Open Hardware Leftovers

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- **How I Built a Homelab on the Budget** [2]

  In my previous article, I discussed what is a Homelab and why you should (or should not) have one for yourself.

  Now, can anyone who wants or need, have a homelab? It depends on several things but money or resources can be worked around. In this article, I will explain how I have managed to have my own Homelab without investing a fortune in it. As a matter of fact, it costed me less than US $1,000 and it works good enough to manage my home's infrastructure requirements.

  That being said, it is important to mention as a disclaimer: this article doesn't describe the best way to do things. It just describes how I manage to make it work even knowing there are some issues and risks with it but for now, I am fine to live with these.

- **Want Octoprint But Lack A Raspberry Pi? Use An Old Android Phone | Hackaday** [3]

  3D printers and Octoprint have a long history together, and pre-built images for the Raspberry Pi make getting up and running pretty easy. But there?s also another easy way to get in on the Octoprint action, and that?s to run it on an Android phone with the octo4a project.

- **This Raspberry Pi Mini ITX Board Has Tons Of IO | Hackaday** [4]

  The Raspberry Pi now comes in a wide variety of versions. There are tiny little Zeros, and of course the mainstream-sized boards. Then, there?s the latest greatest Compute Module 4, ready to slot on to a carrier board to break out all its IO. The Seaberry is one such design, as

demonstrated by [Jeff Geerling], giving the CM4 a Mini ITX formfactor and a ton of IO. (Video embedded after the break.)

The Seaberry sports a full-sized x16 PCI-E port, with only 1x bandwidth but capable of holding full-sized cards. There?s also four mini-PCI-E slots along the top, with four M.2 E-key slots hiding underneath. The board then has a M.2 slot in the middle for NVME drives, and x1 PCI-E slot hanging off the side.

- ### [2021 Open Source Pay-it-Forward Pi Giveaway](#) [5]

  To solve both problems, I'm doing a giveaway?to enter to win one of any of the pictured items below (and maybe a few others I can find lurking in my office), just donate or say thank you to any open source project or maintainer, then submit your entry.

- ### [Mini-ITX Seaberry adds 11 PCIe slots to a Raspberry Pi](#) [6]

  But it's definitely a specialty board. People who need a low-power ARM-based development or experimentation platform could use this board like I do, to test more exotic configurations on the Pi. And it's looking like it will be the first commercially-available (though not cheapest) ways to install a Pi into a standard desktop or rackmount PC case, since it's mini ITX.

- ### [xa 2.3.12](#) [7]

  I've updated xa, André Fachat's venerable 6502 cross-assembler, to version 2.3.12. This contains a bug fix for a regression in 65816 mode which I'd meant to release earlier but got sidetracked on (thanks Samuel Falvo for the nice test case, which is also incorporated into the suite). As with prior versions it is tested on pretty much all of my Un*x-alike systems here including AIX, Mac OS X (PowerPC, Intel and Apple Silicon), NetBSD/mac68k and Linux/ppc64le. I said this before for 2.3.11 but one more time for the record: this will probably be the last in the exceptionally long-lived 2.3 series before 2.4, which as I keep warning you will definitely have some minor compatibility breaks and jettison a couple long-deprecated options and syntaxes (but will have some new features to make up for it). Again, more to come on that.

[Hardware](#)

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[2] https://linuxhandbook.com/building-budget-homelab/

[3] https://hackaday.com/2021/11/27/want-octoprint-but-lack-a-raspberry-pi-use-an-old-android-phone/

[4] https://hackaday.com/2021/11/28/this-raspberry-pi-mini-itx-board-has-tons-of-io/

[5] https://www.jeffgeerling.com/blog/2021/2021-open-source-pay-it-forward-pi-giveaway

[6] https://www.jeffgeerling.com/blog/2021/mini-itx-seaberry-adds-11-pcie-slots-raspberry-pi

[7] https://oldvcr.blogspot.com/2021/11/xa-2312.html