Hyperdrive’s modular design provides manufacturers with the opportunity to deploy a common architecture across a range of niche electric and hybrid vehicles, portable and stationary energy storage systems.

**HIGH PERFORMANCE AS STANDARD**

Hyperdrive’s modular battery technology provides a complete solution; a high performance lithium-ion NMC battery pack with built in BMS ready for easy deployment in a range of electric vehicles, stationary and portable energy storage systems.

- High energy density: up to 164 Wh/kg
- 100% depth of discharge available
- 2,000 cycles
- Fast & efficient charging: up to 132 amps
- Wide operating temperatures: -25 to 60 degrees Celsius

**MULTIPLE SECTOR APPLICATIONS**

Hyperdrive's modular design provides manufacturers with the opportunity to deploy a common architecture across a range of niche electric and hybrid vehicles, portable and stationary energy storage systems.

- Global manufacturers who have a diverse product range
- Low to medium volume OEM’s who benefit from economies of scale
- Product developers who must react quickly to new market demand

- Construction Equipment
- Autonomous Vehicles
- Airport Fleets
- Residential Energy Storage
- Portable Energy Storage
- Grid Scale Energy Storage
- Warehouse Robots
- Municipal Vehicles
- Stationary Energy Storage
CLASS LEADING ENERGY DENSITY

A standard design, the modular product range is highly configurable for a range of different applications, providing a proven and best value solution that is flexible, powerful and scalable.

THE PACK
- Integrated Charger Controls
- Access to World-Class Battery Cell Technology
  - Proven automotive quality and global high volume supply
  - Incorporating Nissan LEAF cell technology
- UN38.3 Certified
  - Approved for global shipping
- Versatile
  - Scale up capacity without additional controllers
- High Voltage
  - Connect packs in series for systems up to 400V*
- Environmental Protection
  - IP55

THE SYSTEM INSTALLATION
- High Voltage and High Energy Density
  - In arrays of up to 127 packs
- Easy Fitting
  - Mounting points for secure installation
- Easy Connection
  - Design for efficient installation

THE BMS
- CAN Enabled BMS
  - Master and slave arrangement
  - J1939 compatible option
- Actively Controlled Balancing
  - Maximised capacity over pack life
- Charger Control
  - Algorithm manages rate, temperature and voltage via CAN
- State of Charge Measurement
  - Adaptive capacity reporting

Intelligent Battery
- CANbus reporting
- Voltage, Temperature and Current Measurements

Buy Built-In
- BMS is included in each Hyperdrive Pack

CANbus Integration
- Master and slave communications
- System level reporting via master pack

System Safety Protection
- External contactor controlled from BMS

* Higher voltages available upon request
## Providing cleaner options for supplying portable power to construction sites, temporary events and utility response.

### Diesel Hybrid Electric
- **Battery inverter generator units of 40kVA output used on network faults affecting an estimated 1 to 7 domestic customers on single or three phase networks.**
- **Pack Arrangement:** 12P
  - **Voltage:** 40.6-58.1V

### Powering a new generation of electric municipal vehicles to reduce carbon emissions in major cities across the world.

- **Fully Electric:** Street sweeper for municipal and contractor use in towns and shopping centres.
- **Pack Arrangement:** 10P
  - **Voltage:** 40.6-58.1V

### Powering a high performance technology platform accelerating the electrification of construction machines and delivery vehicles.

- **Electric Hydraulic:** Electrification of an excavating machine for a leading OEM.
- **Pack Arrangement:** 4P
  - **Voltage:** 40.6-58.1V

## Designing your system

<table>
<thead>
<tr>
<th>Pack Option A</th>
<th>Pack Option B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nominal Voltage</strong></td>
<td>44.4V</td>
</tr>
<tr>
<td><strong>Max. Voltage</strong></td>
<td>49.8V (4.15 V per cell)</td>
</tr>
<tr>
<td><strong>Min. Voltage</strong></td>
<td>37.2 V (3.1 V per cell)</td>
</tr>
<tr>
<td><strong>Nominal Capacity</strong></td>
<td>111.4 Ah</td>
</tr>
<tr>
<td><strong>Energy</strong></td>
<td>4.94 kWh</td>
</tr>
<tr>
<td><strong>Number of Cells/pack</strong></td>
<td>24</td>
</tr>
<tr>
<td><strong>Cell Configuration</strong></td>
<td>12S 2P</td>
</tr>
<tr>
<td><strong>Cell Chemistry</strong></td>
<td>Manganese Laminated Lithium-ion</td>
</tr>
<tr>
<td><strong>Power Terminal Type</strong></td>
<td>Amphenol SurLok Plus: 2 x positive, 2 x negative</td>
</tr>
<tr>
<td><strong>BMS</strong></td>
<td>CAN enabled (J1939 compatible option available)</td>
</tr>
<tr>
<td><strong>Charging</strong></td>
<td>BMS Controlled (130 A maximum)</td>
</tr>
<tr>
<td><strong>Maximum Discharge</strong></td>
<td>130 A</td>
</tr>
<tr>
<td><strong>Series/Parallel Configuration</strong></td>
<td>Maximum of 127 Packs</td>
</tr>
<tr>
<td><strong>Enclosure</strong></td>
<td>Fully plastic case (IP55)</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-25 to +60 degrees Celsius</td>
</tr>
<tr>
<td><strong>Compatible chargers as standard</strong></td>
<td>Bassi, Victron, Delta-Q, Zivan</td>
</tr>
</tbody>
</table>
| **Certification** | **EN 383**
EN61000-6-1 Immunity for residential, commercial and light industrial
EN61000-6-3 Emissions for residential commercial and light industrial
EMC EN55022 Class A Certified (Emissions and Immunity) | |
| **Dimensions** | 243 x 265 x 352mm | 243 x 298 x 352mm |
| **Weight** | 32kg | 35kg |
| **Nominal Energy Density** | 152wh/kg | 164wh/kg |

*limited to 90% by BMS to improve cell life