

# OS04B10 3.6-megapixel product brief



## Backside Illumination 3.6-Megapixel 2K Image Sensor is Cost-Effective, Space Saving, and High-Performance for Industrial and IoT Security Cameras



available in  
a lead-free  
package

OmniVision's OS04B10 is a 2-micron image sensor built with OmniBSI™ pixel technology, which reduces pixel crosstalk, yielding excellent image quality. This sensor provides the industry's most cost-effective backside illumination (BSI) solution and is designed for capturing high definition (HD) images in entry-level IoT, industrial, commercial, and residential security and surveillance cameras. With its superior low-light sensitivity, the OS04B10 can produce high-quality digital images and HD video, even in poor lighting conditions. This capability is critical for security applications.

The OS04B10 is designed for applications covering larger surveillance areas, with 3.6MP resolution that supports 2K (2560x1440) resolution streaming video at 30 frames per second (fps). It features a 1/3-inch optical format and a 6.3 x 3.7 mm chip scale package (CSP). The OS04B10's power consumption is less than 140 mW, and it has high QE for low system power. Its wide chief ray angle (CRA) of 9 degrees enables thinner modules with wide-aperture lenses for accurate, unobtrusive surveillance.

Find out more at [www.ovt.com](http://www.ovt.com).



## Applications

- Security Surveillance Systems
- IP Cameras
- HD Analog Cameras

## Product Features

- supports 2K (3.6-megapixel, 2560 x 1440) resolution
- supports windowing
- supports mirror and flip function
- supports auto black level calibration
- supports defective pixel correction
- supports black sun cancellation
- SCCB control interface for register programming
- supports 2k-bit OTP memory, 9 bytes for customer
- supports 2x2 binning function
- supports 10-bit / 8-bit RAW image data output
- supports MIPI 1-lane or 2-lane serial output interface
- low power mode
- supports multi-camera synchronous function

# OS04B10



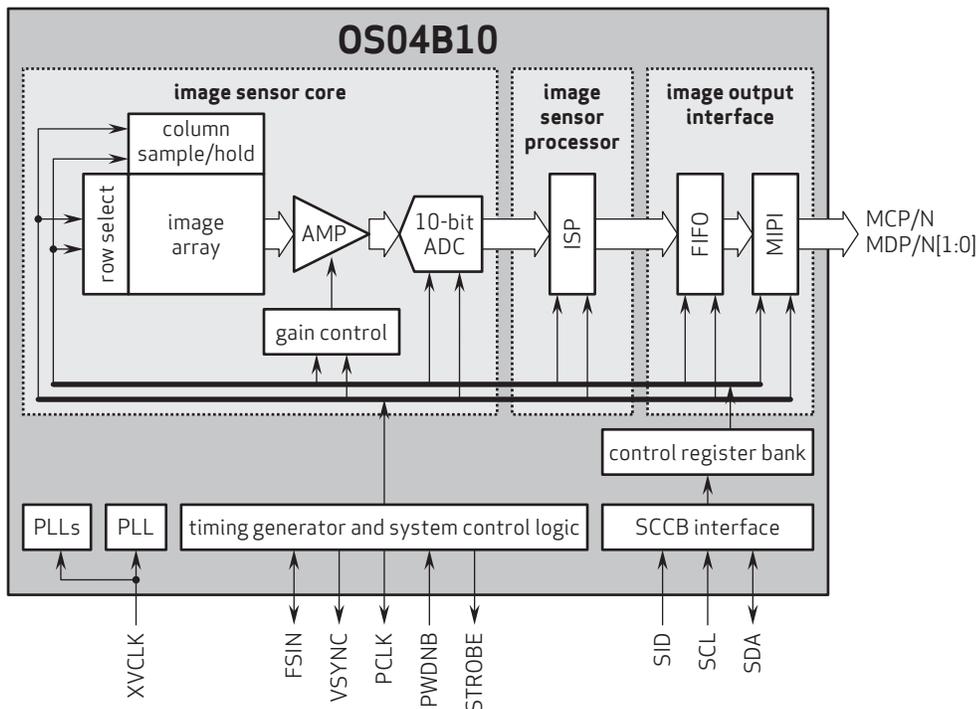
## Ordering Information

- OS04B10-A51A (color, lead-free) 51-pin CSP

## Product Specifications

- active array size: 2560 x 1440
- power supply:
  - core: 1.15 - 1.3V (1.2V nominal)
  - analog: 2.7 - 3.0V (2.8V nominal)
  - I/O: 1.7 - 1.9V (1.8V nominal)
- power requirements:
  - active: <140 mW
- temperature range:
  - operating: -30°C to +85°C junction temperature
  - stable image: -10°C to +60°C junction temperature
- output interfaces: MIPI 2-lane
- output formats: RAW10/RAW8
- lens size: 1/3"
- lens chief ray angle: 9° linear
- input clock frequency: 6 - 27 MHz
- max S/N ratio: 39 dB
- dynamic range: 74 dB @ 16x gain
- maximum image transfer rate:
  - 2K: 30 fps
  - 720p: 60 fps
- sensitivity: 13,000 e<sup>-</sup>/Lux-sec
- shutter: rolling
- SNR1(Lux): 0.62
- dynamic range: 74 dB
- pixel size: 2 μm x 2 μm
- image area:
  - 5146.848 μm x 2909.088 μm
- package dimensions:
  - CSP: 6330 μm x 3739.8 μm

## Functional Block Diagram



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