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# Raspberry Pi Gamer

*"Because we never came up with a better name..."*



Computer Systems  
Design Laboratory

## The Idea:

**Design, Build and Implement** a handheld game-streaming console that allows for remote play of Steam PC games.

### Design

- Pick components
- Layout circuit diagrams for peripherals
- Create a 3D printable casing that fits all parts

### Build

- Augment Raspberry Pi board to fit design
- Solder together additional components
- Print and assemble casing

### Implement

- Test and tweak Moonlight for prototype
- Write drivers for all inputs and outputs
- Refine design iteratively

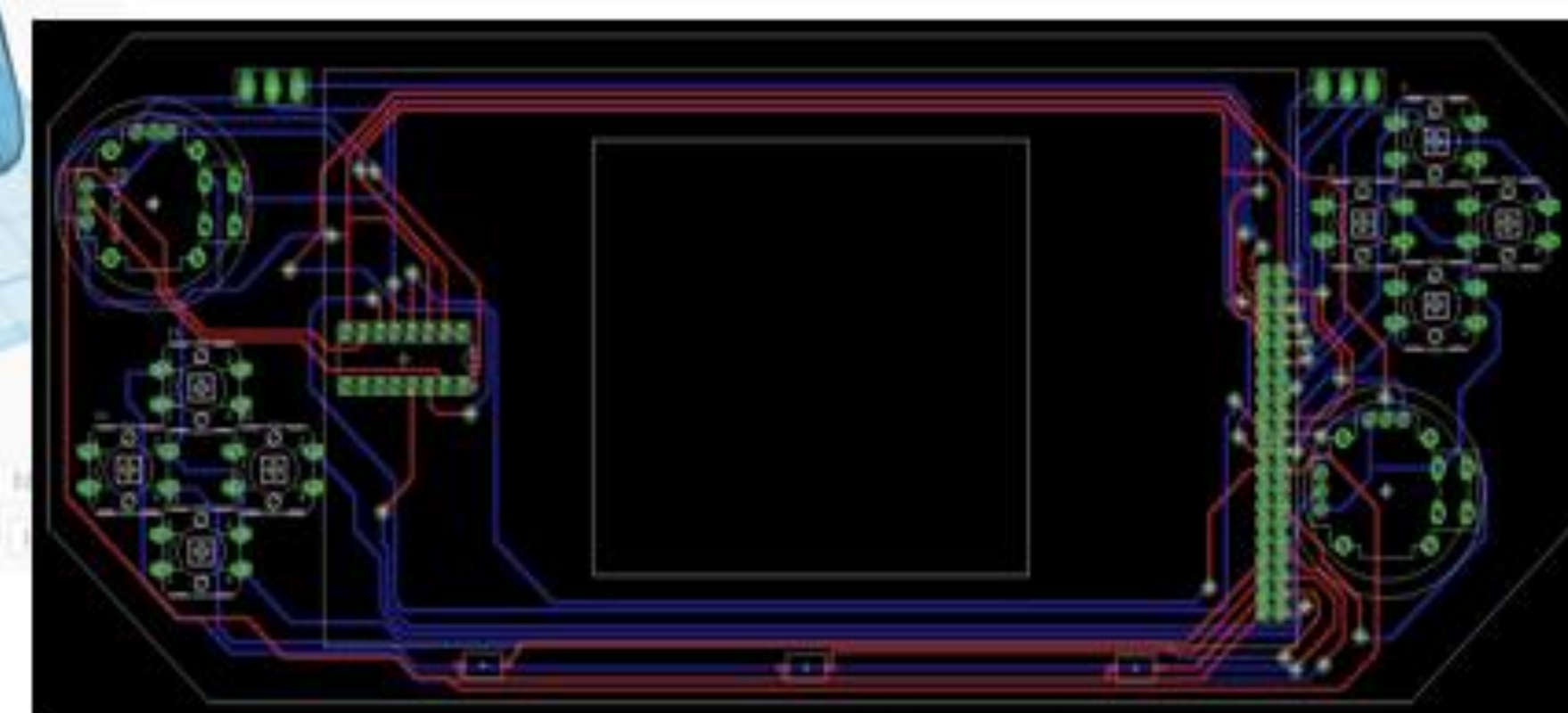
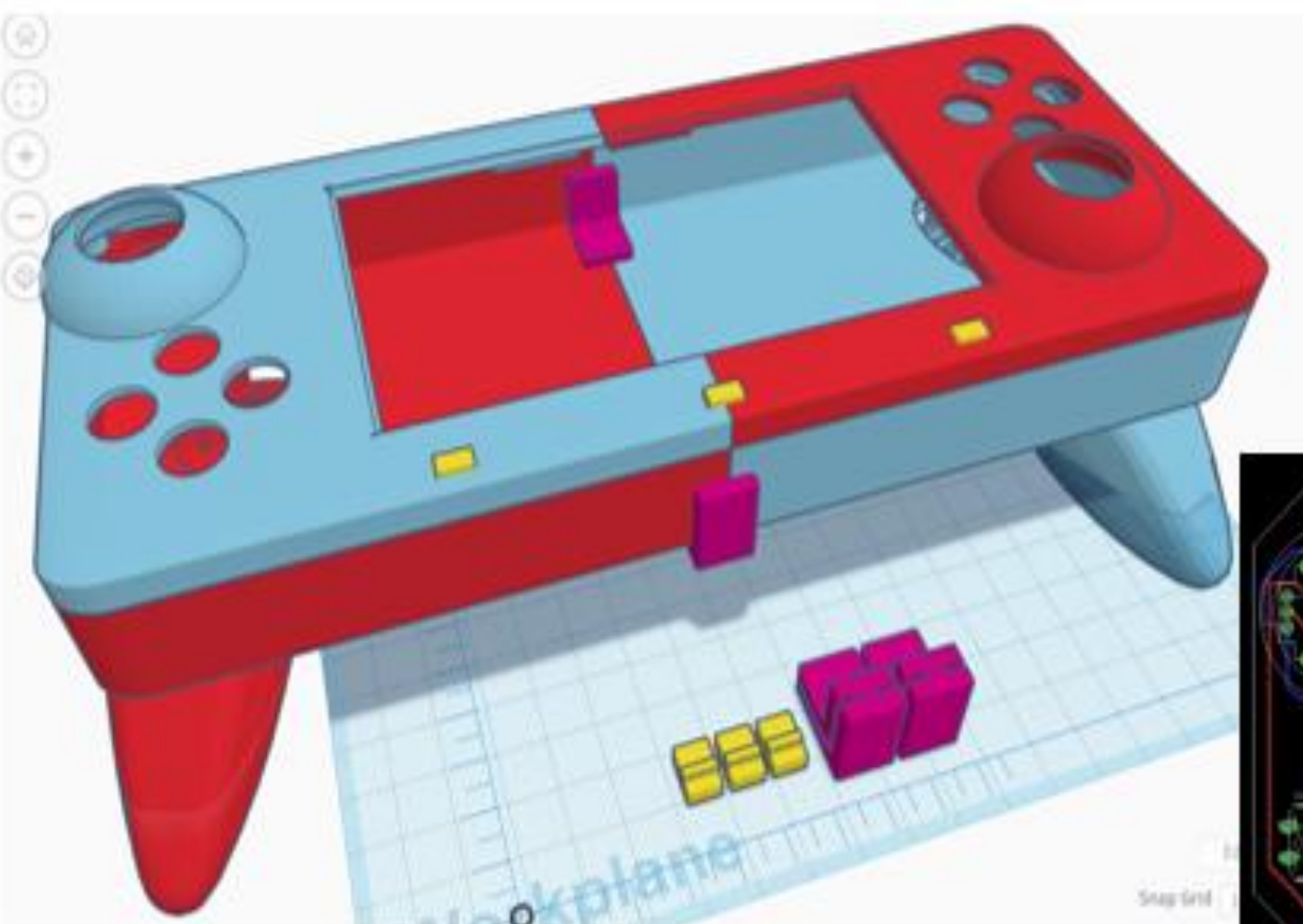
## Cornerstone Technologies

- Raspberry Pi is a common, well supported ARM microcontroller.
  - Designed to service multiple peripherals and has built in HDMI support.
- Moonlight is an open source implementation of the Nvidia GameStream protocol used in such products as the Nvidia Shield



## Hardware and Software Systems

- The 3D-printed case and button design were made in Tinkercad, a free browser-based 3D modeler.
- PCB design for the controller inputs were completed with EagleCAD and milled by the EECS shop.
- All drivers and software systems were written in Python 2.7.15.



## Revision v4

