▶▶ Danville Signal

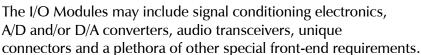## *Introducing* dspstak™

Simplify your DSP-based embedded applications with dspstak™ DSP Engines and Signal Conditioning / Data Conversion I/O Modules.

Each dspstak™ consists of two or more modules:

- A DSP engine
- Signal conditioning / data conversion I/O Module(s)

Danville Signal's dspstak Engines are available for latest Analog Devices SHARC® family processors. The modules generally consist of a DSP processor, memory, power supplies and standard digital I/O such as RS-232 and USB.

The I/O Modules may include signal conditioning electronics, A/D and/or D/A converters, audio transceivers, unique connectors and a plethora of other special front-end requirements.

Since the dspstak I/O module is separate from the DSP module, custom interfaces can be created quickly and inexpensively.

Painless Development!

Danville has several platforms of dspstak DSP Engines. Each platform is supported by a dspstak DSP Engine with ICE. The ICE is a licensed version of Analog Devices' EZ-KIT Lite debugger and is fully supported by Analog Devices Visual DSP++. This means that you can treat a dspstak just like a EZ-KIT Lite development board and then move directly to a production version of the same board.

The dspstak DSP Engine with ICE is supported by a free KIT license of Visual DSP++ with exactly the same functionality as an Analog Devices EZ-KIT. All dspstak DSP Engines can also take advantage of the full featured Visual DSP++ tools and the Analog Devices HPUSB & USB emulators. We resell these tools if you are interested.

All dspstak DSP Engines include flash memory to store program code. Bootable program code can be uploaded into the flash by either USB or RS-232 without the need for any special programming tools.

Production Boards

Danville's dspstaks are ideal for small and medium sized production runs. You can start with a dspstak with ICE development board and then move directly to a form factor equivalent production board. This greatly reduces your time-to-market and saves you money in development costs.

Features & Benefits of the dspstak™ Family of DSP Engines and I/O Modules

- Compact Size (3.5" x 4")
- Flexible I/O
- Field Reprogrammable
- Standalone Operation

- Fast Time to Market
- Reduced Development Costs & Risks
- Standardized Form Factor
- Optimized for DSP Embedded Applications

dspstak™ DSP Engines

All our dspstak DSP Engines support a number of standard features, which are implemented in a consistent way to facilitate using the dspstak DSP Engines as standard building blocks in embedded systems.

The current family of SHARC-based dspstak DSP engines include:

- dspstak™ 21369zx2 DSP Engine (High Speed USB)
- dspstak™ 21369zx DSP Engine (Full Speed USB)
- dspstak™ 21262sx DSP Engine

The ADSP-21369 based models listed above are available in ICE Versions. We also support other ADSP-2126x and ADSP-2136x variations.

dspstak™ I/O Modules

Many of our I/O modules can be combined for higher channel counts. For example, four dspstak c192k48 modules can be combined to create a 16 input, 32 output system.

I/O Modules include:

- dspstak™ c192k48 - 4/8 audio input & output channels, up to 192k sampling, S/PDIF
- dspstak™ c192k22 - 2/2 audio input & output channels, up to 192k sampling
- dspstak™ c96k44 - 4/4 audio input & output channels, up to 96k sampling,
- dspstak™ S/PDIF - 1/4 digital audio input & output channels
- dspstak™ a9244 - a single channel high speed ADC I/O Module
- dspstak™ io24 Opto isolated digital I/O