Audio FPGAs Codecs from Xilinx and Coreworks

Clive (Max) Maxfield - September 10, 2010

There’s buzz of excitement at the IBC 2010 Conference, which is being held in Amsterdam as I pen these words. For example, Xilinx and Coreworks have just announced the availability of a range of new Dolby and other audio codec IP cores for compressing multichannel audio in FPGAs.

Integrating these codecs into a single FPGA eliminates the need for Digital Signal Processor (DSP) farms related to high-density multichannel audio streaming applications, thereby lowering overall cost, power consumption and circuit board area.

Coreworks designed the new IP cores to fully support Dolby Digital, AAC+ and MPEG-1 Layer II for distribution to the home and Dolby E from professional studio to studio. This support helps designers exploit the parallel processing capabilities of FPGAs for more performance, while lowering bill of material costs through reduced board component count.

Xilinx Broadcast Targeted Design Platform
The new audio codecs make up the IP components of Xilinx’s Targeted Design Platform approach that gives developers the ability to stay focused on product differentiation throughout the design cycle and into production in the face of constantly evolving standards and demands on performance. These platform components include IP cores, design environments and reference designs, along with a base set of digital audio/video development boards and industry standard FPGA Mezzanine Cards (FMC).

For broadcast applications, the Targeted Design Platform approach simplifies the development of complete broadcast audio and video interface solutions, including triple rate SDI solutions with support for standard definition TV to 3D TV and beyond in a single programmable device. It also enables the earliest possible adoption of emerging standards, such as DisplayPort, rapidly replacing DVI (Digital Visual Interface), and new Ethernet AVB (Audio Video Bridging) technology that guarantees timing and bandwidth availability in IP networks. For more information, please visit www.xilinx.com/broadcast.htm.

Pricing and Availability
The cores are available from Coreworks starting in October at a cost starting at $10,000, with additional licensing fees for the Dolby cores. Bundles are available which combine different IP cores.