

OV10823 4K2K product brief



Ultra-High Resolution CameraChip™ Sensor for the Next Generation of Feature-Rich Security and Surveillance Systems



available in
a lead-free
package

OmniVision's OV10823 CameraChip™ sensor brings best-in-class light sensitivity, outstanding high dynamic range (HDR) and wide field-of-view (FOV) to high-end security and surveillance applications. The sensor's ability to capture ultra-high resolution images and video enables a host of features for the next generation of surveillance systems, including crowd faction recognition, video analytics and highly detailed video zoom.

The 1/2.6-inch OV10823 uses advanced 1.4-micron OmniBSI™-2 pixel architecture to capture full-resolution 10.5-megapixel (4320 x 2432 pixels) video at 30 fps

and ultra-high resolution 4K2K video at 30 fps. In addition to capturing ultra-high definition video, the OV10823 supports 720p HD video with up to 3x zoom with no moving lenses.

The OV10823 comes in a chip scale package (CSP), making the security industry's smallest image sensor capable of recording 4K2K video. It features a high-speed 4-lane MIPI interface to facilitate the required high data transfer rate.

Find out more at www.ovt.com.



Applications

- Security and Surveillance

OV10823



Product Features

- 1.4 μm x 1.4 μm pixel with OmniBSI™-2
- optical size of 1/2.6"
- programmable controls for:
 - frame rate
 - mirror and flip
 - cropping
 - windowing
 - panning
- image quality controls:
 - black level calibration
- support for output formats:
 - 10-bit RAW RGB data and DPCM 10-8 compression
- support for video or snapshot operations
- support 1x2 binning, 2x2 binning
- standard serial SCCB interface
- up to 4-lane MIPI serial output interface
- 12K bits of embedded one-time programmable (OTP) memory
- two on-chip phase lock loop (PLL)
- programmable I/O drive capability
- support for black sun cancellation

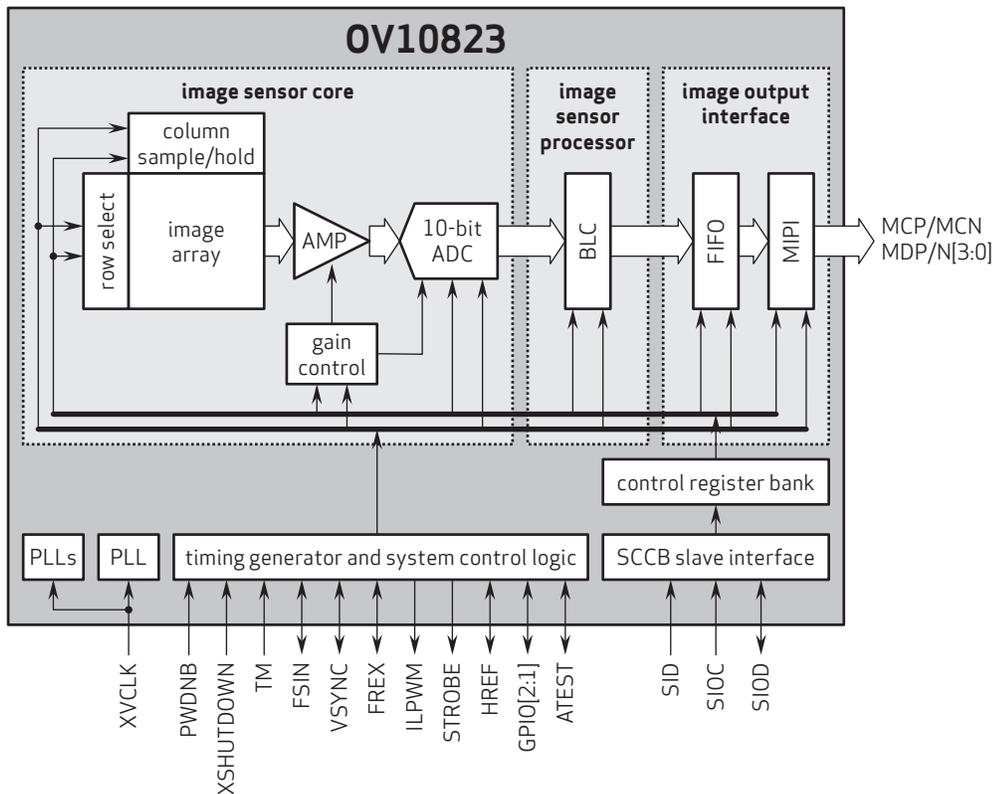
Ordering Information

- OV10823-H75A (color, lead-free) 75-pin CSP

Technical Specifications

- active array size: 4320 x 2432
- maximum image transfer rate:
 - 10.5MP (4320x2432): 30 fps
 - 2.6MP (2160x1216): 60 fps
- power supply:
 - core: 1.2V \pm 5%
 - analog: 2.7 - 3.0V
 - I/O: 1.7 - 3.0V
- power requirements:
 - active: 296 mW
 - standby: 200 μA
 - XSHUTDOWN: 5 μA
- temperature range:
 - operating: -30°C to +70°C junction temperature
 - stable image: 0°C to +60°C junction temperature
- output formats: 10-bit RAW RGB data and DPCM 10-8 compression
- lens size: 1/2.6"
- lens chief ray angle: 0°
- scan mode: progressive
- shutter: rolling shutter
- pixel size: 1.4 μm x 1.4 μm
- image area: 6092.8 μm x 3449.6 μm

Functional Block Diagram



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