

e-con Systems Showcased New Lattice FPGA Based Holoscan Camera Solutions at Computex Taipei and Embedded Vision Summit 2025

California & Chennai (May 22, 2025): e-con Systems, a leading provider of camera solutions for embedded vision applications, successfully showcased its <u>new Holoscan camera solution</u> based on the low power Lattice FPGA technology for NVIDIA[®] platforms at two major industry events in 2025: Computex Taipei and the Embedded Vision Summit (EVS) in Santa Clara, CA, at Lattice Semiconductor's booth.

At these premier events, e-con Systems demonstrated two Holoscan camera solutions. Available in both <u>development kit</u> and <u>miniature versions</u>, the Holoscan camera system represents a major advancement for AI applications requiring real-time sensor fusion and low-latency data transmission in robotics, autonomous systems, industrial automation, and more.

e-con Systems' Holoscan camera solution is based on low power Lattice FPGA running e-con's proprietary TintE[™] ISP, which efficiently offloads image processing from the NVIDIA GPU. This reduces computational load, optimizing performance for AI-driven tasks such as object detection, recognition and so on. TintE enhances image quality through advanced processing algorithms, providing superior imaging solutions. Its user-friendly ISP features enable efficient, realtime processing, which is crucial for demanding applications across various industries.

The featured inbuilt Holoscan sensor bridge enables multisensor aggregation through a single 10 Gigabit Ethernet interface, drastically reducing latency compared to traditional Ethernet solutions.



Figure 1: e-con's New Embedded camera for NVIDIA Holoscan



Figure 2: Holoscan camera solution integrating cameras with NVIDIA platforms through Lattice FPGA



Key features of e-con Systems' Holoscan Camera solution

- High-speed 10G Ethernet interface ensuring ultra-low latency image transmission
- Lattice CertusPro[™]-NX FPGA with proprietary TintE ISP for reducing GPU processing load
- Support for up to 4K at 30fps with real-time streaming capabilities
- Dual MIPI CSI-2 ports for connecting multiple cameras along with IMU, GPS, and Radar
- Compatibility with NVIDIA AGX ORIN, IGX ORIN, and NVIDIA Thor platforms
- Powered by Marvell CUX3610 PHY for reliable 10G Ethernet over copper
- Flexible cabling options supporting distances up to 100 meters
- Compact design ideal for space-constrained environments

"As the demand for real-time AI processing and intelligent vision solutions grows across various industries, we are excited to expand the ecosystem around the Lattice FPGA based NVIDIA Holoscan sensor bridge solution with these new solutions from e-con Systems," said Kambiz Khalilian, Senior Director, Ecosystem Partnerships at Lattice Semiconductor. "This innovation will enable our customers with more ways to develop and deploy low latency, scalable, and high-performance edge AI applications powered by our industry-leading FPGA technology."

"Our collaboration with Lattice Semiconductor combines our camera expertise with their lowpower FPGA leadership to create the Holoscan Camera solution for NVIDIA platforms. By integrating Lattice FPGAs running our proprietary TintE ISP, we efficiently offload image processing from NVIDIA GPUs. This significantly reduces computational load while enhancing real-time performance—exactly what today's AI-powered applications demand in robotics, medical imaging, and industrial automation." said Gomathi Sankar, Head of Industrial Business Unit at e-con Systems.



Watch the Holoscan Camera Solution Demo: <u>https://youtu.be/uzekPEIJLtw</u>



The Holoscan camera solution supports e-con's comprehensive range of camera modules, including the 8MP Sony IMX715 Rolling Shutter Camera, 5MP Sony IMX568 Global Shutter Camera, 20MP onsemi AR2020 High Resolution Camera, Full HD onsemi AR0234 Global Shutter Camera, and 3MP SONY ISX031 Camera.

Event Details:

Computex Taipei Date: May 20-23, 2025 Location: Taipei, Taiwan Venue: Visit Lattice Semiconductor's Meeting Suite at Grand HiLai Hotel, Suite #910 Embedded Vision Summit Date: May 21-22, 2025 Location: Santa Clara Convention Center, CA, USA Booth: Visit Lattice Semiconductor's booth #416

The solutions received positive feedback from industry professionals and potential customers, highlighting the product's capabilities for next-generation AI applications in robotics, autonomous systems, and industrial automation.

About e-con Systems

e-con Systems[®] designs, develops, and manufactures OEM cameras. With 20+ years of experience and expertise in embedded vision, it focuses on delivering vision and camera solutions to industries such as retail, medical, industrial, mobility, agriculture, smart city, and more. e-con Systems' wide portfolio of products includes Time of Flight cameras, MIPI camera modules, GMSL cameras, USB 3.1 Gen 1 cameras, stereo cameras, GigE cameras, low light cameras, and more. Our cameras are currently embedded in over 350+ customer products, and we have shipped over 2 million cameras to the United States, Europe, Japan, South Korea, and many other countries.

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