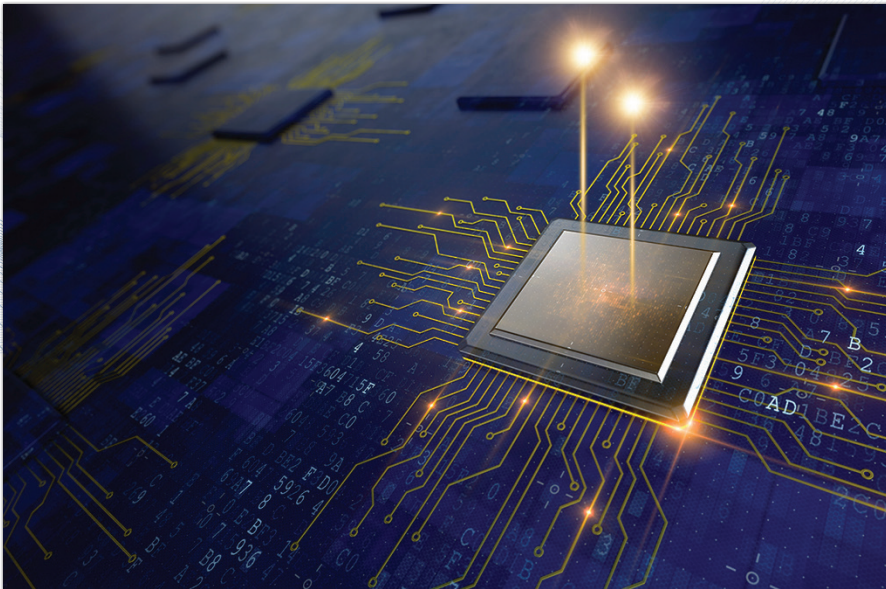


Dante IP Core™

Flexible Dante-Powered FPGA Designs



Add innovation, flexibility and connectivity to FPGA-based AV products at a lower total solution cost

Dante IP Core is a soft IP solution that implements high-performance Dante endpoints on Xilinx FPGA platforms. It enables you to add Dante audio networking flexibly and cost-effectively to FPGA-based AV products, minimizing footprint and reducing BOM expenditures.

Dante IP Core runs efficiently alongside OEM product applications on Xilinx FPGAs, providing channel counts up to 512x512 with ultra-low latency and sub-microsecond synchronization, enabling unprecedented levels of integration and flexibility.

Dante IP Core is the clear choice for manufacturers looking to build best-of-breed Dante solutions with total control over cost, platform, features and performance.

Cost-effective

Get more out of your FPGA expenditures and resources by integrating Dante IP Core alongside your product applications on the same chip. The lower total solution cost of the single-FPGA model returns significant BOM savings that can be used to drive sales, boost margins, or deliver extra features.

Compact

By reducing designs to a single FPGA, products can be built with a smaller footprint and lower total power consumption. ASRC, audio encryption, signal processing modules – your choice of additional functionality can be built directly into the FPGA alongside the Dante core, simplifying your design process and enabling a huge range of unique and disruptive products.

Flexible

Dante IP Core runs on the Xilinx Spartan-6 and Artix-7 FPGA families, allowing you to choose the optimal part for your product needs, space constraints, and power requirements.

With support for up to 512x512 channels and 128x128 audio flows at sample rates up to 192kHz, Dante IP Core packs the same mighty punch as Audinate's flagship Dante HC module – and is also available with lower channel-count configurations to enable cost-effective products for all segments of the industry.

Future-proof

Dante IP Core gives you the flexibility to upgrade your design with newer FPGA parts as they become available, allowing you to keep pace with the industry and stay on point with class-leading products that pass even the most demanding performance benchmarks.

