

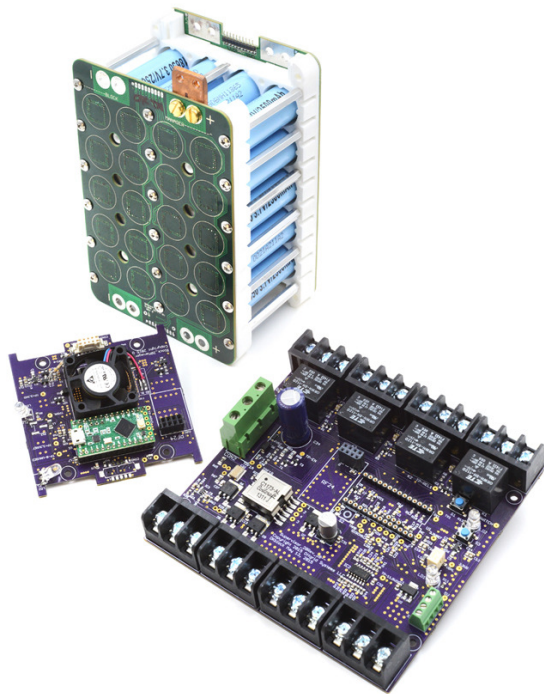
# Dkblock FAQ

## **What markets are the Dkblock designed for?**

- One market is for electric vehicle (EV) systems from 24-72VDC and above. The largest systems built so far is a 60 block system with 20 blocks in series communicating to the Pack Supervisor, and there are two more 20 block strings in parallel.
- Another market is home power-wall applications where energy density is valued over power density.
- Note that the Dkblock is better in terms of energy density over power density, noting that the 100 amps DC maximum block current helps explain why, especially for larger packs.

## **What makes the Dkblock better than current battery packaging and management systems (BMS) on the market (as of Nov 2019)?**

- You don't throw away your BMS when the batteries wear out! The Dkblock is reusable, simply change out the cells and populate with new cells. This is made possible because there is no welded battery contacts. The high current connections to the cells are made with gold plated spring contacts with a 10 amp rating.
- There is precise temperature measurement inside the block, 8 temperature sensors keep close tabs on what the cell temps actually are inside your pack.
- The Dkblock has wireless communications from blocks to the mother ship (Pack Supervisor) so there are no tiny wires running around the pack to break, making troubleshooting and setup of the pack much faster and easier.
- Improved energy density over Lithium Iron Phosphate systems on the order of 2X.



**Looking at the Dkblocks, I see that a system needs not only a few blocks, but also a Pack Supervisor board. Can I get away with just using the blocks alone, without the Pack Supervisor?**

- The blocks are somewhat autonomous, they will balance themselves to a point, they can carry the pack current, for a series parallel circuit for a pack, and operate the cooling/warming fans inside each block.
- But a Pack Supervisor is required to do all the functions that all normal BMS's offer, such as overcurrent

protection, over and under temperature operation, over and under cell and pack voltage protections and

(eventually) communication to CANBUS or internet.