Specifications:

The device must be capable of supplying $24V$ at $10A$.

The device must be capable of supplying $12V$ at $5A$.

The device shall be powered by rechargeable batteries.

The device must be capable of operating on single charge during the entirety of a competition event.

The device must have a battery management system with the below protection features:

- Short circuit protection
- Overcharge protection
- Over discharge protection
- High temperature protection

The device shall be equipped with a display.

The display must provide the user with the following information:

- Battery temperature
- Battery voltage
- Current output

The device shall be equipped with an SD card reader.

The device must be capable of logging battery temperature, battery voltage, and current output to the SD card, at the behest of the user.

The batteries in the device shall be recharged via the use of an external AC wall power adaptor.

The device must be housed in a modular, compact, fireproof, waterproof, and easy to assemble/disassemble enclosure.

Stretch Specification:

The device must be Bluetooth enabled.

The device shall be accompanied by an Android application.

The accompanying Android application must be capable of interfacing with the device via the use of Bluetooth technology.

The user must be able to log battery temperature, battery voltage, and current output via the use of the accompanying Android application.