ELTEC Elektronik presents a sturdy, intelligent camera for industrial applications

HiPerCam I – developed specifically for use in rough industrial environments

Mainz, 31st March 2015 – ELTEC's new industrial camera – the HiPerCam I – is based on a modular concept comprising a processor board (Freescale i.mx6) in combination with a discrete sensor module: The separation of the CPU and the camera sensor makes it possible to combine the processor system with a wide variety of lenses and lens standards as well as camera sensors that have been optimized for the respective application.

All components of the new HiPerCam I have been integrated into a robust aluminum housing, protection class IP50. The exchangeable front screen, which can be easily and affordably replaced, e.g. after the camera has been exposed to extreme stressors (e.g. scratches in the glass caused by particles), is one of the unique advantages of the camera housing. Consequently, this device is suitable for a vast range of situations, especially for applications in very dusty and dirty industrial environments.

The camera is equipped with a one gigabit Ethernet interface. It has a PoE (IEEE802.3af Class 2) power supply. The GigE interface, which is compatible with potential cable lengths of up to 100 meters, offers enormous advantages, especially when used in large scale system architectures.

The standard HiPerCam I model comes with a 5-megapixel CMOS sensor which attains maximum resolution rates of 2592 x 1944 pixels (i.e. up to 14 frames/s at the max. resolution level or 31 frames/s at the full HDTV resolution level). Users have the option to configure different resolution levels and frame rates as needed.

The highly scalable processor board (Freescale i.mx6 with one to four ARM Cortex A9 cores; cycled up to 1.2GHz; boasts 2 GB DDR3 DRAM) offers ample computer speeds even for exacting image processing or process control algorithms in the camera and thanks to the generous memory build-out also makes e.g. embedded video recording possible. Consequently, the HiPerCam I is the ideal solution for complex process control applications, process optimization or for utilization in conjunction with security systems. It supports the following codecs and/or formats: Raw (Bayer, RGB), (M)JPEG and H.264. The one gigabit Ethernet interface permits adequate transmission speeds for real-time video data streaming.

The robust hardware is designed for industrial environments and temperature ranges of -30 to +55 °C. The unit does not contain any components that would require maintenance, such as batteries or fans. The camera is extremely tough and suitable for rough environments where it will be exposed to substantial stressors, such as shock and vibrations. It meets the common applicable DIN, EN and IEC standards.

The HiPerCam I firmware offers a convenient, web-based management interface. The standard version uses TCP/IP for both, the transmission of images and the configuration. ELTEC offers a PC test application for the depiction of images. As an option, the camera is able to use H.264 or MJPEG compression adapted to GStreamer.

In addition to the HiPerCam I, ELTEC also offers its HiPerCam A in an IP67 cast aluminum housing. The HiPerCam A has been designed especially for the extreme demands of railway and transportation applications. For users who want to integrate the camera into their own housings, the company also offers its modular camera electronics assembly as a board level product without housing, which can be ordered under the name HiPerCam E.

The following operating systems e supported: Linux and Windows, other systems upon request.

For more information, please visit the company's website www.eltec.com.

ELTEC Elektronik AG

ELTEC Elektronik offers tailor-made client solutions for a wide range of embedded designs with their specific criteria and tasks. To achieve this, the enterprise draws from its vast expertise in disciplines such as FPGA and CPU design, operating systems and drivers, as well as application software, bus concepts for all commonly used form factors, industrial PCs and industrial image processing.

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