

# OS08A10 8-megapixel product brief



## Low-Power 8-Megapixel PureCel® Sensor Brings 4K2K Video to Security and Consumer Applications



available in  
a lead-free  
package

OmniVision's OS08A10 is a low-power image sensor that brings 8-megapixel resolution to a variety of applications, including commercial surveillance, IoT, and action cameras, drones, and augmented and virtual reality (AR/VR) systems. Built on OmniVision's advanced PureCel® pixel architecture, the OS08A10 leverages backside illumination (BSI) technology with improved low-light sensitivity to deliver high-resolution images and capture ultra-high-resolution 4K2K video, even in challenging high-contrast lighting conditions.

The OS08A10 captures smooth, best-in-class 4K2K video at 60 frames per second (fps) and 1080p video at 120 fps, enabling detailed wide-area coverage. The

OS08A10 also features a 11-degree chief ray angle (CRA), a two-exposure staggered high dynamic range (HDR) mode, and low power requirements to enable a range of battery-powered drones and wireless devices. The OS08A10 is compatible with advanced compression technology such as high-efficiency video coding (HEVC) to deliver 4K video to mainstream displays.

The OS08A10 comes in a package size of 8.9 mm x 6.3 mm.

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



## Applications

- Security Cameras
- Action Cameras
- High Resolution Consumer Cameras
- Digital Still Cameras (DSC)
- Digital Video Camcorders (DVC)

## Product Features

- 2  $\mu\text{m}$  x 2  $\mu\text{m}$  pixel
- optical size of 1/2"
- programmable controls for:
  - frame rate
  - mirror and flip
  - cropping
  - windowing
- supports output formats:
  - 10/12-bit RGB RAW
- supports images sizes:
  - 4K2K (3840x2160)
  - 2560x1440
  - 1080p (1920x1080)
  - 720p (1280x720)
- supports 2x2 binning
- standard serial SCCB interface
- 12-bit ADC
- up to 4-lane MIPI/LVDS serial output interface (supports maximum speed up to 1500 Mbps/lane)
- 2-exposure staggered HDR support
- programmable I/O drive capability
- light sensing mode (LSM)
- PLL with SCC support
- support for FSIN

# OS08A10



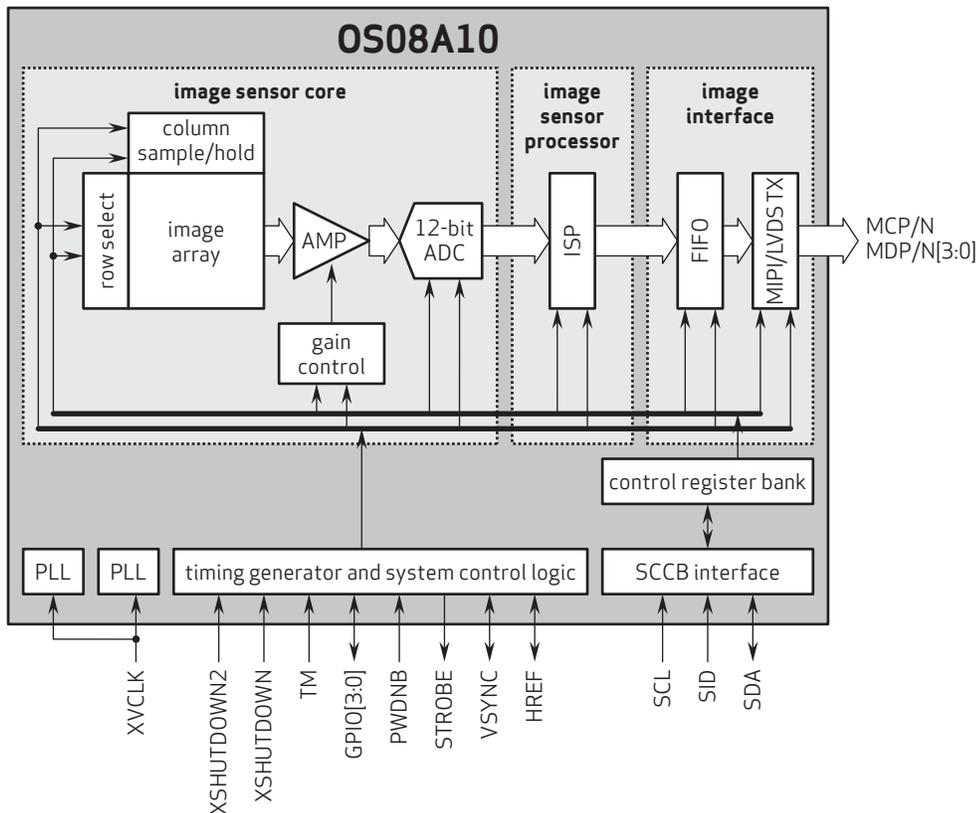
## Ordering Information

- OS08A10-H92A-Z  
(color, lead-free, 92-pin CSP)

## Product Specifications

- active array size: 3840 x 2160
- power supply:
  - core: 1.2V
  - analog: 2.8V
  - I/O: 1.8V
- power requirements:
  - active: 280 mW
  - standby: 1000  $\mu\text{A}$
  - XSHUTDOWN: 0.6  $\mu\text{A}$
- temperature range:
  - operating: -30°C to +85°C junction temperature
  - stable image: 0°C to +60°C junction temperature
- output formats: 10/12-bit RGB RAW
- lens size: 1/2"
- input clock frequency: 6 - 27 MHz
- lens chief ray angle: 11° linear
- max S/N ratio: 39 dB
- dynamic range: 74 dB @ 16x gain
- maximum image transfer rate:
  - 4K2K: 60 fps
  - 2250x1440: 60 fps
- sensitivity: 13,000 e<sup>-</sup>/Lux-sec
- scan mode: progressive
- maximum exposure interval: 1112 x t<sub>row</sub>
- pixel size: 2.0  $\mu\text{m}$  x 2.0  $\mu\text{m}$
- image area: 7736.256  $\mu\text{m}$  x 4379.616  $\mu\text{m}$
- package dimensions: 8939.2  $\mu\text{m}$  x 6340  $\mu\text{m}$

## Functional Block Diagram



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