Rocket Club Avionics Projects:

# Sparkfun Nina b306

**Project Goal:** Create firmware to support the Sparkfun Nina B306 in log various sensors, at the maximum data transfer speeds that the chip can handle, in CSV format microSD card.

**System Hardware:**

* LIPO battery with a JST connector.
* MicroSD connected to the MCU, needs to be reformatted for FAT32 format.
* Mount/Enclosure includes a tight fit to the specific payload tube being used. Use materials with mechanical damping.

**How does it help the club:** For only 55 dollars per chip the Sparkfun Nina B306 can serve as a cheap and reliable option for recording some of the key characteristics of a rocket launch for low power, mid power, and L1 rockets.

**Keep code complexity LOW:** We want to keep the firmware as simple as possible. More features and complexity can cause more power consumption, more interruptions (slower data logging) and less redundancy. We want this to be a safe option for the future of rocket club.

9/19/25 Mark H. is working on this.

The code is available here: <https://github.com/JackKochensparger/rocket_club_avionics>

# OUROCK1Controller

**Project Goal:** Create a custom PCB to log various sensors to a microSD, and also transmit the data real-time via radio transmission to a ground station.

The scope of this project is going to be decided soon. I have a couple ways in mind to divide up work.

**Onboard 2-layer PCB:**

**Ground Station 2-layer PCB:**

**Real-time python/high-level data interpretation/ dead-reckoning:**