

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, action cameras, drones, and augmented / 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.



Applications

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

Product Features

- 2 μm x 2 μm pixel
- optical size of 1/1.8"
- programmable controls for:
 - frame rate
 - mirror and flip
 - cropping
 - windowing
- supports output formats:
 - 12-/10-bit RGB RAW
- supports image sizes:
 - 4K2K (3840x2160)
 - 2560 x 1440
 - 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



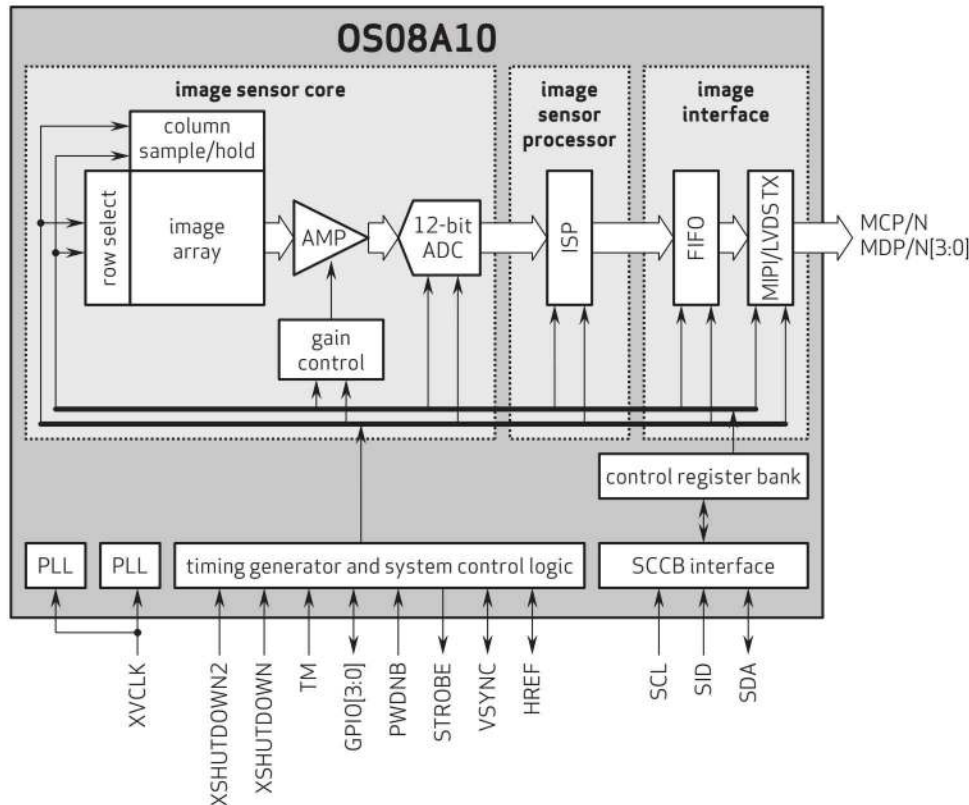
Ordering Information

- OS08A10-H92A-1B
(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: 240 mA
 - XSHUTDOWN: $<10 \mu\text{A}$
- temperature range:
 - operating: -30°C to $+85^{\circ}\text{C}$ junction temperature
 - stable image: 0°C to $+60^{\circ}\text{C}$ junction temperature
- output formats: 10/12-bit RGB RAW
- lens size: 1/1.8"
- 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
 - 2560 x 1440: 60 fps
 - 1080p: 120 fps
- sensitivity: 13,000 $e^{-}/\text{Lux}\cdot\text{sec}$
- scan mode: progressive
- maximum exposure interval: VTS-8
- pixel size: 2.0 μm x 2.0 μm
- image area: 7736.256 μm x 4379.616 μm
- package dimensions:
 - CSP: 8929.2 μm x 6330 μm

Functional Block Diagram



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