



OV04C10

4-megapixel product brief

1/3" Color 4-Megapixel CMOS Image Sensor with PureCel®Plus Technology



The OV04C10 RAW RGB PureCel®Plus image sensor is a high performance, 1/3-inch, 4-megapixel CMOS image sensor that delivers 2688 x 1520 at 60 fps. It provides full-frame, sub-sampled, and windowed 10-bit MIPI images in various formats via the control of the Serial Camera Control Bus (SCCB) interface.

The OV04C10 has a 4-megapixel image array capable of operating at up to 60 frames per second (fps) in 10-bit resolution with complete user control over image quality, formatting, and output data transfer. Some image processing functions, such as defective pixel canceling, etc., are programmable through the SCCB interface.

In addition, OMNIVISION image sensors use proprietary sensor technology to improve image quality by reducing or eliminating common lighting / electrical sources of image contamination, such as fixed pattern noise, smearing, etc., to produce a clean, fully stable, color image.

The OV04C10 has a MIPI interface of up to four lanes.

Find out more at www.ovt.com.



- OV04C10-GA5A-001A (color, chip probing, 150 µm backgrinding, reconstructed wafer with good die)

Applications

- security cameras
- high resolution consumer cameras
- action cameras

Technical Specifications

- active array size:** 2688 x 1520
- temperature range:**
 - operating: -30°C to +85°C junction temperature
 - stable image: -10°C to +60°C junction temperature
- maximum image transfer rate:**
 - 2688 x 1520: 60 fps
 - 1920 x 1080: 80 fps
 - 1280 x 720: 240 fps
- power supply:**
 - core: 1.2V
 - analog: 2.8V
 - I/O: 1.8V
- power requirements:**
 - active: 155 mW
 - XSHUTDOWN: <10 µA
- output formats:** 10/12-bit RGB RAW
- lens size:** 1/3"
- lens chief ray angle:** 34.38° non-linear
- scan mode:** progressive
- pixel size:** 1.998 µm x 1.998 µm
- image area:** 5402.592 µm x 3068.928 µm

Product Features

- programmable controls for:
 - frame rate
 - mirror and flip
 - cropping
 - windowing
- supports output formats: 12-bit/10-bit RAW RGB
- supports image sizes:
 - full (2688 x 1520)
 - 1080p (1920 x 1080)
 - 720p (1280 x 720)
 - AO_360p (640 x 360)
 - AO_720p (1280 x 720)
- supports 2x2 binning
- standard serial SCCB interface
- up to 4-lane MIPI serial output interface (supports maximum speed up to 1500 Mbps/lane)
- add staggered HDR RAW data output
- programmable I/O drive capability
- built-in temperature sensor
- MIPI serial output interface (1-lane, 2-lane, or 4-lane)
- image quality controls:
 - defect pixel correction
 - automatic black level calibration

Functional Block Diagram

