**Quick2Wire Pi Interface (Beta) Review**

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The Quick2Wire Pi Interface Board is a new interface board for the Raspberry Pi. It will go on sale in early 2013. I managed to get hold of one of the beta kits for review and also had a chat with Romilly Cocking, Director of Quick2Wire.

 **So, What’s in the kit?**

* 1 printed circuit board (PCB)
* 1 multi-coloured ribbon cable
* 4 jumpers
* 11 assorted headers
* 2 transistors (FETs)
* 1 tantalum capacitor
* 1 light emitting diode (LED)
* 1 push-button
* 1 voltage regulator (3V3)
* 1 diode array
* 16 resistors

PHOTO of kit parts

**Interface Build**

The build was a pleasure. I’d been teaching my son to solder the day before, so I’d left the leaded solder out and the leaded bit on the iron. I decided to go with those for this build.

The instructions are clear and the build is quite easy. You could probably build it without the instructions because the excellent silk screen layout, printed on the board, shows you what goes where. The only potential pitfalls are the orientation of the diode array and tantalum capacitor. They both have to be the right way round. The instructions explain how to make that happen. Smile

It took me about 20 minutes to do all the resistors (I was fussy about aligning them). Overall, it took 53 minutes from start to finish and it was an enjoyable experience. This is what it looks like finished.

Photo of built up board

**Software Installation**

Next step was to fully update Raspbian and install some software to test the interface. The instructions were excellent and software installation worked flawlessly. The longest part was doing the Raspbian package updates (sudo apt-get update/upgrade).

Pull-quote (if you want one)

*“The thing which stands out here, compared to other Python based GPIO drivers, is that, as long as you are in the “gpio” group there’s no need to be a sudo user to run the commands. This is great!”*

**Testing Procedures (from the manual)**

Test commands are given for switching the led on/off and reading the button’s status (pressed/unpressed). These worked perfectly (although the LED on mine is not very bright).

Then you are invited to test your 5V FTDI interface (a type of cable you can use to log in directly with no network connection) if you have one. Mine worked perfectly. I was able to get a command line terminal login through the serial port. And that completed the structured test procedures. Everything passed.

**Testing the Quick2Wire Python Libraries**

Digging a bit deeper than the test manual instructions, I downloaded the Python Quick2Wire libraries from GitHub <https://github.com/quick2wire> and went through two test programs I found there – flashing the led and using the button to control it. These weren’t yet documented.

It’s worth mentioning that you can use this software library, to control GPIO ports, regardless of what hardware you have (apart from the Pi itself). So, theoretically, I could write a third Python version of the Gertboard test suite to go with the WiringPi for Python and RPi.GPIO versions.

**RGB LED**

So then I wrote a little script to blink a three colour (Red, Green, Blue – RGB) LED different colour combinations using P7, P6 & P5 (Q2W numbering scheme) as outputs. That also worked perfectly. Here’s a link to a video guided tour of the Quick2Wire board with test programs in action. <http://youtu.be/JJuKtsdAerU>

**We Interrupt this Article...**

Another area the Quick2Wire Python libraries stand out (which I haven’t explored yet) is epoll support. This allows you to control things using interrupts instead of continual polling. This means that you can have your program respond to a change, instead of using up loads of processor power continually checking the GPIO ports’ states. This is an important development.

**Conclusion**

The Quick2Wire Pi Interface is a very nice board with a lot of promise and what looks like being a very good Python Applications Programming Interface (API) behind it. It’s going to be priced cheaper than you’d be able make one yourself. Being ultra-fussy, I’d prefer a more visible (brighter) LED. But that’s really the only thing I’d change, which is saying a lot!

**The Future?**

There’s a lot more Quick2Wire add-on boards in the pipeline, including an analog to digital converter (ADC), motor controllers, lcds, servo controllers etc. It’s going to be a modular system, easy to build and easy to use. There’s even talk of a Scratch interface at some point down the line.

All the hardware and software is open source. The emphasis is on software libraries and much needed free teaching resources. It looks very much to me as if Quick2Wire is one to watch. Their web site is at Quick2Wire.com.

I don’t know if you do “about the author” stuff, but if you do, here’s something you could use.

Alex Eames runs the RasPi.tv blog, where he’s often up to something educational, fun, innovative or just plain silly with a Raspberry Pi. He also wrote the Python port of the Gertboard software.