Datalogger

# Hardware

## Raspberry Pi

## CAN HAT

## RTC

# Software

## Directories

All files pertaining to the Datalogger are found in /data/

* /data/scripts – all scripts that are to be run
* /data/RAW – where RAW canbus files are stored before they are parsed
* /data/dailylogs – where parsed logs sit
* /data/summary – where summary.csv sits

Only the /data/dailylogs and /data/summary directories will be accessible via samba share by the user, and the directories are set to read-only. At the moment, the entire /data/ directory is also shared with full read/write access, but this is to be revoked before delivery.

## Cron Jobs

### start\_can

Sends the commands to get the canbus line running:

*ip link set can0 type can bitrate 500000 listen-only on  
ip link set can0 up*

### ensurecanstarted

This script will look at the list of processes running, and if *mcp251x\_wq* isn’t running, it will run the /data/scripts/start\_can script to get it running again.

I have no idea what can shut down the canbus, but this is here just in case.

### startlogging

Kills any running candump, and creates a new one (with a bunch of filters so it only records relevant messages).

*cd /data/RAW  
sudo killall candump  
(candump -l can0,477:7ff,478:7ff,475:7ff,270:7ff,294:7ff,306:7ff)&*

### parse\_logs

### createsummary

Runs update\_summary.py which will take the summarized line of data at the top of a daily log and move it into the summary.csv document.

*(python /data/scripts/update\_summary.py `find /data/dailylogs -type f -name "\*.csv" -mmin +4`;)&*

### deletefiles

Checks to see if the SD card is getting full; if so, deletes files in the /data/dailylogs directory. The script will keep deleting the oldest file until the SD card’s capacity is at 95% or less.