Kitronik Discovery Kit for Raspberry Pi Pico (Pico Included)

Stock code: 5325

Take your first steps in Python and physical computing with the Kitronik Discovery Kit for Raspberry Pi Pico (Pico Included).

The Kitronik Discovery Kit for Raspberry Pi Pico (Pico Included) is a great way to learn about microcontrollers, Python coding, and physical computing. The kit is supplied with all of the components needed to complete the 7 included experiments, including a large-format breadboard. The Pi Pico is also included in the kit and comes pre-fitted with pin headers, so no soldering required! The kit is packaged in sturdy reusable packaging that can be used to store the kit.

The seven experiments take you from the basics of using the board through to more advanced concepts and using external electronics. The experiments cover key concepts of microcontrollers, such as; basic setup, simple coding, Interrupts, Threads, Digital Inputs, and Analog and Digital Outputs.

The kit ships with a comprehensive guide booklet. The booklet covers the basic setup and then how to complete each of the 7 experiments. Each experiment is complete with detailed circuit diagrams, explanations, and a complete code run-through. This means that you can get started without having to understand too much Python.

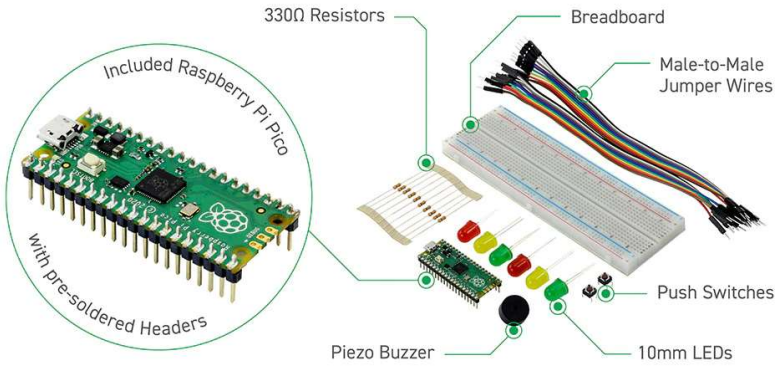
At the heart of the kit is the Raspberry Pi Pico board, a new low cost, high-performance microcontroller. The board features a powerful new, Raspberry Pi designed ARM-based dual-core chip-- the RP2040. The pico also features 64KB of internal RAM and support for up to 16MB of off-chip Flash. A wide range of flexible I/O options includes I2C, SPI, and Programmable I/O (PIO). These support endless possible applications for this small and affordable board.

The kit is programmed using MicroPython. This is a full Python 3 implementation created specifically for small embedded microcontrollers, such as the Pico and the popular BBC micro:bit. You will use the Thonny editor to create your code, which can then be saved directly to the Pico from the editor via USB. Thonny is a Python Editor/IDE designed to allow beginners to get up and running with Python coding with as little fuss as possible.

A power pack is not required as power will be supplied via the USB connection to the computer that the Thonny editor is running on.

Note:

- A USB cable is NOT supplied. USB cables capable of data transfer and power are available separately.
- This kit is also available without an included Pico.
- No soldering is required.



Features:

- This kit offers a great introduction to microcontrollers, Python coding, and physical computing.
- Make the 7 experiments in the step-by-step tutorial book and learn as you go.
- All parts are included to conduct the 7 experiments, including the Raspberry Pi Pico.
- The kit is supplied with a detailed booklet that covers setup and then how to complete the 7 experiments.
- The experiments explore; simple coding, Interrupts, Threads, Digital Inputs, and Analog and Digital Outputs.
- Once you have completed all of the included experiments, you have the perfect prototyping system for further learning/prototyping with the Raspberry Pi Pico board.
- The Raspberry Pi Pico board is a new cutting edge microcontroller that features the Pi designed ARM-based dual-core RP2040 chip.
- Included is a large format breadboard for ease of prototyping.
- No soldering required.
- The kit is supplied in re-usable packaging suitable for long term storage of the kit.

Contents:

- 1 x Raspberry Pi Pico board.
- 1 x Large Prototype Breadboard.
- 2 x Red 5mm LED.
- 2 x Yellow 5mm LED.
- 2 x Green 5mm LED.
- 10 x 330Ω Resistor.
- 1 x Piezo Element Buzzer.
- 20 x Male to Male Jumper Wires.
- 2 x Push Switches.
- A booklet guide containing basic setup information and full explanations of the following 7 experiments;
    - Exp. 1 - Show Me The Light.
    - Exp. 2 - Control an Input.
    - Exp. 3 - Interrupt Me.
    - Exp. 4 - Making a Noise.
    - Exp. 5 - So Many Interruptions.
    - Exp. 6 - Rub Head and Pat Tummy - Threads.
    - Exp. 7 - Building a System from the Blocks we have Learnt.

The kit is supplied in re-usable packaging suitable for long term storage of the kit.