

The Danville Signal Processing Advantage

Danville Signal Processing, Inc. is a design and manufacturing company providing custom and semi-custom Digital Signal Processing Systems for the professional audio and acoustics/vibration instrumentation markets. We are experts in the design, creation and integration of flexible, modular development and production boards, providing turnkey DSP solutions for our customers. Our platforms deliver audiophile performance, featuring carefully selected state-of-the-art components from Analog Devices, XMOS, AKM and Wolfson.

We are specialists in the board design and layout of systems utilizing a variety of state-of-the-art components including DSPs, microcontrollers, FPGAs and associated memory and I/O technology. Complementing our core technology base in these areas, we have developed strong relationships with leading hardware and software vendors. We are third party partners with several chip and technology providers, include Analog Devices, DSP Concepts, XMOS, Altera and Summit Wireless.

We take the complexity out of designing sophisticated products. Today's DSPs and other state-of-the-art components are extremely powerful, but they come at a price: they are often extremely difficult to design on to a board. Complex routing, signal integrity issues, controlled impedances, BGAs, multiple layer I/O paths, etc., all combine to make the utilization of the features of powerful chips challenging. We have significant experience with designing complex, multi-layer processing boards, so all you need to worry about is integration.

Our products are not just prototyping boards, they are a complete hardware solution delivering an optimized development platform for your designs and a production ready module for manufacturing. In addition, many of our SHARC-based DSP designs can include a custom version of DSP Concept's Audio Weaver software for development, test and deployment of audio algorithms.

Given our expertise, our understanding of industry applications and our agility in developing solution sets, we are able to quickly provide our customers in a wide variety of industries with the solutions they need.

These solutions include:

- Turnkey Design & Manufacturing for OEMs/ODMs
- DSP and FPGA combination solutions
- High Performance Audio Systems
- COTS DSP Boards and I/O Modules
- Custom board solutions



Danville Signal

Danville Signal Custom Solutions for High Performance Audio

The world of high performance audio is changing. Sure, you can still find vinyl enthusiasts and advocates for 10 watt triode amplifiers, but you will also find many more listeners that are taking advantage of newer digital technologies. What they all have in common, is that they all want great sound. What many of them also have in common, is core technology from Danville Signal Processing. Our modules can be found inside award winning audiophile / brand name products for home audio systems, recording studio monitors and concert hall speakers around the world.

Here are a few of the application areas that we address:

- DSP-based Active Crossovers
- High Performance Wireless Audio
- USB Audio Class 2 DACs
- USB Audio Class 2 Headphone Amps
- Bass Management
- Room Correction
- Beam Forming
- Vinyl to Digital Converters
(Translation Phono Preamplifiers)
- Algorithm Decoders and Demo Systems



The bulk of our audio products are semi-custom solutions tailored to individual customer requirements (ODM & OEM). Most of our products are available in a variety of configurations including stand-alone PCB assemblies where you provide your own housing, or they can be provided in extruded aluminum enclosures. Panels can be customized and rebranded with your company's logos and trademarks to fit your company's specific requirements and branding.

About Danville

Founded in 1998, we manufacture and assemble products in our state-of-the-art facility outside of Minneapolis, MN, USA. We are proud members of the WiSA (Wireless Speaker & Audio) Association, Alma and NAMM.

We work hard to develop long-term relationships with our customers and appreciate the opportunity to develop a mutually satisfying partnership with you as well. Give us a call, let's start a conversation about how Danville Signal can provide the platform for your next design!



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