Lattice Semiconductor's ECP5™ FPGA Enables Energy-Efficient Embedded Vision Systems at the Edge

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State-of-the-art License Plate Recognition for Intelligent Traffic Cameras and 360 Degree Surround View for ADAS to be Showcased at CES Asia 2017

- Intelligent traffic camera system utilizes ECP5 FPGA for license plate detection, image processing, and image enhancement
- ADAS 360 degree surround view system utilizes ECP5 FPGA for 4-channel image stitching, fish eye correction, and 3D seamless merging
- Both systems achieve improved energy efficiency, system performance, and low cost with ECP5 FPGA-based acceleration

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PORTLAND, Ore. & SHANGHAI--(BUSINESS WIRE)--Jun. 5, 2017-- Lattice Semiconductor Corporation (NASDAQ: LSCC), the leading provider of customizable smart connectivity solutions, today announced the implementation of its ECP5 FPGA into embedded vision applications for smart surveillance and automotive applications at the Edge. Reinforcing Lattice's commitment to the industrial and automotive markets, the company's ECP5 family of low power, small form factor FPGAs enables CPU acceleration for license plate detection and image enhancement in intelligent traffic cameras. In addition, Lattice's ECP5 FPGA enables the integration of image stitching and 3D merging for Advanced Driver Assistance Systems (ADAS) 360 surround view systems.

Intelligent traffic systems (ITS), including traffic flow monitoring, traffic violations identification, smart parking, and toll collection are a key part of the vision of tomorrow's Smart Cities. Such systems typically require intelligent traffic cameras that can accurately detect many aspects of a vehicle, such as license plates, even in harsh environments, to perform video analytics at the Edge, rather than sending raw video streams back to the Cloud. Shanghai Microsharp Intelligent Technology Co., Ltd (Microsharp) is one such company that offers intelligent traffic cameras with up to 95 percent license plate recognition rate.

"When seeking a partner to collaborate on our intelligent traffic camera, we were looking for a scalable, low power solution to ensure flawless real-time license plate image capture," said Ting Zhou, CEO of Microsharp. "Lattice's ECP5 FPGA was a natural fit, allowing us to take advantage of the product's energy efficient image enhancement and processing capabilities to accelerate the development of our intelligent camera."

360 degree surround view system is a popular automotive ADAS technology for parking assistance. These systems typically capture their surroundings using at least four cameras facing different directions around the car to generate a composite view for the driver to assist with parking and low-speed maneuvering. The NEX-ADAS 360º 3-D Surround View Monitoring Technology from Shenzhen Moorechip Technologies Limited (Moorechip) synthesizes images from four cameras to create a sophisticated, real-world 3D view of a vehicle's surroundings.

"Lattice's ECP5 FPGA family offers the low power, small form factor and flexible connectivity requirements needed to support our ADAS 360 surround view system, providing advanced, high-quality image-stitching technologies to further differentiate our product from others on the market," said Andrew Liu, General Manager at Moorechip. "We look forward to continuing our work with Lattice on future intelligent systems that leverage their embedded vision solutions."

"ECP5 FPGAs are ideal for flexible connectivity and acceleration at the Edge, due to their low power consumption and small form factor," said Deepak Boppana, director, product marketing at Lattice Semiconductor. "As intelligence at the Edge continues to grow, our solutions, including the new Embedded Vision Development Kit, will help accelerate the adoption of mobile-influenced technology in systems including robotics, drones, machine vision, smart surveillance cameras and ADAS."

For more details on the ECP5 family of low power, small form factor connectivity FPGAs, please visit www.latticesemi.com/ECP5. To learn more about the recently announced Embedded Vision Development Kit, visit www.latticesemi.com/evdkit. Lattice's complete product portfolio for embedded vision solutions can be found at www.latticesemi.com/EVsolutions.

For additional information on Microsharp, visit www.microsharptech.com.

For more information about Moorechip's NEX-ADAS solution, visit www.nex-adas.com.

CES Asia 2017 – Shanghai, China
Wednesday, June 7 – Friday, June 9, 2017

Lattice will be showcasing intelligent traffic camera and ADAS 360 degree surround view demonstrations with Microsharp and Moorechip, respectively,

along with Lattice's new Embedded Vision Development Kit and portfolio of smart connectivity solutions at booth No. 2646 at the Shanghai New International Expo Centre (SNIEC).

For editors interested in meeting with Lattice during CES Asia, please contact Lattice@racepointglobal.com in the U.S. or LatticeChina@racepointglobal.com in China to schedule a briefing.

About Lattice Semiconductor

Lattice Semiconductor (NASDAQ: LSCC) provides smart connectivity solutions powered by our low power FPGA, video ASSP, 60 GHz millimeter wave, and IP products to the consumer, communications, industrial, computing, and automotive markets worldwide. Our unwavering commitment to our customers enables them to accelerate their innovation, creating an ever better and more connected world.

For more information about Lattice please visit www.latticesemi.com. You can also follow us via LinkedIn, Twitter, Facebook, YouTube or RSS.

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