

## Breakout Garden pHAT

- PIM414

The easiest way to use breakouts with your Raspberry Pi. There's no soldering required, just pop up to three [Pimoroni breakouts](#) into the slots on Breakout Garden pHAT and get started coding and creating.

Grow your projects on Breakout Garden. It's ideal for prototyping projects without the need for complicated wiring, soldering, or breadboards, and you've always got the option of changing your setup thanks to the way that Breakout Garden works.

The three sturdy slots on Breakout Garden pHAT are edge connectors that connect the five pins on each Pimoroni breakout to the power and I2C (for data) pins on your Raspberry Pi. Because I2C is a bus, you can use multiple I2C devices at the same time, providing they don't have the same address (we've made sure that all of our breakouts have different addresses).

## Features

- Three sturdy edge-connector slots for [Pimoroni breakouts](#)
- 0.1" pitch, 5 pin connectors
- Broken-out pins (1x10 strip of male header included)
- Reverse polarity protection (built into breakouts)
- pHAT format board
- Compatible with Raspberry Pi 3 B+, 3, 2, B+, A+, Zero, and Zero W

## Using Breakout Garden

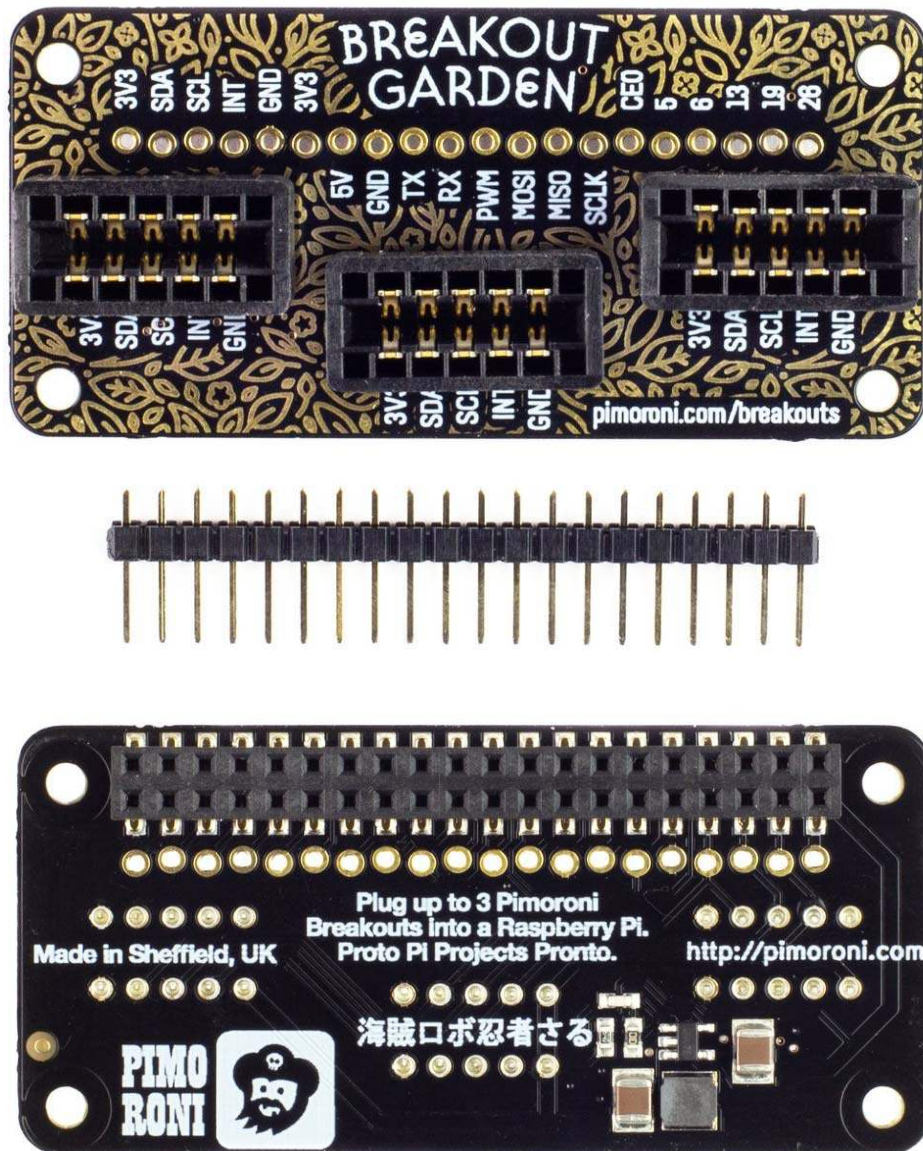
Because of the way that I2C (the protocol that Breakout Garden uses) works, it doesn't matter which slot on Breakout Garden pHAT you plug your Pimoroni breakout into. Each I2C device has an address (you'll see it on the back of each breakout) that it uses to identify itself to other I2C devices, so it's effectively saying to your Raspberry Pi, "Hey, it's me, Bob!"

We've built reverse polarity protection into our [Pimoroni breakouts](#), meaning that there's no magic blue smoke if you accidentally plug one in the wrong way round. However, the correct way to plug them in is to make sure that the labels on the pins on your breakout and the labels on each Breakout Garden pHAT slot match up.

We've also broken out a load of useful pins along the top of Breakout Garden pHAT, so you can connect other devices and integrate them into your Breakout Garden projects. If you have [Pimoroni breakouts](#) to which you've already soldered headers, then you can use this top row of pins to use them alongside other breakouts on Breakout Garden pHAT.

## Software

Head over to the Breakout Garden GitHub repo and give our automagic installer a go. Just pop a few breakouts into Breakout Garden pHAT, run the installer, and SHAZAM!, the software for the appropriate breakouts will be installed. We've also got a few nice examples to show you what's possible.



<https://shop.pimoroni.com/products/breakout-garden-phat/12-7-18>