Compact Vision Solution with integrated Image Processing

GigEPRO stands for real-time image processing with the footprint of a compact GigE vision camera. By processing algorithms in the camera, the amount of transferred data can be considerably reduced. This means that applications are virtually unaffected by bandwidth restrictions. Vison solutions featuring camera-integrated image processing at sensor speed offer major advantages in terms of efficiency as opposed to conventional PC-based vision architectures. With GigEPRO, multi-camera systems that have already reached their technological or economic limits are now a tangible - and scalable - reality.
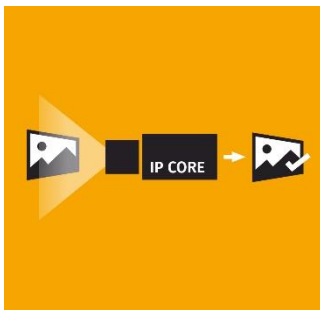
The ability to integrate their own algorithms means that customers are free to program their trusted vision know-how into the camera themselves. This is the idea behind the NET Open Camera Concept: the camera becomes a unique vision solution presenting new competitive advantages. Customers also benefit from IP core copy protection in the FPGA. The NET library, a collection of algorithms specially developed by NET for the purpose of enhancing and processing images, provides optimized image results for the application. The integrated image processing feature enables the camera to make its own decisions and directly control the peripherals.

Highlights >

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# Compact Vision Solution with integrated Image Processing

HIGHLIGHTS

NET Open Camera Concept

GigEPRO offers the Open Camera Concept for unique vision solutions. It allows algorithms to be integrated into the camera: own IP cores as well as algorithms from the NET library. The flexibility of the NET Open Camera Concept is also reflected in the wide range of possible camera versions, including customized models. This means that GigEPRO can be used as a line scan camera. Functional upgrades are available as optional extras. Users can continue to enjoy all the advantages of a standard interface as GigEPRO is a GigE vision camera that is compliant with the GenICam standard.
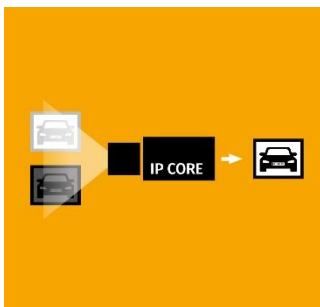
Award-winning image processing

GigEPRO comes with the NET library - innovative algorithms, specially developed by NET, that optimize the final image. Examples include:

- more detailed information for evaluating the image upon receipt of the full frame rate of the image sensor with the HDR algorithm.
- reduction of the image output format - and therefore the volume of data - with the scaler algorithm.
- ROI and feature recognition in the camera for more efficient image processing.
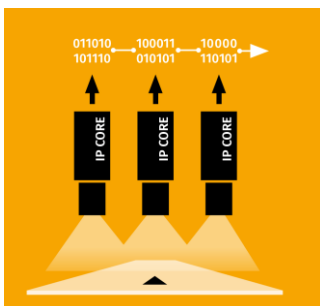
3D laser triangulation

GigEPRO can master complex, sophisticated tasks such as 3D laser triangulation in the FPGA. Here, NET offers the user support in calibrating the system with GigEPRO. Due to the conversion and reduction of data in the camera by 98%, this application can be solved extremely efficiently and decentrally without experiencing any bandwidth problems. This means that applications with multi-camera systems can be virtually scaled to requirement and can cover extremely wide visual ranges.

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