The High Power Voltage/Current Source (HPVIx) is a high voltage programmable power supply for the Diamondx test system targeted for use in power management, automotive, and display driver applications.

**Highlights**
- Fast throughput with high power pulsed mode operation
- Transient detect capability to capture perturbations at the device in program development, or production test
- Reduced load board complexity using the SmartMux for high voltage and current signal routing

**Features**
- 8 channels
- SmartMux capabilities
- Transient detection
- Four quadrant force voltage or force current operation
- Continuous and pulsed mode operation
- Kelvin force and measurement capability +100 V to -40 V & +40 V to -100 V
- Independent measure ADC per pin
- Sequencer control with local per-channel results buffer

- 8 Channels
- Force/Measure 4-Quadrant Operation
- ±100 V / 500 mA
- 4:1 SmartMux
The High Power Voltage/Current Source (HPVIx) is a high voltage, high current programmable power supply for the Diamondx test system. HPVIx is targeted for use in power management, automotive and display driver applications.

The HPVIx support the following features:

- An eight-channel board providing fully independent floating operation
- SmartMux capabilities that enable:
  - Fanning each channel out to four different DUT IO path
  - Mapping two alternate load board connected signals to the DUT connection path
- Transient detection that enables monitoring for unexpected voltages or currents at the device under test
- Four quadrant force voltage (FV) or force current (FI) operation
- Continuous and pulsed mode operation
- Up to 250K samples/second
- 4K Measure FIFO per channel, simplifying multisite measurements

### Key Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>± Ranges</th>
<th>Resolution</th>
<th>Maximum Force / Measure Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force Voltage</td>
<td>100 V, 50 V, 25 V, 10 V, 5 V, 2.5 V</td>
<td>16 bits</td>
<td>+100 V to -40 V, +40 V to -100 V</td>
</tr>
<tr>
<td>Measure Voltage</td>
<td>100 V, 50 V, 25 V, 10 V, 5 V, 2.5 V</td>
<td>16 bits</td>
<td></td>
</tr>
<tr>
<td>Force Current</td>
<td>500 mA, 50 mA, 5 mA, 500 μA, 50 μA, 5 μA</td>
<td>16 bits</td>
<td>continuous 50 mA, pulsed 500 mA 10 ms max, 10% duty cycle</td>
</tr>
<tr>
<td>Measure Current</td>
<td>500 mA, 50 mA, 5 mA, 500 μA, 50 μA, 5 μA</td>
<td>16 bits</td>
<td></td>
</tr>
</tbody>
</table>

All specifications are subject to change without notification and are for reference only. For detailed performance specifications, please contact Cohu.