments</u>, 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, AN1-AN3, which allows whether the GPIO pin from Raspberry Pi 400 board or ADC pin from ADS115 will be directed to the AN pin of the mikroBUS[™] or Shuttle socket. In addition to these jumpers, a jumper labeled as ADDR SEL enables the I2C address selection of the ADS1115.

Once you connect Raspberry Pi 400 board with our Click Shield for Pi 400, it will allow you access to hundreds of Click boards[™] working with 3.3V or 5V logic voltage levels. For checking which Click boards[™] is compatible with Raspberry Pi 400 board, please open our <u>Click Shop</u> filter. Our Click boards[™] is equipped with a open source libraries containing functions and example codes for <u>Mikroe</u> compilers available on <u>LibStock</u>, which can be used, as a reference, for further development.

Specifications

Туре	Adapter,Shield
Applications	Click Shield for Pi 400 allows you to use Click

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	boards™ on your Raspberry Pi 400 board
On-board modules	2x mikroBUS [™] sockets, 1x Shuttle connector, connector for connecting compatible Raspberry Pi 400 board, ADS1115 ADC
Interface	Analog,GPIO,I2C,PWM,SPI,UART
Compatibility	mikroBUS™,Raspberry Pi,Shuttle
Input Voltage	3.3V,5V

Resources

<u>mikroBUS</u>™

<u>mikroSDK</u>

Click board[™] Catalog

Click boards™

Downloads

ADS1115 datasheet

Raspberry Pi 400 Datasheet

Click shield for Pi 400 schematic

Click shield for Pi 400 2D and 3D files

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