

PicoBricks

PicoBricks is an electronic development board + software that is designed for use in maker projects. With ten detachable modules included, PicoBricks can be used to create various projects.

Modules on PicoBricks

- Raspberry Pi Pico
- OLED Screen
- RGB LED
- LED + Button
- DHT11 Temperature and Humidity Sensor
- Relay
- Motor Driver
- IoT Board
- Buzzer
- LDR
- Potentiometer

Specifications of The Modules

Description	Raspberry Pi Pico
Specifications	<ul style="list-style-type: none">● Dual-core Arm Cortex M0+ processor, flexible clock running up to 133 MHz● 264KB of SRAM, and 2MB of on-board Flash memory● Castellated module allows soldering direct to carrier boards● USB 1.1 with device and host support● Low-power sleep and dormant modes● Drag-and-drop programming using mass storage over USB● 26 × multi-function GPIO pins● 2 × SPI, 2 × I2C, 2 × UART, 3 × 12-bit ADC, 16 × controllable PWM channels● Accurate clock and timer on-chip● Temperature sensor● Accelerated floating-point libraries on-chip● 8 × Programmable I/O (PIO) state machines for custom peripheral support

Description	OLED Screen
Specifications	<ul style="list-style-type: none"> • Monochrome 7-pin SSD1306 0.96" OLED display. • 128×64 pixel resolution with 160° viewing angle. • Supply voltage 3V – 5V (supports both 5V and 3.3V logic devices). • Uses SSD1306 for interfacing hence can communicate through SPI or IIC. • Multiple IIC devices are supported • Can be easily interfaced with Arduino, MicroPython, MicroBlocks. • Supports decent graphics of bitmap images.
Description	DHT11 Temperature and Humidity Sensor
Specifications	<ul style="list-style-type: none"> • Temperature Range: 0-50°C/ $\pm 2^{\circ}\text{C}$ • Humidity Range: 20-80% / $\pm 5\%$ • Sampling Rate: 1Hz • Body Size: 15.5 x 12 x 5.5mm • Operating Voltage: 3-5V • Max Current During Measuring: 2.5mA
Description	Buzzer
Specifications	<ul style="list-style-type: none"> • Max. Voltage: 30V DC • Rated current: <5mA @4000 Hz 5V • Buzzer Type: Externally Driven • Resonant Frequency: ~4000 Hz
Description	LDR
Specifications	<ul style="list-style-type: none"> • Can be used to sense Light • Easy to use on Breadboard or Perf Board • Easy to use with Microcontrollers or even with normal Digital/Analog IC • Has a parallel 100K resistor for voltage dividing.

Description	L-KLS4-R0902N-B100K-L25 Potentiometer
Specifications	<ul style="list-style-type: none"> • Type: Rotary a.k.a Radio POT. • Power Rating: 0.05W • Maximum Input Voltage: AC 50V / DC 20V • Rotational Life: 15000 cycles • Resistance: 100K Ohms
Description	LED & Push Button
Specifications	<p>LED:</p> <ul style="list-style-type: none"> • 5mm Round Standard Directivity • UV Resistant Epoxy • Forward Current (IF): 30mA • Forward Voltage (VF): 1.8V to 2.4V • Reverse Voltage: 5V • Operating Temperature: -30°C to +85°C • Storage Temperature: -40°C to +100°C • Luminous Intensity: 20mcd <p>Button:</p> <ul style="list-style-type: none"> • Mode of Operation: Tactile feedback • Power Rating: MAX 50mA 24V DC • Insulation Resistance: 100Mohm at 100v • Operating Force: 2.55±0.69 N • Contact Resistance: MAX 100mOhm • Operating Temperature Range: -20 to +70 °C • Storage Temperature Range: -20 to +70 °C
Description	Relay
Specifications	<ul style="list-style-type: none"> • Rated Coil Voltage: 5V/DC • Contact Current: 5A • Switched Voltage: max 30V/DC, max. 277V/AC • Coil Resistance: 125Ω • Coil Voltage Min: 3.25V/DC • Coil Voltage Max: 6.5V/DC • Operate Time: 10ms • Dimensions: 20.5x7.2x15.3mm • Release Time: 10ms • Coil Power Consumption: 200mW • Operating Temperature -40 - 85°C

Description	Dual L9110 Motor Driver
Specifications	<ul style="list-style-type: none"> • Operating Voltage: 2.2 - 6.5V/DC • Nominal Current Output: 1A • Rated Power: 500mW • Operating Temperature: -30 - 85°C
Description	IoT Board
Specifications	<ul style="list-style-type: none"> • Universal IR Infrared Receiver 38Khz • Supply Voltage: 0 - 6V/DC • Rated Current: 3.0 mA • Operating Temperature: -25 - 85°C • 6-pin Bluetooth Module Connector that supports HM-10, HC-05, HC-06 modules
Description	WS2812B RGB LED
Specifications	<ul style="list-style-type: none"> • Addressable RGB LED • Supply Voltage: 3.7 - 5.3V/DC • Quiescent Current: 0.6 mA • Working Current: 12 mA • Brightness (max.): 1000 mcd • Communication: 24-bit Serial Data • Operating Temperature: -25 - 80°C