

# RT1010Py-DevKit

## User Manual

[olimex.com](http://olimex.com)

Rev.1.0 January 2024

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# What is RT1010Py-DevKit

RT1010Py-DevKit is development board for RT1010Py module

RT1010Py-DevKit has these features:

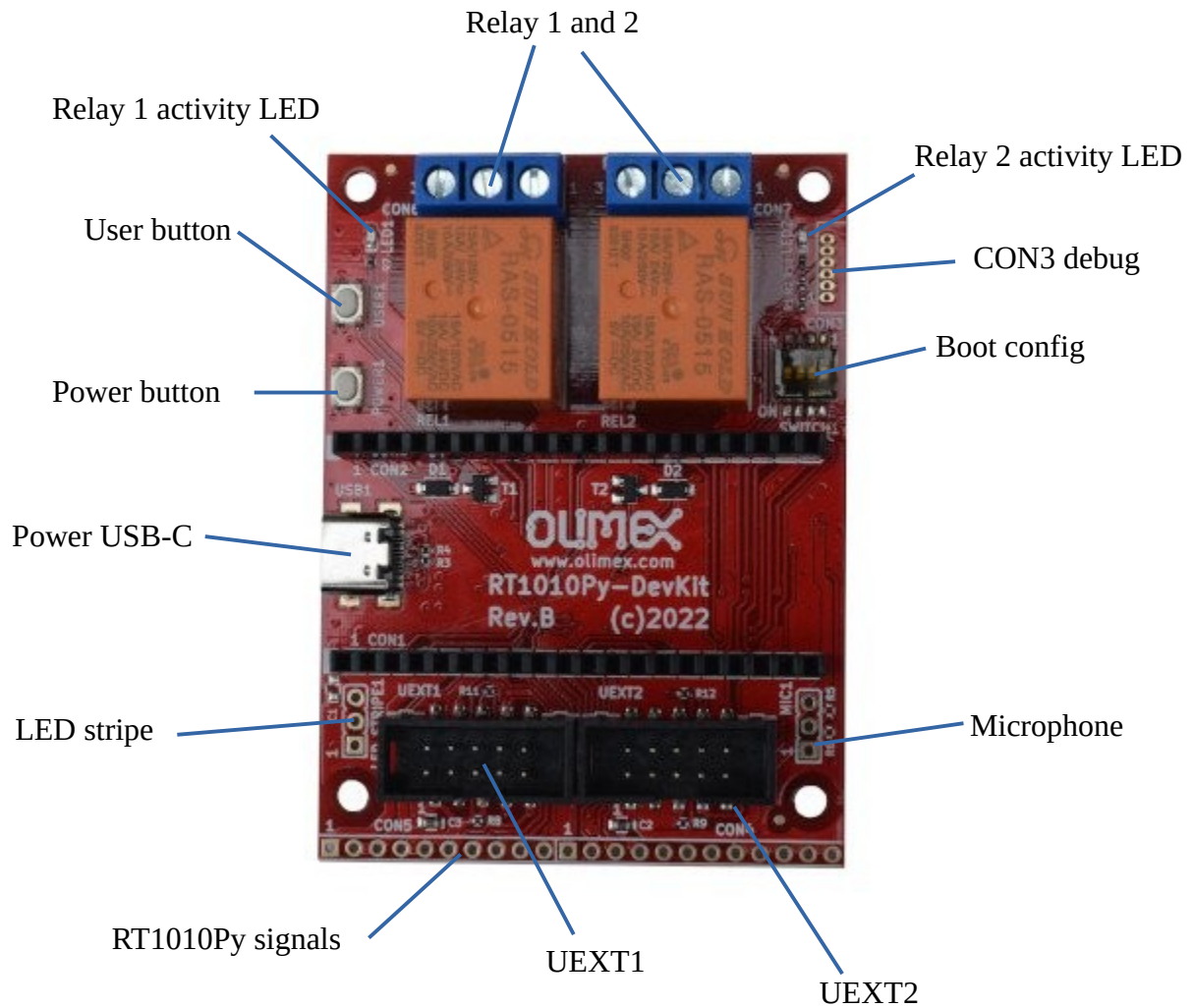
- socket for RT1010Py
- USB-C power supply input
- Two buttons
- Two relays 10A/250VAC
- two UEXT connectors
- Boot configuration slide switch
- Dimensions: (55 x 75)mm ~ (2.17 x 2.95)"

## Order codes for RT1010Py-DevKit and accessories:

<a href="#">RT1010Py-DevKit</a>	evaluation board for <a href="#">RT1010Py</a> with two relays, two UEXT, USB-C
<a href="#">RT1010Py</a>	RT1011 board running at 500Mhz with MicroPython
<a href="#">USB-CABLE-A-MICRO-1.8M</a>	USB-A to micro cable
<a href="#">MICRO-SD-16GB-CLASS10</a>	16GB microSD card
<a href="#">UEXT modules</a>	There are temperature, humidity, pressure, magnetic field, light sensors. Modules with LCDs, LED matrix, Relays, Bluetooth, Zigbee, WiFi, GSM, GPS, RFID, RTC, EKG, sensors and etc.

