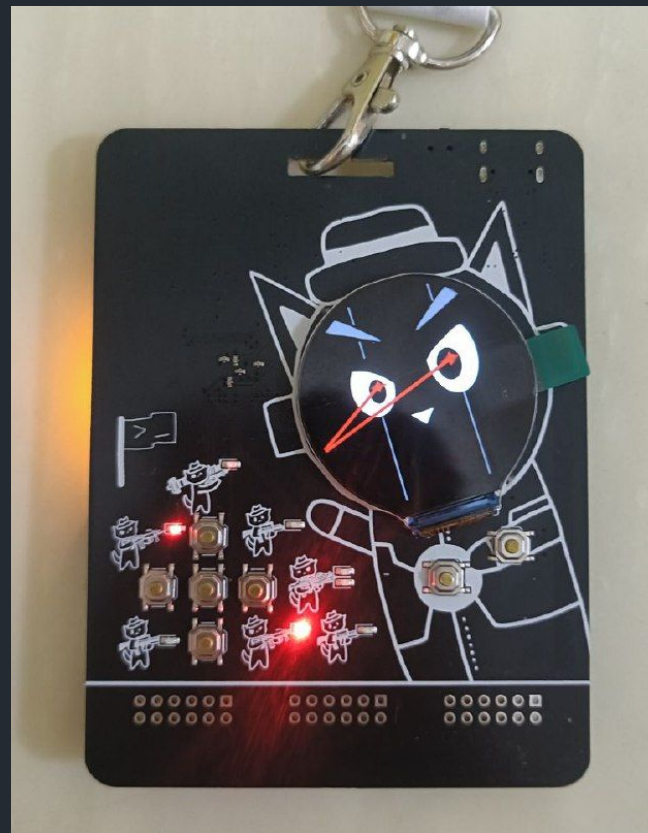# GreyMecha/Army

The GreyCTF 2025 badge

Instructions

Menu Options

1. Hi I'm Locked In (Does nothing)

2. Live Firing

3. Animation

4. Face (Images)

5. Music

6. Brick Game

7. Brick Good

8. Asteroids
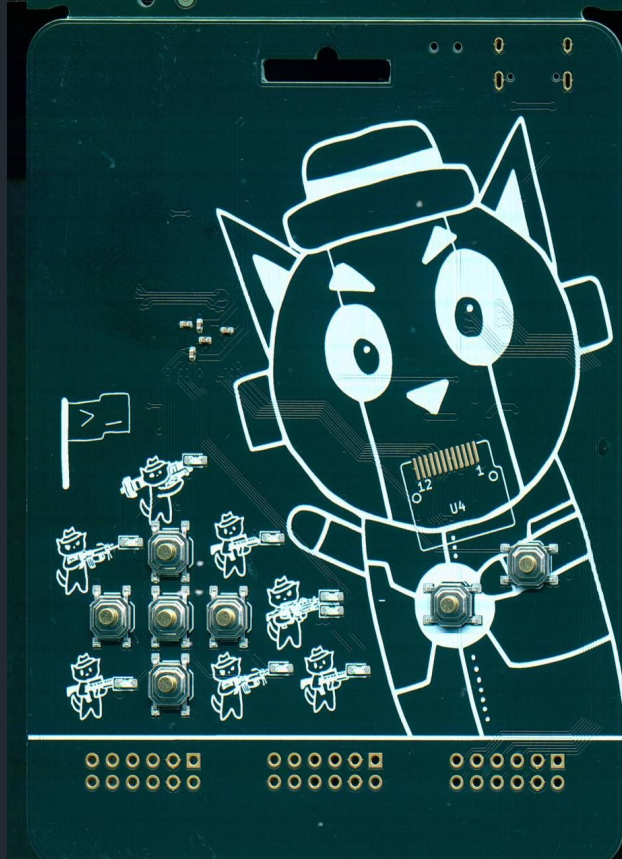
9. Controller (USB HID Controller)

- "When I saw Loading FPGA I thought it was a joke"
- It wasn't a joke
- that guy spent half the CTF doing the FPGA challs
