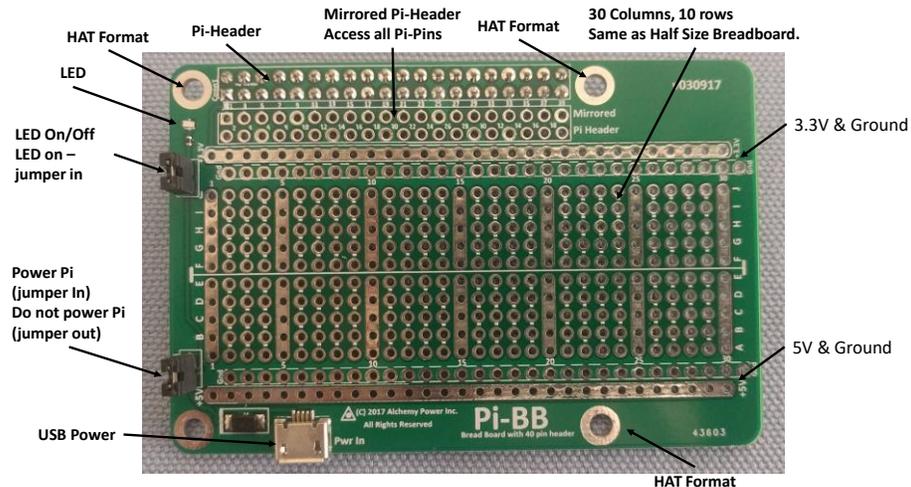


## Key Features

- **Standard half-size breadboard offering 300 connections.**
- **Designed to fit snugly on top of a Raspberry Pi.**
- **Pre-installed Raspberry Pi header. A mirrored header provides access to all GPIOs.**
- **USB Power-in port powers the Pi or electronics only (jumper selectable.)**
- **Provides both 3.3V and 5V bus – ideal for prototyping.**
- **Standard spacing between each connection. Ideal for integrated circuits and other devices.**
- **Dual layer – solder on top or bottom layer.**
- **LED indicates when power is provided from USB port.**

# Pi-BB

*Powered half-size breadboard ideal for Raspberry Pi™, compatible with Arduino & other development boards*

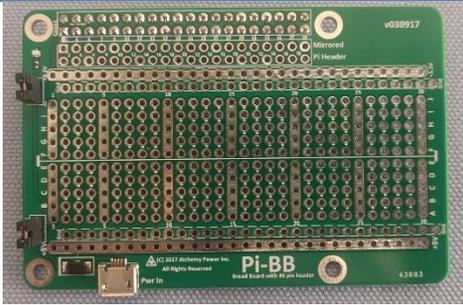
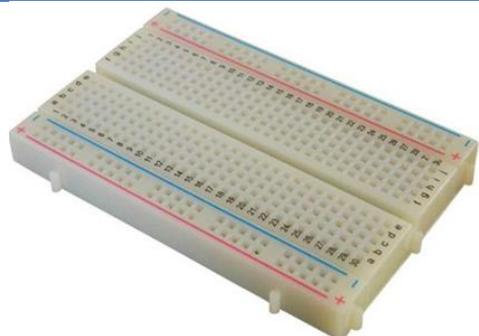


Pi-BB is a powered breadboard designed for the Raspberry Pi. Pi-BB offers the following features:

- Half size breadboard offering 30 columns x 10 rows or a total of 300 points. Five connection points are available for each column, with a total of 60 columns, making it convenient to attach any peripheral.
- Provides access to 3.3V as well as 5V from the Raspberry Pi.
- Includes a Raspberry Pi header as well as connections as a mirrored header. The 40-pin Raspberry Pi header is soldered on to the Pi-BB board. This allows Pi-BB to be connected to a Raspberry Pi as a HAT. Mirrored Raspberry Pi header allows access to all pins and GPIO's on the Raspberry Pi.
- USB Power-In – Power the Raspberry Pi and the peripherals from a single USB in Port. Optionally, power only the electronics on the board but not the Pi. Continue to power the Pi from the Power port built in on the Pi. Note – the 3.3V power is still tapped from the Pi. 5V power is provided from the USB port.
- Use the Raspberry Pi Power – use the power from the Raspberry Pi for the 3.3V bus as well as 5V power.
- Provides 3.3V as well as 5V bus from the Raspberry Pi – makes it easy to access the appropriate power for I<sup>2</sup>C, SPI or other connections.
- Standard 0.1 inch or 2.54mm spacing – makes it convenient to attach resistors, diodes, Integrated Circuits, Circuit holders, breakout boards etc.
- Dual layer – solder on top layer or bottom layer. Makes adding components easy.
- LED indicator is on when power is on. LED can be turned off using the LED jumper on the board. Jumper shunt-in turns on the LED. When the shunt is removed, LED is turned off.
- Same dimensions as a Raspberry Pi. Mounting hole matches HAT specifications, allowing Pi-BB to be mounted securely on top of the Pi.

