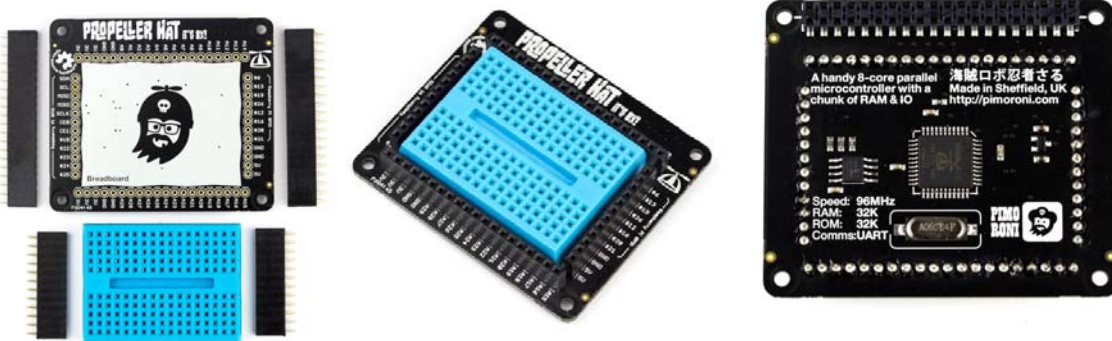# Propeller HAT

PIM083

Propeller HAT will get you flying in the world of microcontrollers, whether you're just learning the ropes, or using it as an integral part of your home automation project.

We've brought the much-adored Parallax Propeller microcontroller to the Raspberry Pi in an experimentation-friendly HAT format that includes a mini breadboard for prototyping and breaks out a whole array of signals from both Pi and Propeller.

Ideal for servo twiddling, robot building, IO expanding, VGA driving, or rockin' to classic tunes with sound chip emulators like SIDcog. Parallax's Object Exchange is packed with code examples and libraries.

Features

- Stonkin' 8-Core microcontroller handles menial IO tasks for your Pi
- 30 general purpose IO pins controllable by any of the 8 cores
- Easy to program using the Pi-compatible Propeller IDE and SPIN language
- 170 point (17x5 on each half) breadboard for prototyping
- SPI, I2C and 15 other pins broken out
- Fully open-source hardware, right down to the microcontroller!
- Compatible with Raspberry Pi 3, 2, B+, A+, Zero, and Zero W
- Full software library including Python
- **Female headers require soldering**

Software

All the tools you need to program Propeller HAT will run on the Raspberry Pi. From Propeller IDE, the software you need to write SPIN code, to OpenSpin (the compiler), and p1load (the loader).

We've put all of the software for Propeller HAT, including a Python library, together into a GitHub repository. Our Python examples allow you to instantly transform your Propeller HAT into a 30-pin IO expander or PWM driver. https://github.com/pimoroni/propeller-hat