

TABLE OF CONTENTS

<i>PINAS V2 - DESIGN PROGRESS (HDD CAGE & CADDIES VALIDATED)</i>	3
<i>REDISCOVERING ENGINEERING THROUGH 3D PRINTING</i>	5

3D PRINTING



PINAS V2 - DESIGN PROGRESS (HDD CAGE & CADDIES VALIDATED)

Author(s): Louis Ouellet

PiNAS is back — and this time, it's more than just an iteration.

Over the past few weeks, I've been deep into redesigning my Raspberry Pi-based NAS from the ground up. What started as a simple idea quickly turned into a series of design challenges, print tests, and unexpected lessons.

This article isn't just about what works — it's about what didn't, what changed, and why.

[Read more](#)

2026/03/24 20:18 · Louis Ouellet · [0 Comments](#)

[3d-printing](#), [project](#), [raspberrypi](#), [pinas](#), [raspberry pi](#), [nas](#), [homelab](#), [3d printing](#), [3d design](#), [diy](#), [hardware design](#), [prototyping](#), [modular design](#), [storage](#), [sata](#)



REDISCOVERING ENGINEERING THROUGH 3D PRINTING

Author(s): Louis Ouellet

I didn't buy a 3D printer to print toys. I bought it to prototype systems.

In early October, I added a BambuLab P1S to my lab. Most people start with a Benchy — a calibration cube, a cable clip, something small and forgiving. I opened FreeCAD and started designing a NAS enclosure from scratch.

Probably not the most subtle first print.

But I wasn't interested in printing trinkets. I wanted constraints. I wanted tolerances. I wanted airflow questions, structural rigidity concerns, screw alignment problems, and the kind of iterative refinement that forces you to think before you click "print." I wanted to push engineering muscles I hadn't used since high school — the ones that make you consider load distribution, clearances, material thickness, and assembly order.

For years, most of what I build has been invisible: servers, scripts, infrastructure diagrams, automation pipelines. Systems that live in racks or in the cloud. With 3D printing, for the first time in a long time, I could design something in the morning and physically hold the result in the evening.

Something functional. Something structural. Something real.

That decision — to start with a NAS enclosure instead of a novelty print — set the tone for everything that followed.

[Read more](#)

2026/02/14 12:22 · Louis Ouellet
[general](#), [blog](#), [p1s](#), [3d-printing](#), [diy-kits](#)

From:

<https://laswitchtech.com/> - **LaswitchTech**

Permanent link:

<https://laswitchtech.com/en/blog/3d-printing/index>

Last update: **2026/03/24 14:16**

