



Lattice's Low Power, Small Form Factor ECP5 FPGA Enables Ximmerse VR/AR Tracking Platform

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Lattice FPGA Technology Provides Low Latency Visual Computing Needed for Inside-out, Outside-In Tracking for Processing at the Edge

- Ximmerse adopts Lattice FPGA to perform stereo vision computing for mobile AR/VR positional tracking
- ECP5 FPGA is used as a low latency, low power and low cost stereo vision processor to offload mobile application processor for VR/AR positional tracking

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PORTLAND, Ore.--(BUSINESS WIRE)--Sep. 26, 2017-- [Lattice Semiconductor Corporation](#) (NASDAQ: LSCC), the leading provider of customizable smart connectivity solutions, today announced that Guangdong Virtual Reality Technology Co., Ltd. (Ximmerse), a provider of interaction systems for mobile AR/VR applications, has selected Lattice's [ECP5™](#) FPGA to perform stereo vision computing in their AR/VR tracking platform. Lattice's market-leading ECP5 FPGAs are ideal for flexible connectivity and acceleration at the edge due to their low power, small form factor and low cost, delivering an energy-efficient, low latency solution.

As the market need for AR/VR environments continues to grow, current head mounted display (HMD)-based systems witness performance issues running content on mobile applications processors (APs). As such, performing visual based positional tracking on the processor has proven challenging. With up to 85K LUTs in a small 10 x 10 mm package, Lattice's ECP5 FPGA offers lower latency and increased power-efficiency image processing compared to an AP. The programmable fabric and I/Os also allow Ximmerse to easily choose and source the camera sensor from different vendors based on the product requirement.

"Lattice has been a valuable partner in overcoming design and performance challenges we previously faced when building our mobile AR/VR solutions," said Jingwen Dai, CTO at Ximmerse. "Their video expertise and top-notch customer support, along with their flexible ECP5 FPGA, helped us deliver a solution that's far smarter and higher performance. We look forward to continuing our work together."

This announcement underscores Lattice's continued success and leadership in AR and [VR applications](#). Its extensive product suite includes [WirelessHD® modules](#) for sub-frame latency video transmission in wireless VR systems, [CrossLink™](#) FPGAs for MIPI® display bridging and multi-camera aggregation in [360 cameras](#) and SLAM (simultaneous localization and mapping), and [iCE40™](#) FPGAs for concurrent data acquisition for sensor based positional tracking systems.

"Lattice's ECP5 FPGA continues to accelerate the adoption of mobile-influenced technology in rapidly evolving systems at the edge," said Ying Chen, senior marketing manager for new consumer markets at Lattice Semiconductor. "In the past year alone, we've seen companies from around the globe implement our small form factor, low power, low latency FPGAs for a wide array of products from AR/VR systems, robotics and drones to machine vision and smart surveillance cameras. This is just the beginning; we are enthusiastic about what's ahead for innovation and design at the edge."

Ximmerse currently offers both inside-out and outside-in tracking products and solutions that are already licensed by the industry's hottest AR and VR HMD vendors. To learn more about the Ximmerse offering, please visit: www.ximmerse.com.

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.

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](#), [WeChat](#), [Weibo](#) or [Youku](#).

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