

Open Hardware and Devices With GNU/Linux

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- [Instaclock | The Magpi 92](#) [4]

- [\[Old\] BrailleBox: Android Things Braille news display](#) [5]

To create the six nubs necessary to form Braille symbols, Joe topped solenoids with wooden balls. He then wired them up to GPIO pins of the Pi 3 via a breadboard.

- [Sending my alerts directly to the keyboard](#) [6]

As I learned while making this blog post, custom drivers are not always the best way to add custom functionality to USB devices on Linux, sometimes there are pre existing APIs that can make adding functionality a lot easier.

Despite me ending up not using a custom USB driver in the final version, it was still quite interesting to play around with, if for no other reason than I now have another trick up my

sleeve for future projects.

And now thanks to my keyboard, I will never miss alerts again.

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[Onlykey review](#) [7]

There's a sort of soft rubber case around the key, you can get all kinds of colors (I just stuck with black). It also comes with the handy little carabiner to attach it to your keychain or whatever.

So, once you have the firmware somewhat up to date, you can run the app. It will also update firmware as long as it's not too old. The firmware is open source:

<https://github.com/trustcrypto/OnlyKey-Firmware>

On your first run (or if you factory wipe it), you have to do a bit of setup. You can enter 2 profile pins (sequences of buttons). They suggest that this might be "work" and "home", but you could use them for whatever you like. You can also enter a "self destruct" profile pin, which wipes back to factory settings if you enter it. You can also tell it to do this if someone enters the wrong pin 10 times, but it will flash red and stop taking input after 3 failed pins. So to wipe it this way you have to enter 3 wrong pins, remove, insert, 3 more wrong pins, remove, insert 3 more wrong pins, remove, insert, 1 more wrong pin. You can also load a firmware called the "International Travel Edition" that has no encryption at all (it's only protected by the pin).

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[Widora TINY200 Allwinner F1C200s ARM9 Development Board Support DVP Camera, Up to 512MB SD NAND Flash](#)[8]

Widora TINY200 is a tiny ARM9 development board equipped with Allwinner F1C200s with a DVP camera interface compatible with OV2640 / 5640 sensor, an audio amplifier, and various storage options from a 16MB SPI flash to a 512MB SD NAND flash.

I first heard about the processor when I wrote about Microchip SAM9X60 ARM9 SoC last month, and some people noted there were other fairly new ARM9 SoCs around such as Allwinner F1C200s that also includes 64MB RAM so you can run Linux without having to connect external memory chips.

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[Librem 5 January 2020 Software Update](#) [9]

January saw development take off again after the end-of-year break, and following on from the Chestnut shipment of the Librem 5.

Some of the activities below were already mentioned in their own articles in Purism's news

archive; others will be covered in more depth in future articles. This is just a taste of all the work that goes into making the Librem 5 software stack. You can follow development more closely at source.puri.sm.

- [**ESP32-S2-Saola-1 Development Board is Now Available for \\$8**](#)^[10]

Espressif ESP32-S2 WiFi SoC mass production started at the end of February 2020, and soon enough we started to find ESP32-S2 SoC and modules for \$1 to \$2 on sites like Digikey, but so far we had not seen ESP32-S2 development boards for sale.

The good news is the breadboard-friendly ESP32-S2-Saola-1 development board has started to show up for \$8 on resellers such as Mouser and Digikey albeit with a lead time of 8 to 12 weeks.

[GNU Linux Hardware](#)

Source URL: <http://www.tuxmachines.org/node/136001>

Links:

[1] <http://www.tuxmachines.org/taxonomy/term/144>

[2] <http://www.tuxmachines.org/taxonomy/term/63>

[3] <http://www.tuxmachines.org/taxonomy/term/39>

[4] <https://www.raspberrypi.org/blog/instaclock-the-magpi-92/>

[5] <https://www.raspberrypi.org/blog/braillebox-android-things/>

[6] <https://blog.cynthia.re/post/keyboard-alerts>

[7] <https://www.scrye.com/wordpress/nirik/2020/04/03/onlykey-review/>

[8] <https://www.cnx-software.com/2020/04/04/widora-tiny200-allwinner-f1c200s-arm9-development-board-support-dvp-camera-up-to-512mb-sd-nand-flash/>

[9] <https://puri.sm/posts/librem-5-january-2020-software-update/>

[10] <https://www.cnx-software.com/2020/04/03/esp32-s2-saola-1-development-board/>