Press Release

Erlangen,
December 7, 2011

More than just pictures: Fraunhofer IIS unveils intelligent, OMAP™ 4 processor-based INCA camera system

Paves the way for next generation camera capabilities with integrated processing compression, real-time metadata, wireless live transmission in full HD and other "industry first" features.

Fraunhofer Institute for Integrated Circuits IIS (Fraunhofer IIS) and Texas Instruments Incorporated (TI) (NYSE: TXN) introduced INCA, an innovative camera system based on TI's OMAP™ 4 processor. As the first camera system to integrate an OMAP 4 processor, INCA creates the technological foundation for a new generation of cameras designed for extreme conditions. INCA was demonstrated at the National IT Congress in Munich on December 6 during a live media event, details of which can be found here: www.bmwi.de. For more information on the INCA platform, visit: www.iis.fraunhofer.de/en/abt/bs. For OMAP 4 platform details, visit: www.ti.com/omap4.

Running on the Android Operating System, INCA is a highly integrated camera platform that helps users accomplish much more than simple picture taking. Alongside the wireless live transmission in full HD and the compression of video material in real time, INCA's intelligent architecture enables the capture of new insights and information from each captured image. For instance, INCA records metadata such as acceleration, direction, and temperature with the help of integrated sensors, and analyzes that data to help a user best understand his or her surroundings. INCA also

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seamlessly connects to external systems, including a chest strap for recording heart frequency, and can run software, such as SHORE™ facial recognition software of Fraunhofer IIS, to achieve new levels of picture interaction.

These and other INCA capabilities are made possible by TI's smart multicore OMAP 4 processor, which runs the system in a highly intelligent, power-efficient way. With a proven legacy in smartphones, tablets and eReaders, the OMAP 4 processor's role in the INCA system represents its first foray into the camera space and its unmatched ability to scale to new markets. The processor's compact size, low power usage, and high performance together enable the use of a very small (2x2x8 cm) yet feature rich camera, making INCA ideal for mobile, professional film and television production.

"We are thrilled to be a part of the INCA platform, and to work closely with Fraunhofer IIS in unlocking the next wave of intelligent camera capabilities," said Angela Raucher, Business Development Director for OMAP Emerging Markets, TI. "Our TI team has more than a decade of experience in driving high-performance, low power architectures for the mobile market. We leveraged this expertise to bring OMAP 4 processing capabilities to the INCA platform, helping it stand above the crowd with features such as highest quality HD video experience or face detection. This product will truly change the game for professional and hobbyist photographers alike."

INCA's processing prowess is packed into INCA's rugged,

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compact form factor. The camera systems design makes it possible to achieve all-new perspectives, even in intense environments. For example, INCA can weather the sand and dust as photographers graze the safari to capture new insights into the animal kingdom. INCA can also brave the cold and debris when acting as a helmet camera to record a sportsman's eye view during ski jumping, mountain biking, and other extreme sports.

Technical data

The INCA prototype offers 30 frames per second in full HD resolution, with the ability to compress and record in real time. With the help of a connected LTE module, the camera system is able to transmit full HD pictures live, with minimal time delay.

INCA has also been developed as a modular system, which can connect to a variety of front- and back-end offerings. HD-SDI (High Definition Serial Digital Interface) output, HDMI (High Definition Multimedia Interface) and Ethernet are available options, while the exchangeable frontend offers the ability to directly feed video signals from other cameras, as well as the integration of various sensors. With these features, INCA can therefore serve as a recorder or radio relay.

Availability and pricing

INCA Technology is ready for customer applications. For licensing and pricing please contact our team.

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Photo: Fraunhofer IIS

Exceptional perspectives with INCA

About Fraunhofer IIS
Founded in 1985 the Fraunhofer Institute for Integrated Circuits IIS in Erlangen, today with more than 750 staff members, ranks first among the Fraunhofer Institutes concerning headcount and revenues. As the main inventor of mp3 and universally credited with the co-development of AAC audio coding standard, Fraunhofer IIS has reached worldwide recognition. It provides research services on contract basis and technology licensing.
The research topics are: Audio and video source coding, multimedia realtime systems, digital radio broadcasting and digital cinema systems, integrated circuits and sensor systems, design automation, wireless, wired and optical networks, localization and navigation, imaging systems and nanofocus X-ray technology, high-speed cameras, medical sensor solutions and supply chain services.
The budget of more than 95 million Euro is mainly financed by projects from industry, the service sector and public authorities. Less than 25 percent of the budget is subsidized by federal and state funds.

About Texas Instruments
Texas Instruments semiconductor innovations help 80,000 customers unlock the possibilities of the world as it could be – smarter, safer, greener, healthier and more fun. Our commitment to building a better future is ingrained in everything we do – from the responsible manufacturing of our semiconductors, to caring for our employees, to giving back inside our communities. This is just the beginning of our story. Learn more at www.ti.com.

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