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Next Generation Image Compression Promised by New JPEG2000 Hardware CODEC FPGA Accelerator Devices

March 12, 2008, Alphen a/d Rijn, The Netherlands -- A unique JPEG2000 hardware compression platform has been launched by **4DSP**, an innovative design company based in Europe and the USA. Powered by **Xilinx FPGA accelerators**, the new system promises better image compression to meet the needs of next generation digital cameras, 4G infrastructure and headsets. In addition, medical, military and other precision imaging applications will benefit from improved compression performance.

JPEG2000 is a wavelet-based digital imaging compression standard superseding the original discrete cosine transform-based JPEG compression method. 4DSP's JPEG2000 PMC daughter card is based on two ADV212 devices and a low-cost SPARTAN-3AN FPGA.

The JPEG2000 CODEC platform from 4DSP can grab and compress up to 140Mpixels per second from two independent cameras. It can either encode the video frames prior to or after applying an advanced video/imaging algorithm. Real-time pre-processing on raw data can be performed in the Virtex-4 or Virtex-5 FPGA devices. This flexibility can be used to correct effects such as local brightness or barrel distortion to enhance image quality and filter out elements that may reduce the compression effectiveness.

"The JPEG2000 compression rate is much more efficient than traditional JPEG algorithms," said Pierrick Vulliez, CTO of 4DSP Inc, "This solution accelerates the next generation of image compression for digital cameras, 4G infrastructure and headset systems."

"JPEG2000 is the preferred compression method to store vital digital data from microscopy and radiography imagery instruments and it is expected to be the premium compression solution for most demanding medical applications," commented Sebastien Maury, sales and marketing director of 4DSP Europe.

Technical information on the JPEG2000 daughter card is available online at www.4dsp.com/modules/FP-JPEG2K.htm. More details on the 4DSP VID475 JPEG2000 compressing platform can be found at www.4dsp.com/VID475. Alternatively, email info@4dsp.com.

More Information

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Additional Notes

4DSP is an innovative hardware manufacturer of small and compact **DSP** and **FPGA** based systems designed in PMC and XMC form factors. The 4DSP premium board architecture is reconfigurable, flexible and scalable. Built around a mix of co-accelerator FPGA devices and embedded hardware and software processor cores, 4DSP's hardware platforms deliver unmatched performance in advanced digital signal processing applications for embedded computing systems. 4DSP's FPGA-based platforms are typically used to perform fast data acquisition and data recording, high-end parallel processing and algorithms acceleration. More details at www.4dsp.com.