Integrated Smart Vision System

MACHINE VISION

iam sets new standards for vision-based self-sufficient decision-making and control processes. The system architecture featuring CPU and FPGA on one chip allows for better, more efficient system performance. iam uses the available options for hardware acceleration on the system-on-chip design. Its additional FPGA resources enable high-performance neural networks and conventional algorithms to be used more efficiently for image processing.

The refined Open Camera Concept offers users unique benefits. iam also enables users with no VHDL expertise to use the FPGA resources for their own vision solutions. They can also use commercial libraries, OpenCV or NET functions.

A wide range of configuration options are available for the many different requirements: CMOS image sensors with different resolutions, shapes and high image transfer rates, as well as a variety of interface options for integration into various system environments. iam supports companies on their way to the industrial Internet of Things (IIoT).

Highlights >

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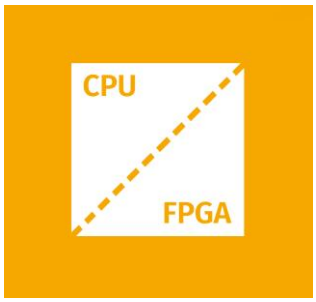
HIGHLIGHTS



SoC architecture makes the Open Camera Concept easy to use

NET has refined the Open Camera Concept. Now, even users without any FPGA expert knowledge can integrate their own algorithms into iam. They benefit from a powerful SoC architecture. The combination of parallel and serial image processing means that they can solve their individual tasks more efficiently than ever before.

Variety of image sensors

iam meets the individual demands placed on the imaging camera system. A wide range of CMOS image sensors is available for this. Combined with the right C-, S-, or F-mount lens, the smart vision system can master practically any challenge. iam also provides the opportunity for a multi-sensor solution. This makes various applications possible with an integrated smart vision system: for 3D imaging using stereo vision or even as a multi-spectral system or for capturing simultaneous images from several perspectives.

Machine Learning ready

iam is ideal as a platform for Machine Learning tasks. The integrated hardware acceleration (DPU) efficiently supports open neural network frameworks such as Caffe, TensorFlow and MXNet. This means that users get a smart vision system that contributes decentrally to the application solution. iam enables them to develop precisely tailored solutions for their vision-based processes.