e-con Systems to Unveil the Latest AI Imaging Solutions at NVIDIA GTC 2025

California & Chennai (March 18, 2025): e-con Systems®, a leading provider of embedded vision solutions, is set to showcase its latest innovations at GTC 2025, scheduled from March 18 to 21 at the San Jose Convention Center. Attendees can visit Booth 2107 to experience firsthand how e-con Systems' cutting-edge AI-driven imaging solutions are poised to transform various industries through the latest technology advancements.

Register now to schedule a meeting with our experts at NVIDIA GTC 2025!

New Embedded Camera Built for NVIDIA Holoscan

At GTC 2025, e-con Systems will introduce its new embedded camera, designed for seamless integration with the NVIDIA Holoscan, a real-time AI sensor processing platform that delivers the foundation for developers to build their end-to-end pipeline for edge solutions. This state-of-the-art camera is ideal for applications across industrial automation, robotics, medical imaging and beyond. It leverages e-con's proprietary TintE™ Image Signal Processor (ISP) to deliver high-speed, low-latency imaging for real-time AI-based object detection and recognition tasks.

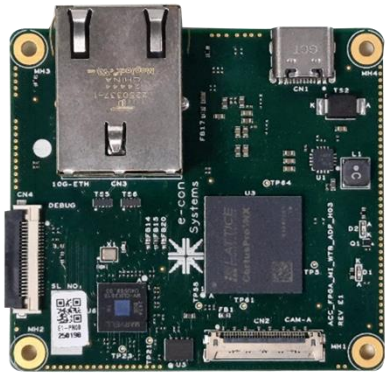

Figure 1: e-con's New Embedded camera solution for NVIDIA Holoscan

Furthermore, the integration of NVIDIA Holoscan Sensor Bridge powered FPGA board with this embedded camera makes it easy to setup and offload image processing tasks. NVIDIA Holoscan Sensor Bridge enables low latency high speed sensor processing to bring the data into the GPU via Ethernet protocol. This optimizes GPU resources for AI inference, thereby enhancing overall system performance.

Improved sustainable farming practices with AI-powered weed detection

e-con Systems will be presenting an AI-based weed detection system utilizing the NileCAM56, a 5MP global shutter camera based on Sony IMX568 sensor and powered by NVIDIA Jetson platform. Demonstrating a commitment to agricultural innovation, this solution addresses common weeding challenges in precision farming, such as motion blur and inconsistent lighting.

Figure 2: NileCAM56 - 5MP Global shutter GMSL2™ Camera Module

The camera solution operates at 15 FPS with video streaming (and 23 FPS without), accurately identifying misplaced

plants, optimizing herbicide usage, and promoting sustainable farming practices. Moreover, its design ensures reliable performance in harsh agricultural environments.

Obstacle Detection and Avoidance using e-con Systems' PCIe Frame Grabber Powered by NVIDIA

At GTC 2025, e-con Systems will also showcase a Gen-AI based obstacle detection and avoidance system using its PCIe Frame Grabber – leveraging STURDeCAM81, our IP67-rated 4K GMSL2 camera. The setup enables the integration of multiple cameras with NVIDIA Jetson platforms, ensuring smooth data acquisition and real-time analytics. The demo will highlight the ability to process voice commands, analyze surroundings, and determine optimal navigation paths for autonomous mobile robots.

Figure 3: STURDeCAM81 – IP69K HDR GMSL2 Camera

With support for up to eight camera modules and high-speed data transfer capabilities, our imaging solution enhances obstacle detection, route optimization, and collision avoidance. These are crucial for autonomous operations in dynamic environments.

Delivery Robot Showcase

e-con Systems will showcase a customer's delivery robot that incorporates the RouteCAM_CU22, e-con's IP67-rated HDR PoE camera featuring the Sony STARVIS 2 IMX662 sensor. This camera is capable of streaming compressed 1080p video at 60 fps with HDR capabilities, providing accurate visuals even in low light and challenging outdoor conditions. Its compliance with IEEE 802.3af standards and support for PTP synchronization enables accurate imaging for autonomous navigation.

Figure 4: RouteCAM_CU22_IP67 - Outdoor Lowlight GigE HDR Camera

The rugged IP67-rated enclosure helps RouteCAM_CU22 endure extreme temperatures, shocks, and vibrations so that delivery robots can operate in harsh environments. Its ability to transmit high-quality images over cable lengths of up to 100m improves the performance of autonomous delivery systems. Also, the camera's compatibility with our in-house CloVis Central™ platform simplifies device management and reduces operational costs.

"At e-con Systems, we're always looking for new ways to push the limits of what's possible with embedded vision. The launch of our new embedded camera for NVIDIA Holoscan at GTC 2025 is a huge step forward for us. Our focus is on creating AI-powered imaging solutions that solve real-world problems: helping modernize farming, enabling robots to navigate complex environments,

improving accuracy in medical imaging, and more. After all, we are committed to giving our customers the imaging technology they need to move faster, work smarter, and stay ahead in an AI-driven world," said **Gomathi Sankar, Head of Industrial Business Unit at e-con Systems.**

Booth highlights

Live AI-driven demos: Attendees will witness real-time applications of e-con Systems' imaging solutions across various industries, including the latest NVIDIA Jetson cameras in action.

One-on-one consultations: Attendees will have the opportunity to engage directly with e-con Systems' camera experts, discussing specific vision challenges and exploring custom solutions.

Expertise showcase: Attendees can better understand how e-con Systems' camera expertise can practically impact their embedded vision applications.

Book a meeting slot to discuss your vision solutions with our camera experts.

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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