

press release

Robust AI image processing reaches new performance heights with IMAGOS new embedded GPGPU platform

Friedberg, Germany, August 2022: IMAGO Technologies, a leading provider of embedded machine vision for industrial applications, is expanding its Deep Learning product offering to include Vision Box AI, an ultra-high performance GPGPU vision system for AI and other applications requiring GPU computational power.

The fanless, compact vision computer is powered by the NVidia AGX Orin GPGPU. It has up to 12 ARM CPU cores with access to up to 64 GB of RAM for standard applications. Tasks can be distributed and there is enough memory available for image data, even when acquired by very high-resolution cameras. The incredibly performant unit achieves an AI-relevant computing power of 275 TOPS (Tera Operations per Second, 8-bit Integer) with a remarkable level of energy efficiency.

The very powerful GPU accelerator used in the Vision Box AI allows a wide range of tasks: It supports AI applications with high process cycles or complex networks. The Vision Box AI can execute both the learning program and the inference program of an AI solution. The GPGPU vision system also provides the necessary computing power for other applications that require a CUDA-based accelerator, such as hyperspectral imaging or light field cameras.

Carsten Strampe, Managing Director of IMAGO Technologies GmbH, explains: "For our customers' machines, long-term availability is a prerequisite for success. Robust, reproducible computer hardware over many years, nowadays more than ever also power-saving, are the decisive advantages in industrial use. Being able to use GPGPU-based systems in complex industrial environments gives users the opportunity to forge new ground with embedded computing."

Vision Box AI combines the GPGPU architecture with the interfaces required for industrial image processing. Standard I/O ports such as real-time digital IO, an RS422 for connecting incremental encoders, Ethernet, USB and an optional monitor output are used to service the system. The first type of Vision Box AI offers up to four GigE interfaces for connecting standard GigE cameras. In addition, the Camera Link interface has been established as the most robust image processing interface for many years. It meets the highest demands for fast image transfer. Camera Link delivers data in real time - an advantage for time-critical applications.



Vision Box AI.jpg

The GPGPU-based image processing system Vision Box AI enables exceptional computing performance and low power consumption.

Image source: IMAGO Technologies

ABOUT IMAGO TECHNOLOGIES

IMAGO Technologies is a leading manufacturer of intelligent cameras, vision sensors, and special computers for automated image processing. IMAGO designs, develops, manufactures, and distributes image processing systems in Friedberg, Germany, for customers worldwide in industrial inspection, pharmaceutical-, engineering industry, and ... soon also for your application? For almost 3 decades, IMAGO has been offering trendsetting solutions with great innovative power serving the individual needs of customers.

The product portfolio includes intelligent line, area, and event-based cameras, deep learning image processing computers as well as embedded multicore ARM, i-Core, and DSP computers, each with real-time IO, Linux, or Windows operating systems and a real-time OS. IMAGO also supports its customers in the areas of engineering and software development. For more information visit www.imago-technologies.com.