

Press Release

Berlin, October 19, 2021

GigE Vision frame grabber in real-time context

Kithara has announced the successful development of a real-time driver for the frame grabber card PGC-1000 by company PLC2 Design GmbH. The purpose of this PCIe card is hardware-based acquisition and conversion of GigE Vision data, for which Kithara RealTime Suite provides real-time functionality.

Following the cooperation between PLC2 Design and Kithara Software, the acceleration card PGC-1000 can be utilized within the real-time operating system as well as enabling usability under Windows. The PCIe plug-in card handles the entire conversion process of captured GigE Vision data, thus almost completely relieving the CPU during image acquisition operations. This allows for machine vision systems to be significantly accelerated while also creating development environments with enhanced performance. For instance, multiple camera streams (4 × 10 Gbit/s or 1 × 40 Gbit/s) can be operated at minimal CPU load and the captured image data can be stored on SSDs within the same real-time context. Additionally, real-time synchronization of multiple cameras is achievable with the Kithara PTP feature. Usage of the card fits seamlessly into the functional range of Kithara RealTime Suite specifically for capture, processing and storage of image and video data.

The fields of application are foremost in demanding developments for advanced driver-assistance systems as well as autonomous driving, where numerous other technologies have to be interlinked in addition to the otherwise CPU-intensive image acquisition. The acceleration card is especially beneficial for existing data loggers in order to relieve important computer resources and provide a more stable real-time performance.

Responsible

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Functionality of the PGC-1000 with Kithara RealTime Suite is a valuable extension for developments in the ADAS field, for which the real-time system already supports numerous relevant bus systems, camera interfaces, image processing libraries as well as data storage standards.

Kithara Software GmbH

Kithara Software is a specialist for real-time solutions, especially for the Windows operating systems family. The real-time extension Kithara RealTime Suite is a comprehensive system library for hardware-dependent programming, communication, automation and machine vision. The software is an easy-to-use and powerful technical basis for advanced applications in production and manufacturing, automotive electronics as well as measurement and control engineering. It is the key element in machine building, testing rig development and other specialized applications. Kithara Software has representations in the USA as well as Asia and supports global companies with their innovative projects.

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