Dante AV Ultra™

AV for the most demanding applications

Dante AV Ultra is an FPGA based solution that enables manufacturers to add networked video and audio to the industry-leading Dante platform.

4K Visually lossless up to 4Kp60 4:4:4 HDR video

True AV Synchronization

Subframe video latency

Fast, seamless switching between video sources

Video wall, Thumbnail, and Multiview capabilities

AV Ultra stands out as a pinnacle of AV-over-IP performance, ensuring optimal encoding for any graphical content while maintaining a visually lossless quality for both video and moving images. Capable of delivering resolutions up to 4Kp60 4:4:4 over 1GbE with sub frame latency, it guarantees a seamless and crisp viewing experience. Instant, smooth switching between sources, even of different resolutions or refresh rates, allows the network to act as a video switcher. Additionally, its true AV synchronization capabilities leverage PTP clock, ensuring precise timing, while also offering the flexibility to use Genlock to sync external sources and displays. Dante AV Ultra is a future-proofed solution tailored to meet evolving AV demands.

Dante AV Ultra™

Applications

Dante AV Ultra is ideally suited for any real time or live interactive application where tight audio and video sync is required such as video production and live events.

HDMI AV encoders & decoders

SDI AV encoders & decoders

Cameras

SDM interface cards

Part of the Dante Family

Dante AV Ultra supports all the features that make Dante the world leader in networked media: auto discovery of devices, label-based one-click routing of signals, and true plug-and-play operation. Enhanced security, user access control, and monitoring across multiple subnets is available with Dante Domain Manager or Dante Director. With thousands of Dante-enabled products available, Dante AV Ultra provides instant connectivity to the largest interoperable AV-over-IP platform.

Off the Shelf Solution - Single Chip

The Dante AV single chip solution harnesses the power of the Zynq 7030 FPGA, allowing the creation of the highest quality Pro AV HDMI/SDI encoder and decoder endpoints or SDM interface cards. It features a single video channel utilizing the Colibri codec and 8 unidirectional channels of Dante audio. Additionally, users benefit from USB HID, IR, and serial ancillary channels routable in Dante Controller. Further enhancing its utility, Dante AV Ultra supports features like video wall, basic multiview, thumbnails and HDCP through an external IC, ensuring a robust and adaptable AV solution.

Build Your Own - IP Core

Designing with Dante AV Ultra IP Core offers flexible integration of Dante video and audio for the Zynq 7000 and Zynq Ultrascale+ families of FPGAs. This opens up new possibilities; allowing for the incorporation of Dante AV Ultra into existing camera designs, the development of multiple video channel option cards, and the creation of video production switchers. The IP Core option builds upon and extends the features of the single chip solution.

Specifications

Hardware
Single Chip: Zynq 7030 FPGA
IP Core: Zynq 7000 & Ultrascale+ FPGAs

Video Codec
Colibri

Resolution Support
Up to 4Kp60 4:4:4
HDR 10 & Dolby Vision

Video Latency
Sub frame

HDCP Support
v1.4 & v2.2

Audio
8 unidirectional audio channels

Ancillary Channels
USB HID, Serial, IR

Network
Standard 1 Gbps