

Specs

- 53.2V, 177Ah, 9.4kWh, 5000W
- 35 second-life Gen 1 Nissan Leaf modules in a 7S5P configuration (14S10P Li-ion)
- 43.4 57.4 V range
- BMS with under/over-voltage protection, temperature protection, real-time cell monitoring via USB or Bluetooth, circuit breaker up to 100A
- Max continuous discharge of up to 100A (5000W), dictated by breaker and inverter selection.

This last prototype was used to power much of our 2021 Engineering Showcase event. This design comes to just under 10kWh capacity and represents five Prototype B packs in parallel. Prototype C was created on the basis of 10kWh modules for off-grid and microgrid systems with a variety of renewable energy sources and is nearly infinitely scalable.

The average household uses between 20kWh and 30kWh of electricity every day. While Prototype C wouldn't power an entire home for a full day, it could be used as an emergency backup for essential appliances such as a refrigerator/freezer, to power lights, charge devices, and maybe have a TV on for a few hours. If paired with a suitable solar array, Prototype C may be capable of powering the essentials for a few days until power is restored.

Combining a system of four to five modules the size of Prototype C with 10-20kWh of solar power generation per day will make entirely off-grid living possible with high-efficiency appliances.