The main battery consists of 2 hand-welded Li-Ion battery packs. The cells used for these 2 batteries are BAK INR2170-45D, with the following parameters:

- Nominal voltage: 3.6V
- Capacity: 450mAh
- Maximum constant discharge current: 45A (10C)
- Energy capacity: 15.84Wh

The 2 resulting packs in 3S2P configuration are wired together to form a 3S4P main battery. The choice to split the power source into 2 parts is a result of tight space inside the aircraft, which makes it impossible to fit a battery of similar parameters as 1 solid object. Instead, the solution presented in picture was implemented.

Figure 1. 3S4P custom-made battery pack for "Rico" UAV.

Full weight of the battery is estimated at 0.9kg.

The orange pack is located in the front of the UAV, and is connected with the yellow pack through:

- XT60 connectors for the main power rail,
- 2 pin JST connector for the corresponding parallel connections.

This separation of the main battery into smaller packs helps with weight distribution inside the aircraft, as each pack can be slightly shifted to the front or back.

The unusual shape of the yellow pack is a result of a very narrow interion at the back of the aircraft, however the welding and wiring has been done with utmost care, to ensure that the pack is not damaged or unwelded.

The 4P approach allows for up to 120A continuous current, which admittedly is a very big margin for a fixed wing UAV. However, the main purpose of this is longevity of flight. The second reason is frequent current spikes, as the aircraft changes its current draw dynamically. 4 parallel connections allows to compensate for relatively low C-rate of 10.