Lithium-Ion Cells

Features and Benefits
- Autonomous cell bypass capability
- Backup voltage and temperature telemetry
- Long operating life
- Rugged package meets all space qualified levels
- Sophisticated battery management system that optimizes the life of the cells
- Low cost solution
- Eliminates the possibility of cell propagation
- Panasonic or LG 18650 cells
- Standardized virtual cells
- High voltage and power configurations
- Power density for small cell count

Applications
- Aerospace
- Low-earth orbit satellite missions
- Scientific and exploratory satellite missions
- CubeSat and small satellites

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>9.4 to 27.0 kg (21 to 60 lbs)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>See details on back</td>
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<tr>
<td>Voltage Range</td>
<td>14 to 48V</td>
</tr>
<tr>
<td>Nominal Capacity</td>
<td>22 to 39Ah at 20°C (68°F)</td>
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<tr>
<td>Energy Density</td>
<td>75 to 100 Wh/kg</td>
</tr>
<tr>
<td>Discharge Rates</td>
<td>Max constant current 48A</td>
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<tr>
<td></td>
<td>Max pulse current (&lt;1 sec.) 100A</td>
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</tbody>
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Electronics Options
- Battery charging
- Cell charge balancing
- Battery monitoring (volts and temperature)
- Telemetry interfaces
- Cell/battery heaters with controllers
- Battery disconnect
Virtual cell design is available in two formats:
- 20/16 - 18650 cells in parallel
- Two serial strings of eight - 18650 cells in parallel

Formats:
- Large Format:
  - 60.0 X 33.0 X 11.6 cm (23.6 X 13.0 X 4.6 in.)
  - 8 series 16 parallel cells
  - 16 series 8 parallel cells
- Medium Format:
  - 30.0 X 33.0 X 11.6 cm (11.8 X 13.0 X 4.6 in.)
  - 8 series 16 parallel cells
  - 16 series 8 parallel cells
- Small Format:
  - 30.0 X 16.5 X 11.6 cm (11.8 X 6.5 X 4.6 in.)
  - 4 series 16 parallel cells
  - 8 series 8 parallel cells