# HARDWARE

## RT1010PyDevKit layout:



## RT1010Py-DevKit schematics:

[RT1010Py-DevKit](#) latest schematic is on [GitHub](#)

## GPIO connectors:

CON1  
HN1X20

1	EXT_5V_IN	5V_IN
2		GND
3	LPUART1_RXDRXD	
4	LPUART1_TXD	TXD
5	3.3V_OUTPUT	3.3V
6	GPIO_11_LED	LED
7	GPIO_08	D8
8	GPIO_07	D7
9	GPIO_06	D6
10	GPIO_05	D5
11	GPIO_04	D4
12	GPIO_03	D3
13	GPIO_02	D2
14	GPIO_01	D1
15	GPIO_00	D0
16		GND
17	BOOTSEL1	BT1
18	BOOTSEL0	BT0
19	ONOFF	ON
20	GPIO_12	GPIO12

CON2  
HN1X20

D9	GPIO2_I000	1
D10	GPIO2_I001	2
D11	GPIO2_I002	3
D12	GPIO2_I005	4
D13	GPIO2_I012	5
D14	GPIO2_I013	6
A0	LPSP1_PCS1	7
A1	LPSP1_SDI	8
A2	LPSP1_SDO	9
A3	LPSP1_PCS0	10
A4	LPSP1_SCK	11
	GND	12
SDA2	I2C2_SDA	13
SCL2	I2C2_SCL	14
SDI	LPSP2_SDI	15
SDO	LPSP2_SDO	16
CS0	LPSP2_PCS0	17
SCK	LPSP2_SCK	18
SDA1	I2C1_SDA	19
SCL1	I2C1_SCL	20



## UEXT connector:

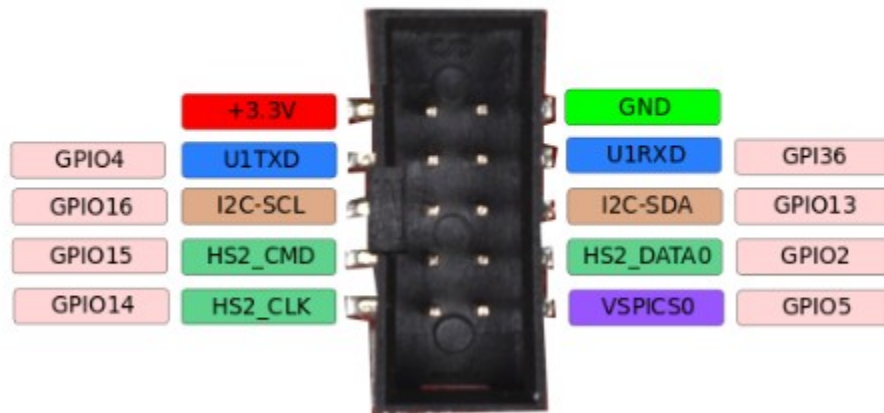
UEXT connector stands for Universal EXTension connector and contain +3.3V, GND, I2C, SPI, UART signals.

UEXT connector can be in different shapes.

The original UEXT connector is 0.1" 2.54mm step boxed plastic connector. All signals are with 3.3V levels.

## UEXT connector

note it share same pins with EXT1 and EXT2



As the boards become smaller and smaller some smaller packages were introduced too beside the original UEXT connector

- mUEXT is 1.27 mm step boxed header connector which is with same layout as UEXT
- pUEXT is 1.0 mm single row connector (this is the connector used in RP2040-PICO30)
- fUEXT is Flat cable 0.5 mm step connector

Olimex has developed number of [MODULES](#) with this connector. There are temperature, humidity, pressure, magnetic field, light sensors. Modules with LCDs, LED matrix, Relays, Bluetooth, Zigbee, WiFi, GSM, GPS, RFID, RTC, EKG, sensors and etc.

## **SOFTWARE:**



# Revision History

Revision 1.0 January 2024    initial