Audinate

MEDIA NETWORKING TECHNOLOGY

FEATURES

- ▶ **Very high capacity:** Up to 512x512 channels in/out, up to 128x128 simultaneous multichannel audio flows with redundancy, up to 32 TDM lines in and out
- ▶ **Complete Sample Rate Support:** Up to 512x512 channels at 44.1/48kHz, 256x256 at 88.2/96kHz and 128x128 at 176.4/192kHz
- ▶ **Full audio bit depth support:** 16, 24 or 32 bits per sample
- ▶ **AES67** audio transport protocol support
- ▶ **Audio buffering:** Up to 1024 samples per channel
- ▶ **Wide range of interface options:** SPI, I2C and UART
- ▶ **High availability:** Glitch-free redundancy via secondary network support
- ▶ **Highly customizable:** Proven set of powerful development tools
- ▶ **Real time signal visibility:** Monitor all channels from anywhere on the network
- ▶ **Fully-supported development:** Industry experts on hand to guide you through the development process
- ▶ **Patented Dante media networking:** Low latency, tightly synchronized transport of uncompressed audio over IP networks using off-the-shelf Gigabit switches
- ▶ **Supports video applications:** Pull-up / down supported at all sample rates
- ▶ Supports **Dante Domain Manager**

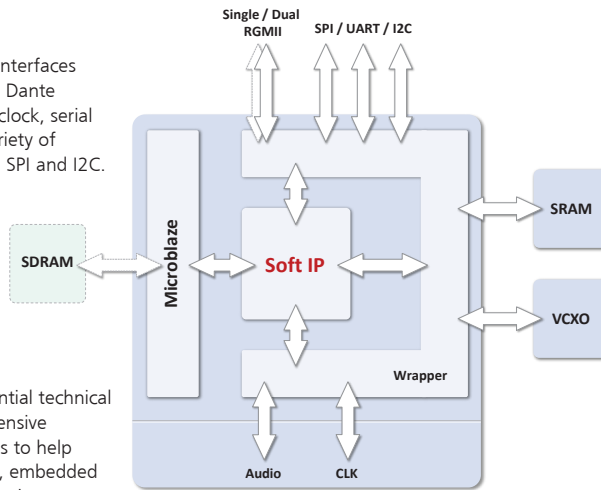
 Dante®

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Feature-packed

The Dante IP Core solution includes all the interfaces required for a complete and fully-functional Dante endpoint, including network, SiLabs VCXO clock, serial audio, DDR2 or DDR3 and SRAM, plus a variety of standard control interfaces including UART, SPI and I2C.

Segregated from the audio processing engine, system management is handled by an integrated Microblaze soft-core CPU, which supports custom user code for your own embedded Dante API applications.



Responsive Support, Extensive Resources

The Dante IP Core license includes a substantial technical support package, and access to a comprehensive repository of mature development resources to help you design and implement host integration, embedded applications, and remote control and monitoring systems.

Feature Summary

Audio

Sample rates up to 192 kHz in multiples of 44.1/48kHz with pull-up/down

Bit depths: 24, 16 and 32 bits per sample

Up to 512x512 channels at 44.1/48kHz, 256x256 channels at 88.2/96kHz and 128x128 channels at 176.4 /192kHz

Up to 128x128 simultaneous audio packet streams for transmit and receive

Up to 1024 samples audio buffering per channel

Flexible synchronous serial audio interface, up to 32 x SDIN and 32 x SDOUT audio lines

Hardware audio metering

Network

Standard RGMII/MII interface for Ethernet PHY or switch chip

Software and firmware are upgradable over network

Clock

High-quality, low jitter clock with companion Silicon Labs clock generator

External word clock sync input

Supported Platforms

Spartan 6

Artix 7 (available Q4 2018)

Contact sales@audinate.com for information about additional Xilinx platform support

Audinate

MEDIA NETWORKING TECHNOLOGY

WHAT'S INCLUDED

- ▶ Reference Project for ISE / Vivado
 - NGC or encrypted EDIF netlists
 - Top Level example file and constraints
 - Supporting files
- ▶ Build scripts
- ▶ Testbench with encrypted source files (Modelsim)
- ▶ Reference schematics
- ▶ Layout guidelines
- ▶ Reference BOM
- ▶ Activation dongles

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