

2.3- and 5.3-Megapixel Image Sensors for Machine Vision, High-End Security and Traffic Monitoring Applications

Cypress Semiconductor Corp. announced two extensions to Cypress's popular VITA family of image sensors ? the 2.3-megapixel VITA 2000 and the 5.3-megapixel VITA 5000. They are ideal for machine vision, high-end security, 2D barcode and intelligent traffic applications. The new sensors offer an array of sophisticated features, including pipelined and triggered global shutter modes and a conventional rolling shutter mode, speeds of up to 92 frames per second (FPS) for VITA 2000 and 75 FPS for VITA 5000, and 10-bit analog-to-digital converters (ADCs), with either parallel outputs or serialized outputs up to 620 Mbps. They feature programmable registers to control different operating modes, configurable over a standard SPI interface. The VITA 2000 can provide output in two standard formats: HD (1920 x 1080), which is typically used in the security market; and 4:3 (1600 x 1200), popular in the machine vision market. The sensor array has a standard 2/3" optical format lens. It offers four parallel LVDS channels. The VITA 5000 has a standard 1" optical format with monochrome or color digital output. The pipelined global shutter capability enables exposure during read-out to reduce motion blur. The sensor also works in a rolling shutter mode with Correlated Double Sampling (CDS) to reduce noise and increase dynamic range. It offers eight parallel LVDS channels.

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