

$0508A10_{\,8\text{-megapixel}}\,\text{product brief}$





available in a lead-free package

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

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 OSO8A10 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 OSO8A10 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 OSO8A10 is compatible with advanced compression technology such as high-efficiency video coding (HEVC) to deliver 4K video to mainstream displays.

The OSO8A10 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)

■ OS08A10-H92A-1B (color, lead-free) 92-pin CSP

Product Features

- 2 µm x 2 µm pixel
- optical size of 1/1.8"
- programmable controls for: frame rate
 - mirror and flip

 - croppingwindowing
- 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

Product Specifications

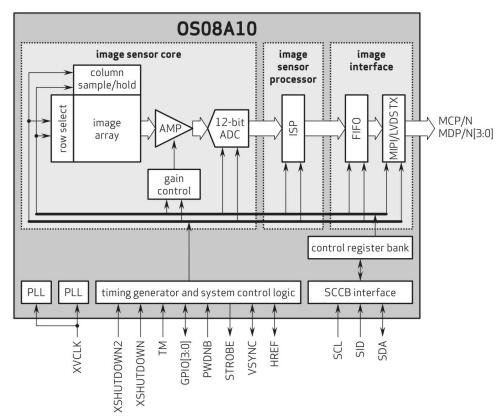
- active array size: 3840 x 2160
- power supply:
 - core: 1.2 analog: 2.8V
 - I/O: 1.8V
- power requirements:
- active: 240 mA XSHUTDOWN: <10 μA
- temperature range:
 operating: -30°C to +85°C junction temperature
- stable image: 0°C to +60°C junction temperature
- output formats: 10/12-bit RGB RAW
- lens size: 1/1.8"
- input clock frequency: 6 27 MHz

■ lens chief ray angle: 11° linear

OS08A10

- 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⁻/Lux-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



4275 Burton Drive Santa Clara, CA 95054 USA

Tel: +1 408 567 3000 Fax: +1 408 567 3001 www.ovt.com

OmniVision reserves the right to make changes to their products or to discontinue any product or service without further notice. OmniVision, the OmniVision logo, and PureCel are registered trademarks of OmniVision Technologies, Inc. All other trademarks are the property of their respective owners.