- Use with a Raspberry Pi or standalone for prototyping work. For stand alone, only 5V is available. 3.3V power is drawn from Raspberry Pi, Pin #1.

A comparison of the Pi-BB and a half-size breadboard is shown below.

Features	Pi-BB	Half Breadboard
		
Number of connections	30 x 10	30 x 10
Power bus	5V & Gnd as well as 3.3V & Gnd – power provided by Pi or provided via USB to Pi and the electronics on Pi-BB	Two sets – provide your own power \$\$
Connection	40 pin header soldered on board	Provide your own – \$\$
Mounting	HAT compatible, 4 mounting holes	None – \$\$
LED	On board indicating power available from board	None - \$\$
Power the Pi	Optional – can draw power from Pi or can power pi and electronics	None - \$\$
Connection Points	Can be soldered – providing mechanical stability. Alternately, connect using jumpers (needs single row headers soldered on) \$\$	Jumpers <b><u>ONLY – falls off easily</u></b>
Access to headers	Headers accessed via 40 pin header pin as well as mirrored pi-header all header pins are accessible	None – provide your own \$\$
Solder	Dual layer – makes solder easy from top or bottom	None.
Applications	Ideally suited for use with Raspberry Pi or Pi-clones – can also be used for general prototyping with 40 pin cable. Connect points are Arduino compatible.	Ideal for quick prototyping. Connect points are Arduino compatible.

# Specifications

## General Information

**Model Number:** Pi-BB

## Raspberry Pi Models supported

The board includes a 40-pin header. Any Raspberry Pi with a 40-pin header is supported. These are Pi 2, Pi 3, Pi Zero etc. Older Raspberry Pi models with a 26-pin header are not supported.

## Input

**Input Power Source:** USB port on Pi-BB. Power the Raspberry Pi as well as the electronics on the board.

**Raspberry Pi Power Source:** 5V, sourced from Raspberry Pi header, pin number 2.  
3.3V sourced from pin number 1.

**Input Power Source Jumper:** Jumper shunt in powers the Pi. Jumper shunt out

## Other

**Max Amps:** Maximum of 1.5 amps

**LED:** Red color. Can be disabled by removing the shunt from the LED jumper. When shunt is in, LED is on when power is provided from USB port.

**USB Port:** micro USB port. Compatible with Raspberry Pi USB power in port.

**Connect Points:** 300 connections. Count does not include connections for 5V, 3.3V and Ground bus. Connection points broken into 30 columns (numbered) x 10 rows (labelled A-J).

**Solder points:** Drill size 1.4mm, Via size 1.9 to 2mm.

**Header:** 2x20 female header, soldered on Pi-BB following Raspberry Pi Hat guidelines for header location. Male pins appx 13mm length.

**Mirrored header:** Pin numbers indicated on board. Pin #1 also indicated by square via.

**Bread-Board:** Create a bread board using Arduino compatible headers.

## Dimensions

**Board dimensions:** 85mm x 56mm x 10mm (2.5" x 2.2" x 0.4"). Board same as a raspberry Pi.

**HAT compatibility:** The spacer mounting holes are HAT compatible.

**Weight:** Less than 30 grams (1.1 oz.).

## Spacers

M2.5x12mm spacers recommended.

## Warranty

90-day limited warranty.

## Other Information

### Recommended peripherals:

**Pi-BB-HV** for Dual DC power, including 24V and USB power and more.

**Pi-EzConnect** for GPIO connections, Amazon Part ID [B01FE9EQ88](#)

**Spacers** – M2.5, 15 mm spacer kit, Amazon Part ID [B01M71WKMS](#)

**Pi-16ADC** for 16 bit, 16 channel Analog to digital converter board. Amazon Part ID [B01N7J31C1](#)

**Header** for creating a breadboard (solderless) recommend using 2.54mm headers such as [B00Y80U9C2](#) and [B0187LTEX2](#) (or search for alternatives on Amazon or eBay or other web sites.)

**RoHS Compliant.** Electronic components, board etc. are RoHS compliant.

**Operating Temperature:** 0°C to +70°C.

**Operating Humidity:** 10% to 80% non-condensing.

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