

# Power and Control

## Batteries

Battery 1

Capacity:  $71,688\text{mah} + 17,457\text{mah} + 14,206\text{mah} = 103,351\text{mah}$

Battery 2

Capacity:  $90,007\text{mah} + 12,816\text{mah} = 102,823\text{mah}$

Battery 3

Battery 4

## PCB Iterations

### V0.1 (Breadboard)

Pre-PCB design that often was multiple parts of the system that would eventually become one.

#### Pros

- Easy to add/change components for testing

#### Cons

- Unreliable connections

#### Components

- [ESP32-WROOM-32U](#)
- [FLIPSKY 75100 VESC](#)

- [Stepper motor driver DM542T](#)
- [SparkFun Logic Level Converter - Bi-Directional](#)

## V0.1 (Breadboard)

# V1

Version one was created by Brandon Marcellus & Juan Silva early on in the start of the project after we had started some of the basic wiring of control and data collection.

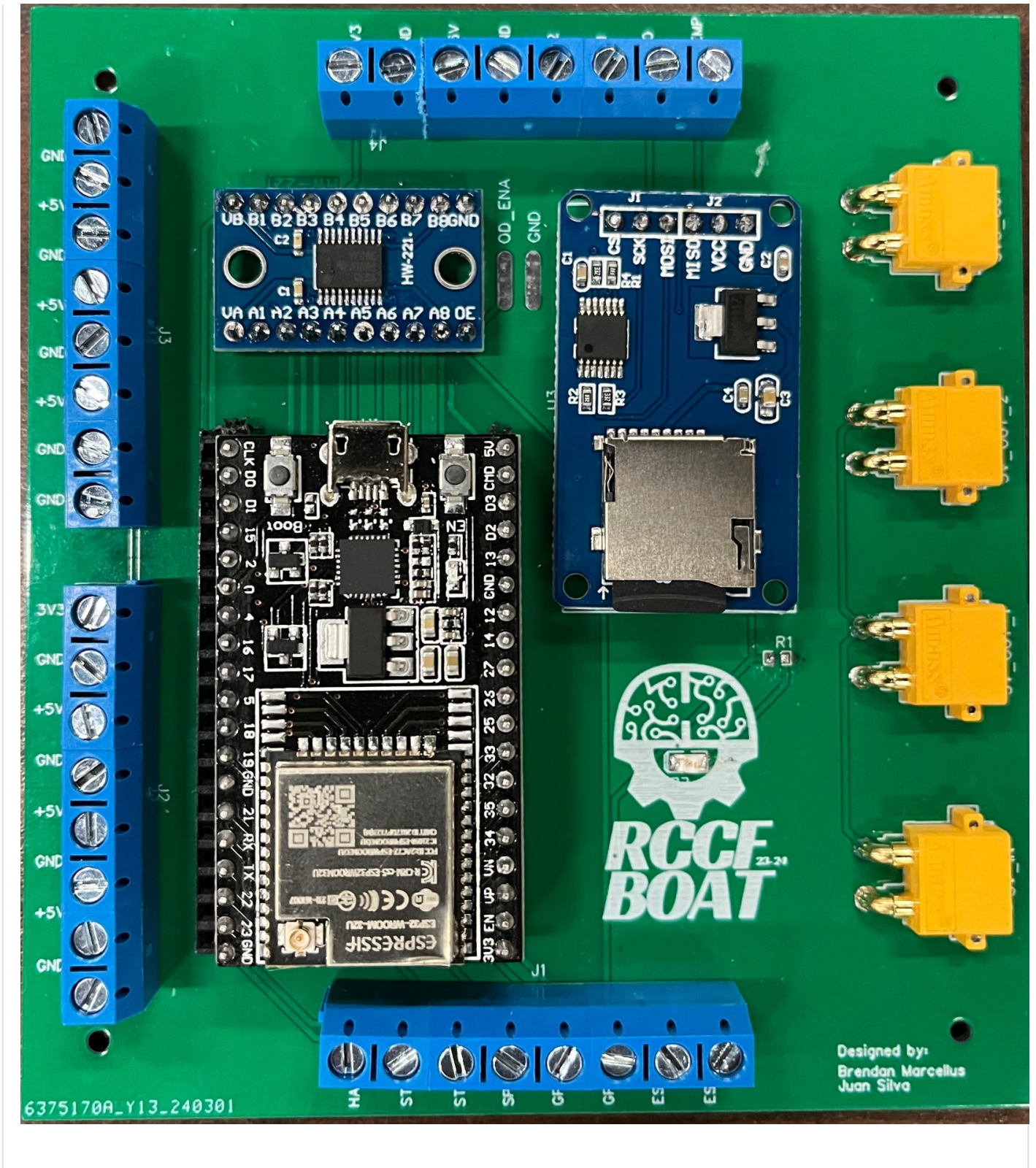
## Pros

- Organization greatly improved
- Power distribution
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## Cons

- Logic level shifter was not wired correctly
- Not enough IO ports were available for use
- SD Card module VCC pin was connected to 3.3V instead of 5V

## V1



V 1.1 (Breadboard)

V2

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Revision #1

Created 6 May 2026 00:17:12 by Caicheng Li

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