

Multicore microcontroller delivers low cost daisy-chain Ethernet AVB



Xmos today announced a new reference design for its xCORE multicore microcontroller products that brings Ethernet AVB (Audio Visual Bridging) technology to more cost-sensitive audio transport and time sensitive networking applications in which latency and timing are critical.

Adding to the extensive xSOFTip software library for xCORE, the new Ethernet AVB Daisy-Chain (AVB-DC) reference design allows manufacturers of network-enabled audio and media products to create solutions that can be interconnected without the need for a central Ethernet AVB switch. The xCORE multicore microcontroller is able to integrate two separate Ethernet AVB interfaces plus an AVB switch fabric using its highly responsive, multiple 32bit processor cores, allowing the entire reference design to be implemented in a single device.

As well as cutting equipment costs, daisy-chain capability allows installers to employ a much simpler network topology, dramatically reducing the cabling and installation costs for an AVB network. For OEMs and product designers, it allows the creation of plug-and-play products - accelerating the already rapid take up of Ethernet AVB as the leading audio and media networking standard.

The new xSOFTip reference design product is based Xmos's proven Ethernet AVB technology, which is already established as the "gold standard" endpoint design for Ethernet AVB interoperability testing. To support the new product, Xmos also today

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announces a new Ethernet AVB Daisy-Chain hardware kit, based on its sliceKIT modular development system. sliceKIT gives engineers the ability to rapidly develop, prototype and test designs based on the xCORE range of multicore microcontrollers.

Ethernet AVB is a highly versatile standard that allows low latency streaming over standard IEEE networks. AVB-DC allows audio devices such as microphones and speakers to be connected together in a daisy-chain topology, without the need for a complex and costly central Ethernet AVB switch. It promises a revolution in the audio industry, dramatically reducing cost and cabling, and opening up applications that previously were not viable. End users will now be able to easily connect together computers, audio devices and audio processing equipment, forming an Ethernet AVB network as they go, and allowing all the devices to communicate. Consumer laptops such as the Apple MacBook and MacBook Air already support Ethernet AVB.

Ali Dixon, Director, Product Management, XMOS commented: "Ethernet AVB has grown dramatically over the past few years. It is thought that as much as half of the overall AVB market may benefit from daisy-chaining capabilities and this is a need that's not currently being addressed by anyone else. XMOS offers the lowest-cost complete AVB solution on the market; built on a configurable multicore microcontroller platform that both provides a complete solution and allows our customers to add their own features, and therefore to build differentiated products."

The new reference design reinforces XMOS' leadership in the AVB market. The company recently announced that its xCORE technology is in use in beyerdynamic's Quinta audio conferencing system, and that xCORE has been chosen as an AVB solution by new partners including EMBAS, Pivitec and DSP4YOU.

The Ethernet AVB Daisy-Chain xSOFTip reference design supports:

- Up to 4 @ 48kHz audio channels simultaneous talker/listener
- Support for up to four streams @ 48kHz or two streams @ 96kHz sample rate
- Low-cost implementation powered by XS1-L16 xCORE multicore microcontroller
- Delivers the lowest bill of materials cost, requiring no external DRAM or operating system
- Uses the existing XMOS AVB technology that is proven in plugfests and in the field
- A system supplied as xSOFTip software IP blocks, that is configurable to meet the exact requirements of your application

For more information on XMOS products including development kits and software, visit www.xmos.com [1]

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[1] <http://www.xmos.com>