Tattile introduces brand-new Smart Camera
New S12MP Smart Camera combines high-speed and compact size for demanding machine vision applications

Brescia, 24 January 2017. In the wide range of products dedicated to Machine Vision, Tattile’s monochrome and color Smart Cameras stand out as ‘all in one’ systems mainly developed for industrial applications where space limitations don’t allow the installation of a conventional camera and the relevant cabling to the processing unit. Together with the open platform featuring Linux OS or the easy to program Nautilus software tool Tattile Smart Cameras are perfectly designed for application fields such as online inspection, robotics, 3D measurement systems, and others. The range of these compact, high performance Tattile Smart Cameras now includes the brand-new ‘off the shelf’ S12MP.

S12MP: ‘made in Tattile’ top range
The S12MP is a technologically extremely advanced, high performance, sturdy and compact Smart Camera that is realized to meet the most complex Machine Vision requirements. Fully designed, developed and manufactured by Tattile, the S12MP Smart Camera features a very high processing capability and a sophisticated technology in a compact product with limited dimensions. The Smart Camera is based on a powerful image processing architecture, the Xilinx Zynq 7030 including a Kintex7 FPGA with 125 K elements allowing images to be acquired and pre-processed at very high speed; and a Cortex-A9 Dual Core 667MHz processor that processes the data, performs the controls required by the application and sends the results either to the machine or to the user line.
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Through an integrated SD card the image storage capability reaches up to 32 GB. “Thanks to the FPGA the working load of the CPU is reduced to the minimum so that it can be exclusively devoted to image analysis”, explains Fulvio Pozzalini, Technical Product Manager with Tattile. “Moreover, the FPGA can be easily programmed through the VHDL language. The user has the chance to directly implement its proprietary algorithms into the FPGA to decrease the load of the CPU which in turn has the only task of analyzing the data being extrapolated by the FPGA.”

High speed at compact size
The exclusive combination of the sensor and the Zynq architecture allows reaching an acquisition speed up to 300 frames/second (fps) at full resolution that can be further increased by partializing the acquisition and therefore reducing the image size. At the same time, the 12 Megapixel CMOS Global Shutter image sensor allows even very small objects to be detected. Despite its very compact size of 80 x 80 x 60 mm without lens support and 80 x 80 x 103.55 mm with lens support the processing power resulting from the synergy of the Dual Core CPU and the FPGA makes the S12MP a top range on the market from the performance standpoint. Due to these features, the S12MP is mainly targeted to applications where high speed is required in the most diversified industries and applications, including the semiconductor industry and the 2D and 3D analysis.

Tattile product strategy
The driving strategy for the development of new Tattile products is to further enhance cost reduction at the overall system level for its customers. The S12MP Smart Camera is part of a series of new products that Tattile will introduce which will balance increased
performance with lower cost. This involves introducing more intelligence into the cameras, using advanced image processing, with the capability to run machine vision algorithms built to the individual requirements of each customer.

Images

Tattile S12MP front and back side (Copyright: Tattile srl)
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Tattile is a high-tech company with a strong international outlook, a remarkable innovation capacity and very custom oriented. Since 1988 the company develops and produces sophisticated vision systems for different applications in the three divisions Industrial, Traffic and Railways. Tattile offers ANPR solutions for ITS (Intelligent Transport Systems) applications and proposes a totally renewed catalogue of smart cameras, line scan cameras, digital cameras, multi-camera vision controllers for high performing applications. Technological partnerships enable customized solutions, made to respond to specific technical requests and to the needs of industrial OEMs from the most different industry sectors such as pharmaceutical, packaging, semiconductors, printing, ceramics, food & beverage, automotive etc.

For more information visit Tattile on the web at www.tattile.com.

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