



## BATTERY SYSTEMS

### MonoLith™ — Engineer Overview

Modular, liquid-cooled, high-voltage battery system for rapid platform integration



#### At-a-Glance

<b>Dimensions (HxWxL)</b>	170 mm x 512–2000 mm x 856–1996 mm
<b>Voltage Range</b>	35–1150 VDC
<b>Capacity (configurable)</b>	10–105 kWh
<b>Cooling</b>	Liquid (low-conductivity)
<b>Ingress</b>	IP67
<b>Comms</b>	CAN 2.0
<b>Fusing</b>	Cell/Pack level; Onboard pre-charge; MSD; Pressure valve; Moisture detection
<b>Energy Pack (cont)</b>	Charge 1C / Discharge 2C
<b>Power Pack (cont)</b>	Charge 1C / Discharge 11C

#### Key Features

- Flat, low-profile pack; configurable length & width for tight envelopes
- Automotive-grade BMS with CAN 2.0 and configurable message map
- Integrated contactors, fuse protection, HVIL, pre-charge, and MSD
- Liquid cooling for thermal uniformity and sustained performance

*Preliminary. For engineering review; subject to change without notice.*

EVolve Battery Systems, LLC – 6880 Winchester Circle Unit F, Boulder, CO 80301 – 720.414.5502 – [www.evolvebattery.us](http://www.evolvebattery.us)

- Serviceable module architecture; field-maintainable
- Energy and Power pack configurations for different duty cycles

Application Examples

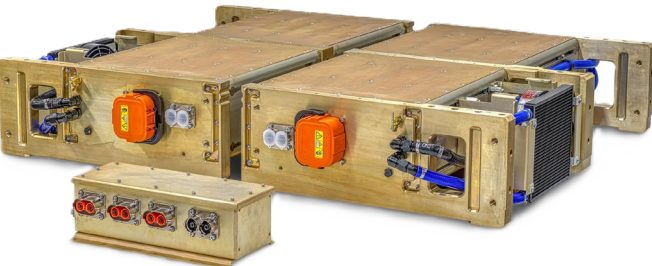
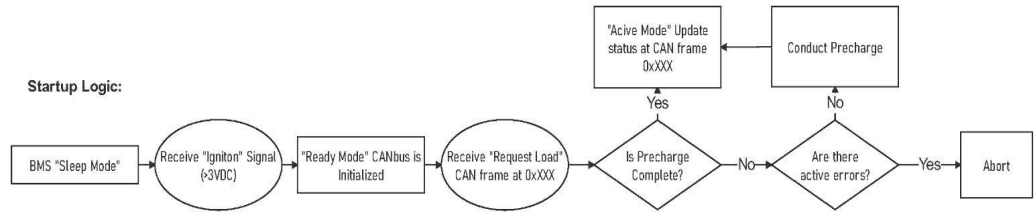
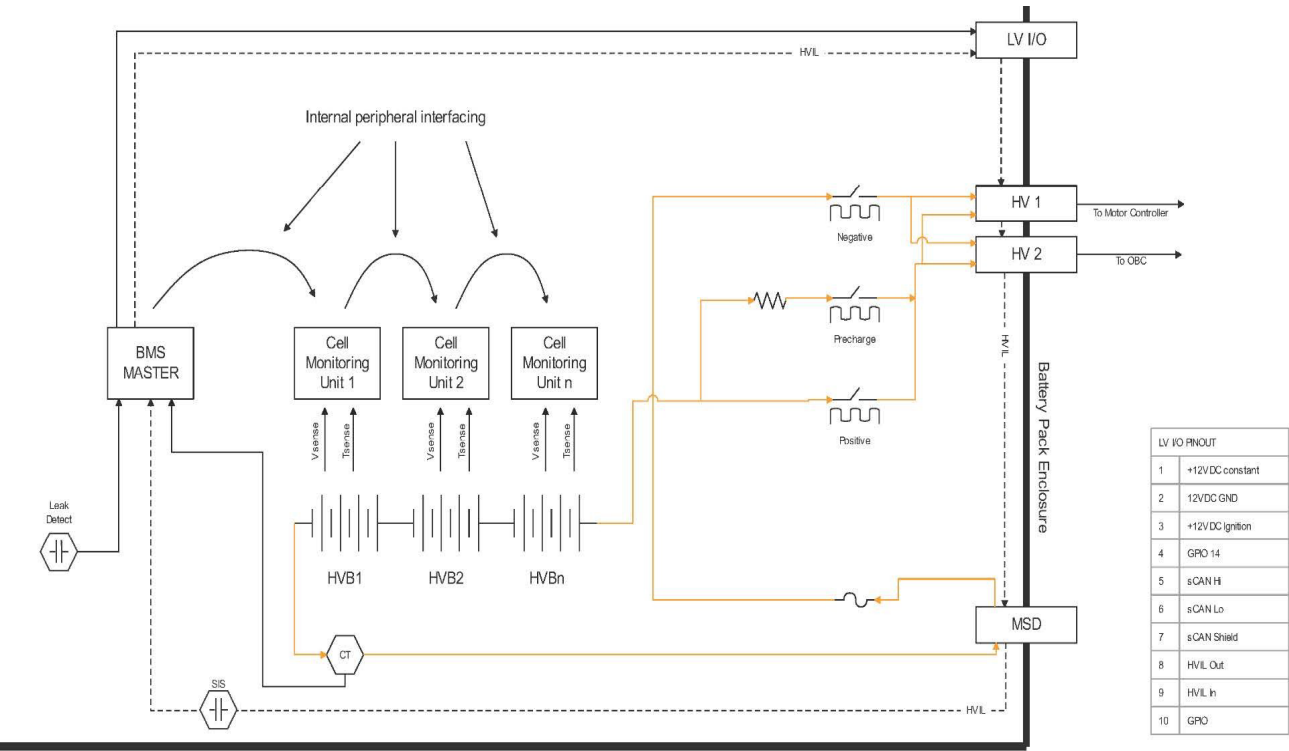


Figure 1: Split Aerospace Pack w/ PDU



Figure 2: Series Hybrid Military Rescue Vehicle

System Architecture



Title	
Drawing #	23041024_E
Rev	A
CIE SOLUTIONS	

## Technical Details

### Electrical

- Voltage range: 35–1150 VDC (system-level configurable)
- Capacity range: 10–105 kWh per pack; parallel scaling supported
- Protection: Pack fuse, contactors, HVIL; onboard pre-charge; MSD
- Sensing: Cell voltages/temps, pack current and voltage, leak detection

### Battery Management System

- CAN 2.0 (DBC available); configurable IDs and broadcast rates
- Digital I/O support for charge/discharge enables and status lines
- Derating and fault handling; contactor sequencing and pre-charge logic

### Mechanical & Thermal

- Height 170 mm; width 512–2000 mm; length 856–1996 mm
- Aluminum enclosure with rigid skeletal design; service panels
- Liquid loop cooling (low conductivity coolant)
- External T-slots for mounting; lift points and service access

### Environmental & Compliance

- Ingress: IP67 (pack)
- Safety: Cell/pack-level fusing, pressure relief valve, moisture detection

### Current Ratings

- Energy Pack (continuous): Charge 1C / Discharge 2C
- Power Pack (continuous): Charge 1C / Discharge 11C

*Preliminary. For engineering review; subject to change without notice.*

EVolve Battery Systems, LLC – 6880 Winchester Circle Unit F, Boulder, CO 80301 – 720.414.5502 – [www.evolvebattery.us](http://www.evolvebattery.us)