

## Alpha Data and 4i2i Demonstrate Real-Time Teleconferencing at GSPx

*Demonstration showcases the first implementation of a high definition H264 video Codec in a single FPGA platform.*

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**SAN JOSE, CA** – Alpha Data, a leading designer and supplier of FPGA computing solutions, and 4i2i, a global leader in video coding intellectual property cores licensing, announced that an FPGA based High Definition H264 Codec solution will be demonstrated at GSPx 2005.

The demonstration uses a high resolution camera fed to a Virtex-4 device with compressed images transmitted over 10/100 Ethernet or Internet at 1Mbps. With the drive for higher quality imaging and constraints on available bandwidth, the Alpha Data/4i2i solution opens up applications such as broadcast, video conferencing, video surveillance, and aerospace and defense.

The ADM-XRC-4 used in the demonstration features the Virtex-4 SX55 with 24Mbytes ZBT memory arranged in 6 independent banks. The ADM-XRC-4 supports a range of front panel adapters allowing the video I/O to be adaptable between CameraLink, CCIR, S-Video or HD-SDI and is supported under Windows, Linux and VxWorks. Alpha Data's hardware provides comprehensive access to the features of the largest available Xilinx FPGA devices. A range of industry standard products supported by comprehensive software and flexible I/O allows innovative designers the opportunity of being first to market with new technology.

4i2i's Encoder core is a fully pipelined dedicated video compression engine that implements the H.264 encoding standard. The core reads a video frame from external memory and outputs an encoded bit stream (and decoded reference picture) back to memory. Host processor requirements are minimal and only a few registers (specifying the frame locations and coding options) need be programmed once at the beginning of each frame. The core requires a single memory component, which may be any of SRAM, SDRAM or DDRAM. If the memory is fast enough then the core can generally share this memory with other encoder cores and the host and capture components with no loss of performance.

"Alpha Data are delighted to be able to offer leading-edge development platforms and software to innovative IP development organizations such as 4i2i" said Keith Baker, Technical Director at Alpha Data. "Being first to market with Virtex-4 platforms has allowed us to demonstrate the world's first single FPGA High Definition H264 Codec."

"The feature sets of the Virtex-4 combined with Alpha Data's ADM-XRC-4 provide an ideal platform to implement the highly complex algorithms required for high definition H.264 encoding" said Martyn Riley, Managing Director and CEO of 4i2i. "We have been extremely excited about working with Alpha Data to produce the world's first high definition H.264 video codec in a single FPGA which will be demonstrated at GSPx 2005"

### **About Alpha Data**

Alpha Data, founded in 1993, designs and builds a comprehensive range of FPGA based computer products backed with flexible I/O and software. Application areas include Radar and Sonar Processing, Software Defined Radio (SDR), Reconfigurable Computing, Telecommunication, Image Processing and Electronic Intelligence (ELINT). More information is available from [www.alpha-data.com](http://www.alpha-data.com)

### **About 4i2i Communications**

4i2i Communications Ltd is a leading supplier of semiconductor IP cores and software for video-coding, error correction coding and broadband modems. Founded in 1995, 4i2i's operations are located in Aberdeen, Scotland and San Jose, California.

Visit [www.4i2i.com](http://www.4i2i.com)

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