

MoPi

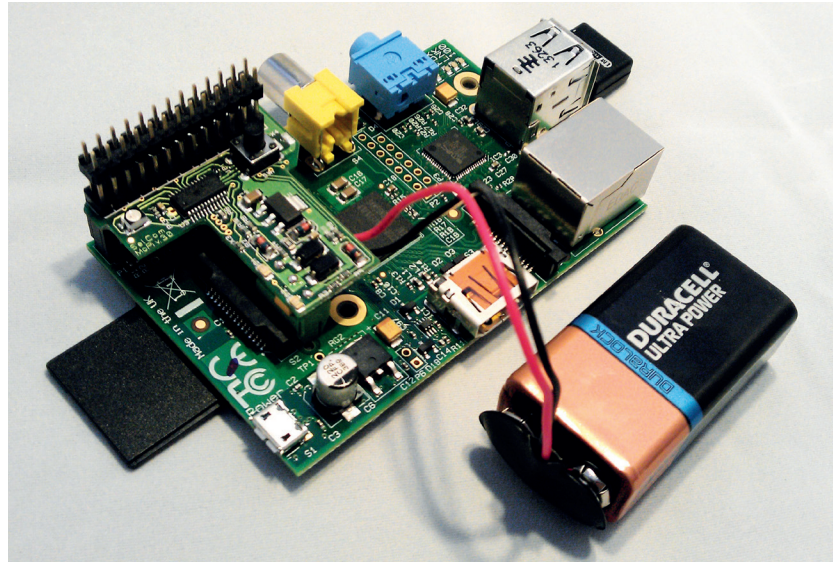
When Captain Kirk asks Scotty for “More power” he probably use MoPi. Les Pounder is “giving her all she’s got Captain!”

The Raspberry Pi has become the go-to piece of kit for a multitude of projects both indoors and outdoors. While we are blessed with power supplies indoors, out in the great wilderness there are a shortage of plug sockets located in trees or clouds. So when we need to use a Pi outside, the normal route is to use a mobile battery. These are great but rarely tell us when the battery is going to die. MoPi by GATE is a board of many talents. The small board attaches to the GPIO pins of the Raspberry Pi and can be connected to multiple sources of power from a simple 9V battery to a bespoke LiPo battery pack, and these power sources are hot-swappable, enabling replacement power while in the field.

The flexibility offered by MoPi is immense. You can attach any type of battery to the board, as long as it supplies at least 6V and at most 20V of power (the regulators built in to MoPi convert the power to a more Pi-friendly level). MoPi can even be attached to an external battery source while your Pi is attached to the mains at the same time, so when the mains supply goes off, the battery will automatically kick in and power your Pi. Used like this, it’s a small and clever UPS for your Pi.

Power management


MoPi is not just a board – it is also a suite of software that can be calibrated to your exact needs, with many types of battery covered in their various configurations. For example, a Raspberry Pi Model B powered by eight AA Duracell batteries and with attached keyboard, mouse and Ethernet can run for nine hours and 31 minutes. With a Wi-Fi dongle attached, this will drop by half to around four hours 45 minutes, which is still impressive considering Wi-Fi is very power hungry. Using a Model A board, which has



MoPi fits neatly on top of the Raspberry Pi and is small enough to work with existing cases such as the Pibow from Pimoroni.

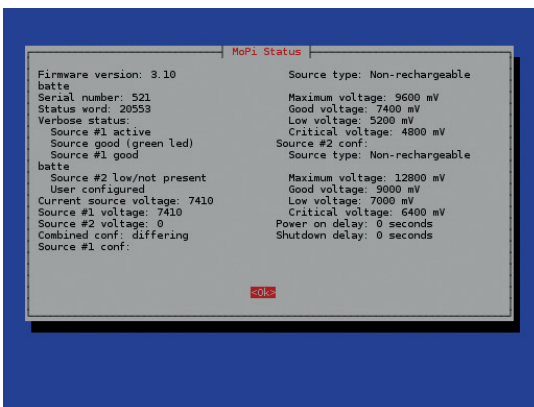
a much reduced power consumption rate, MoPi claim that the board can be powered by the same AA batteries for double the time of a Model B.

The MoPi is at home both indoors and out. Indoor applications include using the MoPi as a UPS for a time-lapse camera or web server, keeping the system running until the mains power can be restored. Outdoors, MoPi has been used to power a home brew Go Pro project and, using the official Raspberry Pi camera and a wide-angle lens, to capture the action of a snowboarding session and a bike ride. The MoPi comes with a simple micro switch to turn the board on and off in a graceful manner similar to a laptop power system. A built in RGB LED provides a visual indication of your power sources, with blue indicating a full power source, green an acceptable rate of power and red for when batteries are starting to run out, and the board also indicates which power source is running out by flashing a yellow LED next to the input.

MoPi comes in two versions: a low-profile board with no GPIO passthrough, and a stackable board that enables other boards to be used on the GPIO. It’s the Swiss Army knife of Raspberry Pi power and a must for any outdoor or power-critical projects. 

DATA

Web
<https://pi.gate.ac.uk/pages/mopi.html>
Developer
 GATE/Sheffield
 Pi-Tronics
Price
 £25



MoPi comes with a suite of config tools in an easy-to-use menu, so information is just a few key presses away.

LINUX VOICE VERDICT

A small board with big possibilities. Launch it into space, send it under the sea, or photograph cross.

★★★★★