

Innovation, flexibility and connectivity to FPGA-based AV products

Up to 512x512 channels in/out,
up to 128x128 simultaneous
multichannel audio flows

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

Glitch-free redundancy via
secondary network support

Pull-up / down supported at all
sample rates

Dante Domain Manager ready

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.

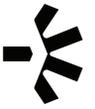
Dante IP Core is the clear choice for manufacturers looking to build best-of-breed Dante solutions with total control over cost, platform, features and performance.

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 FPGA families, allowing you to choose the optimal part for your product needs, space constraints, and power requirements.

Up to 512x512 channels and 128x128 audio flows at sample rates up to 192kHz, 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.

Feature-packed

The Dante IP Core solution includes all the interfaces required for a complete and fully-functional Dante endpoint.

What's Included

- Reference Project for ISE / Vivado
- NGC or encrypted EDIF netlists
 - Top Level example file and constraints
 - Supporting files

Build scripts

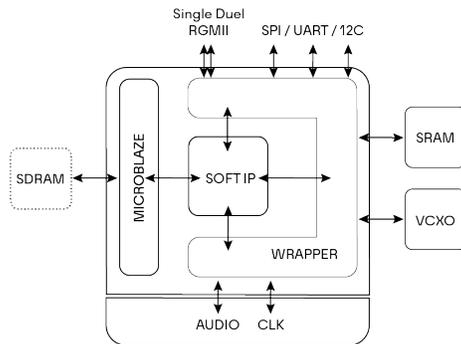
Testbench with encrypted source files (Modelsim)

Reference schematics

Layout guidelines

Reference BOM

Activation dongles



Specifications

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 SDOOUT audio lines

Hardware audio metering

Network

Standard RGMII/MII interface for Ethernet PHY or switch chip

Software and firmware are upgradeable over network

Clock

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

External word clock sync input

Supported Platforms

Xilinx Zynq-7000

Xilinx Zynq UltraScale+

