ON Semiconductor 16 Mp XGS Sensor Brings High Quality, Low Power Imaging to Factory Automation and Intelligent Transportation Systems (ITS)

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Recently integrated into the Toshiba Teli industrial camera family, the XGS 16000 offers one of the highest resolutions available for compact 29 x 29 mmcameras

PHOENIX--(BUSINESS WIRE)-- ON Semiconductor (Nasdaq:ON) introduced the latest addition to the XGS series of CMOS image sensors. The XGS 16000 is a 16 Megapixel (Mp) sensor that provides high quality, global shutter imaging for factory automation applications including robotics and inspection systems. Consuming only 1 Watt at 65 frames per second (fps), the XGS 16000 delivers exceptional performance at low power. This makes the XGS 16000 one of the best in class for power consumption, while also offering one of the highest resolutions available for standard 29 x 29 mm industrial cameras.

The XGS 16000 shares a common architecture and footprint with other XGS CMOS image sensors. This enables manufacturers to use a single camera design to develop products in different resolutions. Supporting up to 65 frames per second readout at full resolution, the sensor is available in various speed grades, all with Bayer color or monochrome options.

Developers of camera systems used in intelligent transportation systems, machine vision inspection and industrial automation applications will benefit from the high resolution and high frame rate of the XGS 16000. ON Semiconductor's global shutter pixel technology addresses the limitations associated with rolling shutter pixels in these applications. Artifacts such as motion blur and distortion are avoidable using a global shutter approach. This is increasingly important in automation, inspection, and identification applications.

Toshiba Teli, specializing in the development and manufacturing of high-performance cameras that meet the application specific requirements of key market segments including machine vision, medical imaging and security, has integrated the XGS 16000 into its new 16 Mp industrial camera. The DDU1607MG/MC can deliver 16 Mp monochrome and color resolution at over 47 fps with a unique technology of DUAL USB3 interface.

The XGS 16000 is designed in a unique 1:1 square aspect ratio, which helps maximize the image capture area within the optical circle of the camera lens and ensure optimal light sensitivity. Because of this design, the sensor is compatible with 29 mm^2 industry standard camera formats using commercially available C-Mount lenses. This provides optimal use of the available field of view and sensor area for the physical size of the camera.

To simplify new camera designs, ON Semiconductor offers color and mono versions of the XGS 16000 X-Cube and X-Celerator developer kits. High-speed conversion to MIPI interface examples are provided with the reference design kits to allow for quicker integration into standard FPGA evaluation environments.

Additional Resources & Documents:

ON Semiconductor Image Sensors
The Current State of Machine Vision Technology (Video)
X-Celerator Demonstration (Video)
X-Celerator Developer Kit User Guide
X-Cube Demonstration (Video)
X-Cube Imaging System Developer Guide

About ON Semiconductor

ON Semiconductor (Nasdaq: ON) is driving energy efficient innovations, empowering customers to reduce global energy use. The company is a leading supplier of semiconductor-based solutions, offering a comprehensive portfolio of energy efficient, power management, analog, sensors, logic, timing, connectivity, discrete, SoC and custom devices. The company's products help engineers solve their unique design challenges in automotive, communications, computing, consumer, industrial, medical, aerospace and defense applications. ON Semiconductor operates a responsive, reliable, world-class supply chain and quality program, a robust compliance and ethics program, and a network of manufacturing facilities, sales offices and design centers in key markets throughout North America, Europe and the Asia Pacific regions. For more information, visit http://www.onsemi.com.

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