e-con Systems Partners with Advantech to Empower a High-Performance Video AI System in AGV/AMR

Taiwan and Chennai (March 21, 2023) – e-con Systems, a leading OEM camera solution provider, for GMSL (Gigabit Multimedia Serial Link) video solutions, is pleased to announce a partnership with Advantech, a leading industrial edge AI solution provider. With e-con Systems partnership, Advantech can provide customers with a GMSL camera + AI Computing System for AGV/AMR applications.

The Future Trend of AGV/AMR
Automated Guided Vehicles (AGVs) and Automated Mobile Robots (AMRs) are becoming increasingly popular in manufacturing, warehousing, and logistics industries due to their ability to perform repetitive tasks with high precision and efficiency. One of the major trends in the field of AGV/AMR is the integration of high-performance machine learning skills and visual processing abilities. With significant demand for AGV/AMR, vision plays a critical role in enabling these vehicles to navigate through complex environments, avoid obstacles, and identify items. In such scenarios, GMSL cameras can be used in harsh environments, such as those with high electromagnetic interference, temperature variations, or long-distance transmission, without suffering from signal degradation. This makes them suitable for use in industrial settings, where other types of cameras may not be able to function reliably.

Advantech AGV/AMR Solution: NVIDIA Jetson AGX Orin system with e-con Systems' GMSL camera

Advantech MIC-733-AO is the industrial AI Inference system based on NVIDIA® Jetson AGX Orin™. MIC-733-AO has high AI performance of up to 275 TOPs, and it features NVIDIA® Jetson AGX Orin™-based AI with a wide range of I/O interfaces for 5G/4G connectivity and multiple video inputs, including 2 x GMSL. The GMSL camera from e-con Systems is a high-performance camera module that uses the GMSL interface to transmit video data over long distances. This solution can integrate multiple cameras into a single Jetson system, providing comprehensive all-in-one system efficient technologies.

Together with the MIC-733-AO, GMSL cameras provide a robust and reliable platform for a range of computer vision applications, including object detection, recognition, tracking, and more. The solution is particularly well-suited for AGV/AMR applications, which can help improve navigation, obstacle avoidance, and other critical functions. Visual ability is an essential aspect of AGV/AMR technology, and continued advancements in AI computing and computer vision will be critical to enabling these vehicles to operate more autonomously and efficiently in the future.

In this partnership, Advantech will leverage its competencies in AI design and manufacturing, while e-con Systems will leverage its expertise with GMSL camera technology to deliver innovative high-performance camera solutions. This will help customers integrate cutting-edge camera products with their applications across a wide range of industries.

Visit e-con's website to learn more.

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About Advantech
Advantech's corporate vision is to enable an intelligent planet. The company is a global leader in the fields of IoT intelligent systems and embedded platforms. To embrace the trends of IoT, big data, and artificial intelligence, Advantech promotes IoT hardware and software solutions with the Edge Intelligence WISE-PaaS core to assist business partners and clients in connecting their industrial chains. Advantech is also working with business partners to co-create business ecosystems that accelerate the goal of industrial intelligence. (www.advantech.com)

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About e-con Systems
e-con Systems, founded in 2003, is a leading OEM camera solution provider - providing end-to-end camera solutions like MIPI camera modules, GMSL cameras, USB 3.1 Gen 1 cameras, stereo cameras, etc. These solutions play a crucial role in accelerating the go-to-market speed of applications across industries like retail, medical, industrial, agriculture, smart city, etc. e-con Systems is also powered by a strong partner ecosystem to offer end-to-end vision solutions, including sensor partners, ISP partners, carrier board partners, etc. Currently, they have built 250+ product solutions - shipping over 2 million cameras across 90+ countries around the globe.
(www.e-consystems.com)