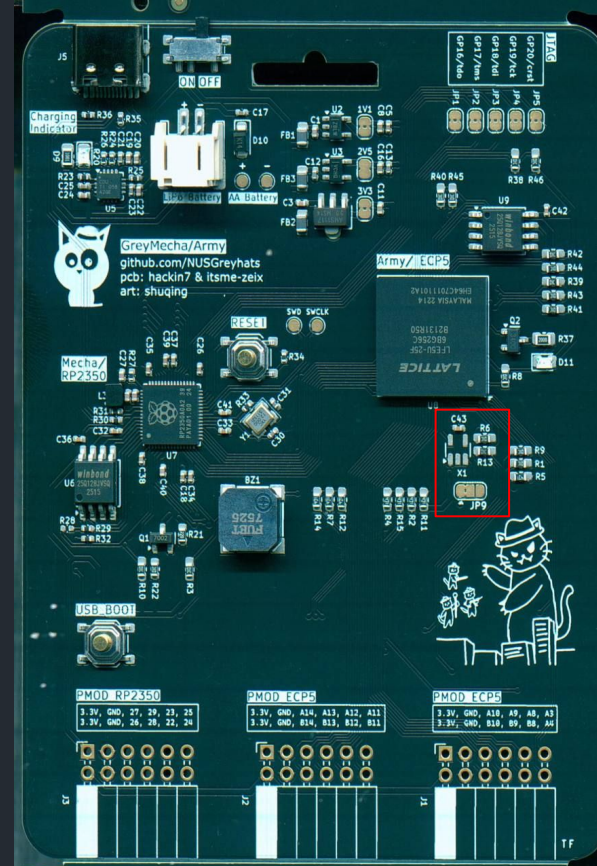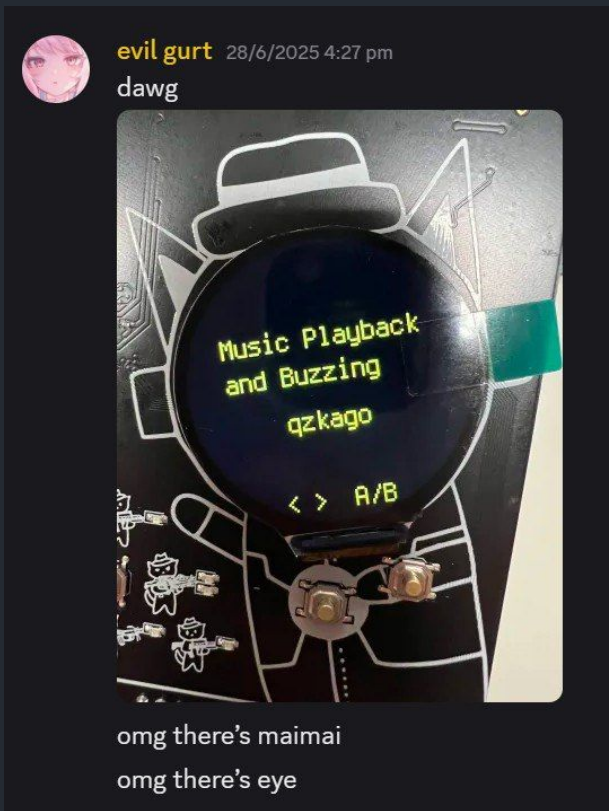
Design

On off Switch

SMD Solder funz

Screen

Buttons + LEDs

Header Pins

Features

pew pew pew
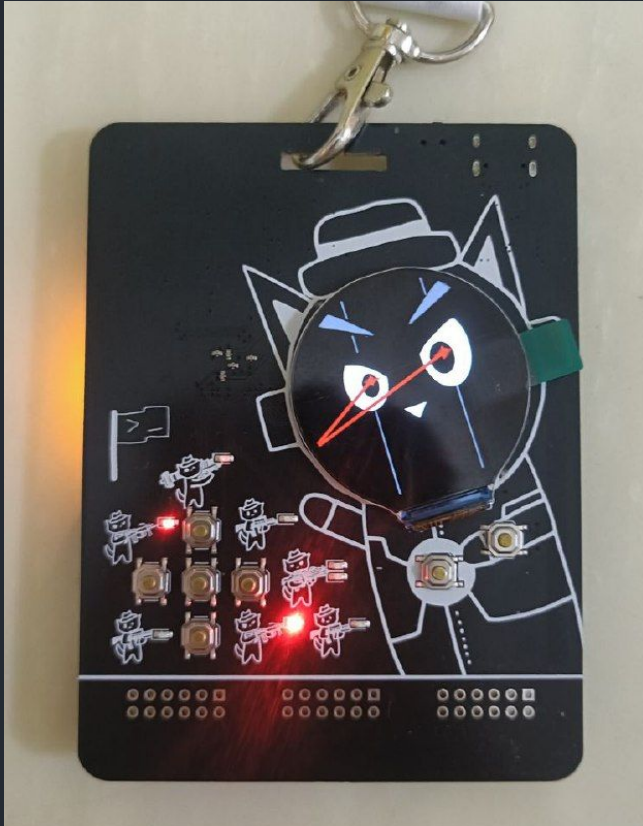
Menu(s)

< - Left

> - Right

A - Select

B - Back

Live Firing

Hold down A/ B

-   Quit Live Firing

Hold down B on startup

-   Disable Buzzer

pew pew pew

beep

aahahahah

Animation/ Face

< >	Cycle through faces/ animations
A	Pause Animations
Long press A	Toggle LEDs
B	Back

Games

And More?

