



OS08A10



8-megapixel product brief

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 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.

Find out more at www.ovt.com.



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

Applications

- security cameras
- action cameras
- high resolution consumer cameras
- digital still cameras (DSC)
- digital video camcorders (DVC)

Technical Specifications

- active array size:** 3840 x 2160
- maximum image transfer rate:**
 - 4K2K: 60 fps
 - 2560 x 1440: 60 fps
 - 1080p: 120 fps
- power supply:**
 - core: 1.2V
 - analog: 2.8V
 - I/O: 1.8V
- power requirements:**
 - active: 240 mA
 - XSHUTDOWN: <10 μ A
- output formats:** 10/12-bit RGB RAW
- temperature range:**
 - operating: -30°C to +85°C junction temperature
 - stable image: 0°C to +60°C junction temperature
- lens size:** 1/1.8"
- lens chief ray angle:** 11° linear
- scan mode:** progressive
- pixel size:** 2.0 μ m x 2.0 μ m
- image area:** 7736.256 μ m x 4379.616 μ m

Product Features

- 2 μ m x 2 μ m pixel
- optical size of 1/1.8"
- programmable controls for:
 - frame rate
 - mirror and flip
 - cropping
 - windowing
- supports output formats: 10/12-bit RGB RAW
- supports image sizes:
 - 4K2K (3840 x 2160)
 - 2560 x 1440
 - 1080p (1920 x 1080)
 - 720p (1280 x 720)
- 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

Functional Block Diagram

