e-con Systems to Showcase Advanced High Accuracy 1MP ToF Camera and AI-Powered 360° Vision Solution at Embedded World 2025

Tags: TOF | 360° vision | AI | high-resolution | 3D depth imaging | ADAS | autonomous vehicles | industrial automation | GMSL2

California & Chennai (March 13, 2025): [e-con Systems®](#), a global leader in embedded vision solutions, exhibits its latest advancements in camera technology across diverse industries at Embedded World 2025 in Nuremberg, Germany from March 11-13, 2025. Visitors will get an exclusive look at e-con's latest innovations, including high-resolution **[1MP Time-of-Flight (ToF) camera](#)** based on AF0130 depth sensor at the **onsemi** booth (hall 4A-260), and AI-powered 360° vision solutions for ADAS and autonomous systems at the AAEON booth (hall 1-306).

New Advanced 1MP 3D Time-of-Flight (ToF) Camera

At the onsemi booth in Embedded World 2025, e-con Systems will showcase the exclusive preview of the innovative 1MP 3D ToF camera that provides real-time 3D depth imaging with high accuracy, high speed and sub-millimeter precision. This new 1MP ToF camera, featuring AF0130 depth sensor, offers superior resolution and frame rates of 1.2MP at 30fps with a 0.2m to 2m range and VGA at 100fps with a 0.3m to 4m range.

Key features include:

- 1.2 MP onsemi AF0130 indirect Time-of-Flight (iToF) CMOS Sensor with advanced 3.5μm Pixel Stacked BSI Technology ensures high accuracy depth data.

- Exceptional depth precision with high accuracy of <1% across 0.2m to 4m range for real-time 3D measurements

- Perfect for both indoor and outdoor environments with 940nm illumination

- Flexible operation modes for maximum control across various distances

- Dual laser operation extends the depth range at VGA resolution, offering enhanced flexibility for diverse applications

Figure 1: DepthVista_GMSL_IP65 -1MP 3D ToF Camera

- Built-in laser eye safety monitoring ensures user protection by preventing harmful exposure.

- Compatible with major image processing platforms, including NVIDIA Jetson.

This camera is perfect for day and night operation in challenging industrial environments, with applications in pick and place robots, palletization, industrial drones, industrial safety, driver monitoring, and occupant monitoring.

AI-Powered 360° Vision Solutions

In partnership with **[AAEON](#)**, e-con Systems is showcasing its high-performance AI-Powered 360°vision solutions designed for ADAS, autonomous vehicles, and industrial automation at AAEON's booth. Our NileCAM25—an advanced Full HD global shutter GMSL2 color camera seamlessly integrates with

AAEON's AI@Edge Fanless Embedded AI System, BOXER-8645AI, powered by NVIDIA® Jetson AGX Orin™, providing real-time, high-speed video processing over extended distances with superior image quality. This powerful solution is being showcased through a 360-degree panoramic street-view demo, enabling AI-driven perception for use cases such as:

- Pedestrian detection & real-time tracking
- License plate & object recognition
- Enhanced situational awareness

Figure 2: BOXER-8645AI + NileCAM25 Multicamera based AI-Powered 360° Vision Solution

"As AI-powered vision technology continues to transform industries, we are proud to lead the charge in delivering innovative embedded imaging solutions. At Embedded World 2025, we are excited to showcase our latest breakthroughs, including the high-resolution 1.2MP smart iToF camera module and AI-driven 360° vision solutions, designed to provide unparalleled High-Precision depth sensing and real-time situational awareness, empowering the next generation of embedded vision applications such as robotics, warehouse automation, quality control and more." said Prabu Kumar, CTO at e-con Systems.

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, HDR 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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