Brick Good- Hold down B on startup to disable music

Brick Game is a CTF Challenge

Challenges
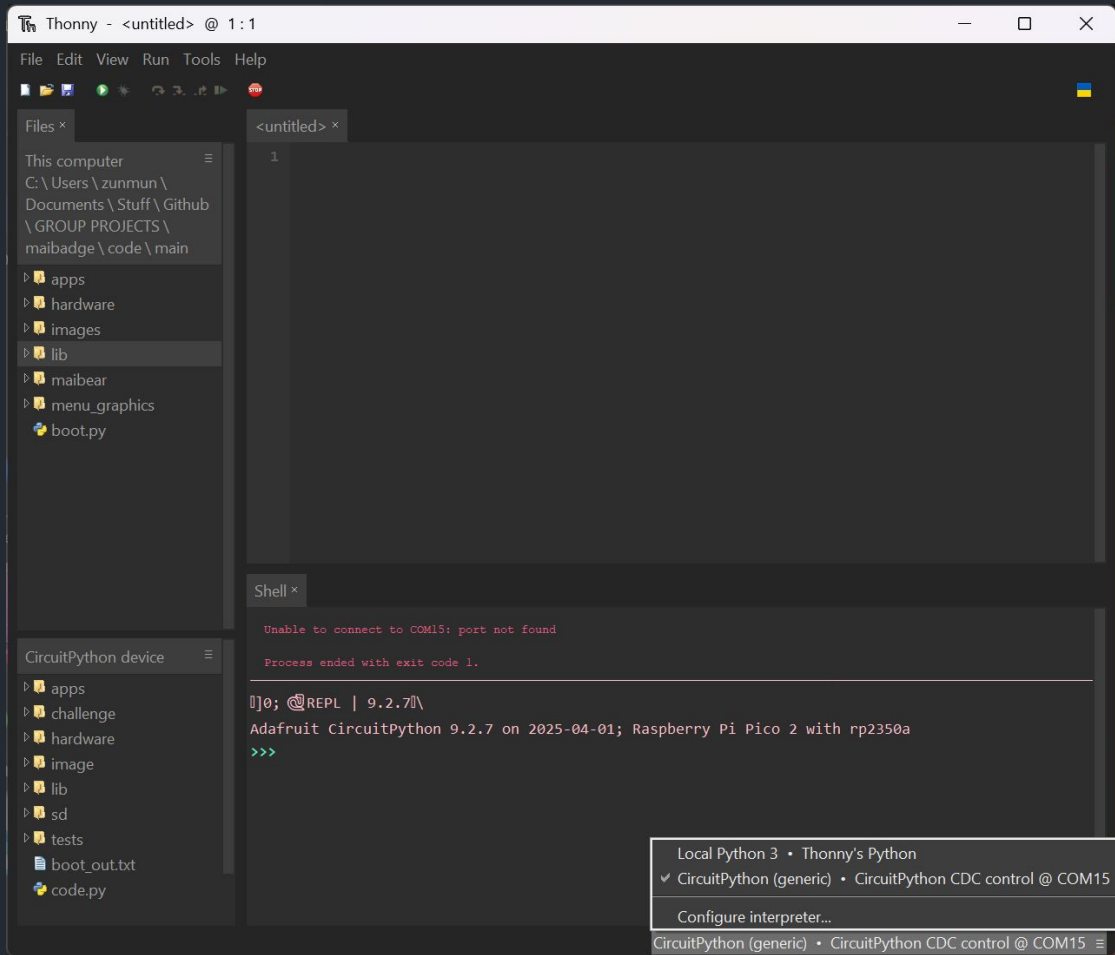
pew pew pew

USB

The badge runs CircuitPython

It should show up as a USB Flash Drive to interact with the files

You can use an IDE like https://thonny.org/ or https://code.circuitpython.org/ to interact with it

Updating Firmware

ooh new game?

Update Firmware

Reset the board while holding down the USB BOOT button

Download the uf2 from https://github.com/NUSGreyhats/greybadge25/releases and drag it to the badge

should be all good!

Stuff I'm too lazy to fix manually

as an FYI the command in your docs is off by two characters

you need two more junk hyphens

The hyper instruction is 16 characters long and the format is described later below

For example, an Instruction to display the flag (under devmode) is as such

D@---------DEV@D

Resources

https://hackin7-blog.vercel.app/

https://github.com/NUSGreyhats/greybadge25

Other stuff

- To generate bitstream for the FPGA use yosys and nextpnr-ecp5
- You can install on wsl, make the sample projects (from github), and transfer over to GreyMecha/Army

GreyMecha/Army!