

# Diamond<sub>x</sub> DPS1<sub>x</sub>

High-Performance Device Power Supply



The DPS1<sub>x</sub> is a high-performance, fully parallel 16-Channel power supply instrument for the Diamond<sub>x</sub>.

## Highlights

- Well suited for multisite testing of multi core application processors and other high current, low voltage devices
- Drop-in replacement for Cohu's DPS16 instrument with enhanced capabilities

## Features

- Ranges:-
  - 1.5 V: up to 8 A
  - 6 V: up to 2 A
- Triggered measurements
- Per channel measure voltage and current
- Programmable Cbit per channel
- Channel ganging up to 64 A
- Hardware measure averaging
- Data sequencer support
- Open Kelvin connection detection



Automotive



Consumer



Power Management



IoT/IoV & Optoelectronics



Industrial & Medical



MCU



Mobility

- 16 Digital Channels per instrument
- Flexible Source and Measure

- Measurement delay up to 4k sample frequency
- Up to 64 A per 8 ganged channels

# Diamond<sub>x</sub> DPS1<sub>x</sub>

## High-Performance Device Power Supply

### Flexible Source and Measure

Each DPS1<sub>x</sub> channel has 1.5 V and 6 V ranges for sourcing and measuring voltage. Multiple current ranges allow accurate current measurements of DUT active and sleep modes. Up to eight channels can be ganged to achieve higher current of up to 64 A per 8 channels for high performance multi-core applications processors. The DPS1<sub>x</sub> supports both voltage and current measurements. The user may specify measurement delay, store up to 4k samples, implement on-the-fly measurement averaging, and adjust the sample frequency.

### Powerful Features

Data sequencer support allows recording and playback of arbitrarily complex setup and measure scenarios. A flexible per-channel control bit is included to control switching of bulk bypass capacitors or other external resources. Real-time Kelvin detect alarm prevents false failures due to probe needle or socket wear. The DPS1<sub>x</sub> design is 100% solid state for maximum reliability under harsh production conditions.

### Diamond<sub>x</sub> Software Support

The Diamond<sub>x</sub> has a full suite of software tools for test creation, debug, characterization and high volume production. Interactive tools can be used to view and modify DPS1<sub>x</sub> settings, as well as the settings of the full range of other instruments available for use with Diamond<sub>x</sub>.

### General

- Channels Per Instrument: 16
- Force Voltage Ranges:
  - 0 to 6 V @ 2 A/Channel
  - 0 to 1.5 V @ 8 A/Channel
- Channel ganging: 2, 4 or 8 channels, static or dynamic
- Maximum Output Current: 8 A per channel (up to 64 A per 8 ganged channels) Current Ranges: 20  $\mu$ A, 200  $\mu$ A, 2 mA, 200 mA, 2 A, 8 A
- Capacitive Load: 100  $\mu$ F Maximum
- Base Force/Measure Accuracy: +/-0.1%
- Triggered waveform capture: 4096 samples at up to 200 ksps
- Hardware Averaging: up to 256 per sample

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