HD DIFT JPEG-MJPEG Encoder Targets Video Surveillance and Monitoring Apps

Conexant Systems Inc. announced the CX93610, a low power DIFT JPEG encoder that includes a 656 camera interface and optional microphone input. A monolithic mixed signal Application-Specific Standard Product (ASSP), the CX93610 is designed for monitoring and surveillance camera applications, including PIR sensor with video, video intercom/door phones, baby monitors and remote home monitoring. Featuring low cost, low power and high image compression capability, Conexant's CX93610 is ideally suited for wireless camera security solutions requiring visual verification, and can significantly reduce file sizes.

Used with an external CMOS image sensor, the CX93610 offers a variety of specialized JPEG encoding techniques to highly compress and save image data in an internal 512KB/256KB frame buffer. A 2:1 and 4:1 scaler is available for image re-sizing, with a 4:2:0 sub-sampling conversion available to further reduce image file sizes – by up to 99%. With a microphone input and programmable allocated buffering, a 2- or 4-bit ADPCM audio session can be recorded simultaneously during image captures, providing a complete A/V solution with a flexible frame buffer for audio and video data storage.

The CX93610 is controlled through a simple register set via the microprocessor interface, and the variety of available interfaces, including Serial Peripheral Interface [SPI], UART, and I2C, allow for wide flexibility in microprocessor selection. This allows easy pairing to various wireless radios where the baseband processor for the radio is used to control CX93610. With both digital and analog photocell sensor inputs available, the CX93610 can facilitate the measurement of ambient light and use an on-chip LED driver to control an external infrared LED during low-light conditions. Alternatively, an internal algorithm can be used for light sensor measurements saving the external photocell cost.

"Conexant remains focused on delivering a wide range of innovative integrated video solutions to address security, monitoring and surveillance applications," said Sailesh Chittipeddi, Ph.D., president and chief executive officer for Conexant. "Our newest encoder employs DIFT JPEG to dramatically reduce file sizes – enabling faster transfer time and longer battery life."

Key features include:

•Integrated mixed-signal design for analog-to-digital image processing
•On-chip 512KB/256KB frame buffer
•Integrated analog components (ADCs, LCD driver, DC-DC converter)
•Supports enhanced JPEG compression techniques and >1MP CMOS sensors and
•processes both color and black and white images
•JPEG, MJPEG, Differential JPEG, and DIFT Encoded JPEG which reduces file sizes by

up to 99 percent over standard JPEG
•Low sleep mode power - 10nA and low operating power (target <15mA)
•Frame by Frame Motion Detection with programmable thresholds
•Privacy mode
•I2C, SPI, and UART interfaces for flexible connectivity
•Register-driven device
•Optional microphone input records audio session simultaneously during image captures
This week at the 2012 International CES in Las Vegas, Conexant will be showcasing its expansive video product line, with a range of demonstrations that will include the CX93610.

Pricing for the CX93610 is $5.00 each in 1000 unit quantities.

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