Battery picked

Two 6S batteries are more affordable to find, and allow for the batteries to be placed in disparate locations There is also the thermal dissapation benifits for having two seperate batteries. We picked this battery as it has roughly half the capacity that we need https://www.banggood.com/ZOP-POWER-22_2V-8000mAh-60C-6S-Lipo-Battery-With-XT60-Plug-For-RC-Model-p-1328629.html Watt hour capcity: 177.6Wh each 2 batteries in parallel, 355.2Wh

Battery charging

https://electronics.stackexchange.com/questions/115795/charging-batteries-in-parallel-when-they-are-connected-in-series-in-the-circuit Since we have two seeprate batteries that are being used in parralel, we will either need a charger that can handle a 12S system or we will have to do some TDMA parralel charging. https://www.flitetest.com/articles/Parallel_Charging_Your_LiPo_Batteries

Battery charging mode

When in operation, the batteries are in series to get the correct operating voltage, but for charging they need to be in parralel for the charger to work.

Battery states

Battery system state - Hibernation (battery isolated) - Idle state (battery live, V^+_S,V^-_S, V^+_P, V^-_P all off) - Charge state (V^+_P, V^-_P on, V^+_S,V^-_S off) - Drive state (V^+_P, V^-_P off, V^+_S,V^-_S on)