# Shunt module and Battery Management System (BMS) for e-vehicle & or Equipment maker

A Shunt Module for DC current monitoring

A BMS or Battery Management System for managing a battery performance

## EPSH-SHUNT-ModuleA

![Shunt Module Diagram](image)

<table>
<thead>
<tr>
<th>Control board</th>
<th>Contactor board</th>
</tr>
</thead>
</table>

## Key System Specification of Reference Design

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor Type</td>
<td>Shunt (Resistive)</td>
</tr>
<tr>
<td>Shunt Value</td>
<td>100 uohm (CSM2F-8518-L100J32)</td>
</tr>
<tr>
<td>High-end and Low-end Sensing</td>
<td>Low-end Sensing</td>
</tr>
<tr>
<td>Unidirectional or Bidirectional</td>
<td>Bidirectional</td>
</tr>
<tr>
<td>Accuracy</td>
<td>&lt;0.2% FSR @25C</td>
</tr>
<tr>
<td>Maximum current through the shunt</td>
<td>+/- 500A</td>
</tr>
<tr>
<td>Module Power Supply</td>
<td>12V, 24V (MCP16331)</td>
</tr>
<tr>
<td>ADC</td>
<td>18bits Sigma - Delta ADC (MCP3421)</td>
</tr>
<tr>
<td>Over Current Detection Function</td>
<td>Yes (MCP6002)</td>
</tr>
<tr>
<td>Temperature Compensation</td>
<td>NTC</td>
</tr>
<tr>
<td>Reverse Polarity Protection</td>
<td>Yes</td>
</tr>
<tr>
<td>Calibration</td>
<td>Offset and gain calibration</td>
</tr>
<tr>
<td>Transient Immunity</td>
<td>Designed to meet ISO7637 - 3 specifications</td>
</tr>
<tr>
<td>Output</td>
<td>CANBUS (ATA65660), RS232</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C to +125°C</td>
</tr>
</tbody>
</table>

## Contact

**Excelpoint Systems (Pte) Ltd**

- **Singapore**
  - +65 6741 8966
- **Australia – Sydney**
  - +61 2 8875 7726
- **India – Bangalore**
  - +91 80 4942 4311
- **India – Hyderabad**
  - +91 97 0375 3721
- **India – Mumbai**
  - +91 22 4237 5800
- **India – New Delhi**
  - +91 11 4731 9900
- **India – Pune**
  - +91 74 1008 1888
- **Indonesia – Jakarta**
  - +62 21 2993 0775
- **Malaysia – Penang**
  - +60 4 637 4219
- **Philippines – Manila**
  - +63 2 910 0438
- **Thailand – Bangkok**
  - +66 2 645 1388
- **USA – San Diego**
  - +1 858 352 6938
- **Vietnam – Hanoi**
  - +84 24 6296 2335
- **Vietnam – Ho Chi Minh City**
  - +84 28 6653 2940

[Contact Information]

**Singapore (Headquarters)**  China  Australia  India  Indonesia  Malaysia  New Zealand  Pakistan  Philippines  Sri Lanka  Thailand  Vietnam  USA