

OV08A10 8-megapixel product brief



High-Performance 8MP PureCel®Plus-S Image Sensor Optimized for Multi-Camera Smartphone Applications



available in
a lead-free
package

OmniVision's OV08A10 is an ultra-compact 8MP image sensor built on OmniVision's second-generation, 1.0 micron PureCel®Plus-S stacked die pixel technology. Designed specifically for multi-camera applications, the 1/4.4" optical format makes it ideal for the compact space requirements of next-generation smartphones.

The sensor's customized chief ray angle (CRA) enables the OV08A10 to be used in telephoto cameras with a 2x or 3x optical zoom configuration, which offers DSLR-like image quality and user experience. Additionally, the OV08A10 is also optimized for dual-camera zoom solutions, with features such as context switching and frame synchronizing to simplify camera system architecture.

The OV08A10 brings a host of advanced imaging capabilities to smartphones, including 4-cell binning and phase-detection autofocus (PDAF), which enables sharp pictures taken in rapid succession. This sensor supports multiple resolution and frame-rate configurations with both D-PHY and C-PHY MIPI interfaces, including full-resolution 8MP images and video at 30 fps, 1080p video at 60 fps, and 720p video at 90 fps.

Find out more at www.ovt.com.



Applications

- Smart Phones
- Video Conferencing
- PC Multimedia

Product Features

- 8MP @ 30 fps
- supports phase detection auto focus (PDAF)
- automatic black level calibration (ABLC)
- total embedded one-time programmable (OTP) memory: 1024 bytes, 512 bytes for customer use, remaining bytes for internal use
- supports typical images sizes:
 - 3264 x 2448
 - 3264 x 1836
 - 2112 x 1188
 - 1920 x 1080
 - 1408 x 792
- supports horizontal and vertical subsampling
- programmable controls for:
 - frame rate
 - mirror and flip
 - cropping
 - windowing
- 4-lane MIPI TX interface at 1 Gbps/lane and 2-lane MIPI TX interface at 1.8 Gbps/lane
- programmable I/O drive capability
- standard serial SCCB interface
- supports output formats:
 - 10-bit RAW RGB
- two on-chip phase lock loops (PLLs)
- typical module size: 8.5 x 8.5 x 4.5 mm

OV08A10



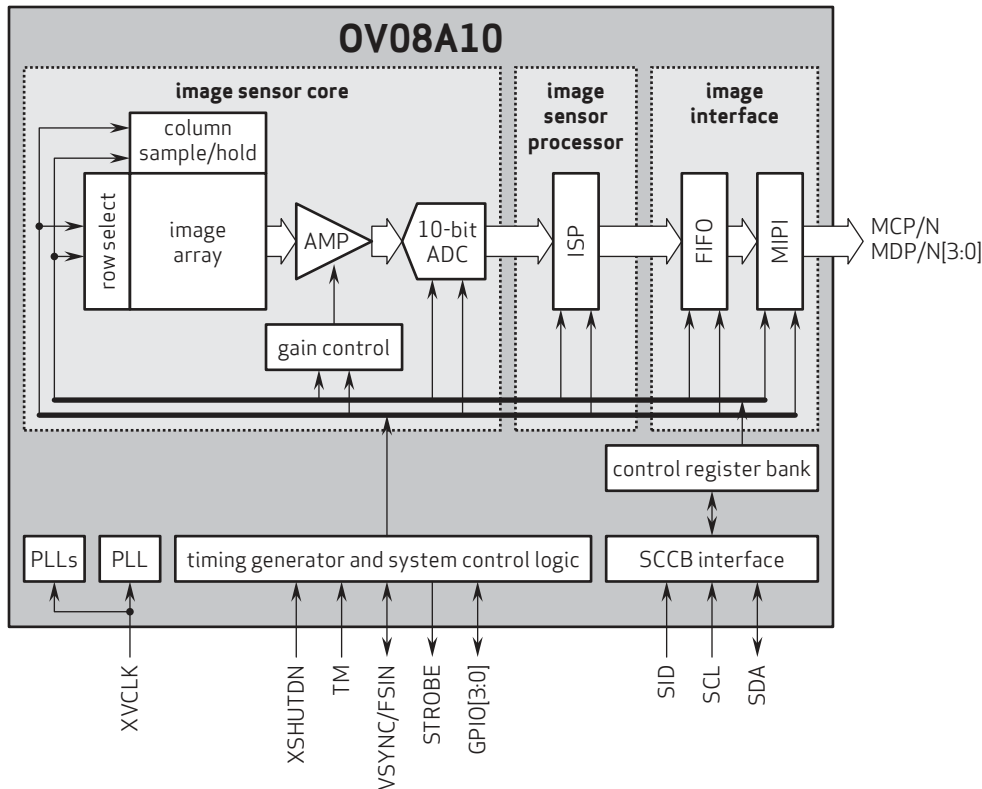
Ordering Information

- OV08A10-GA5A**
(color, chip probing, 150 μm backgrinding, reconstructed wafer with good die)

Product Specifications

- active array size:** 3264 x 2448
- maximum image transfer rate:**
 - 3264 x 2448: 30 fps
 - 3264 x 1836: 30 fps
 - 2112 x 1188: 60 fps
 - 1920 x 1080: 60 fps
 - 1480 x 792: 90 fps
- temperature range:**
 - operating: -30°C to +85°C junction temperature
 - stable: 0°C to +60°C junction temperature
- input clock frequency:** 6 - 27 MHz
- lens size:** 1/4.4"
- scan mode:** progressive
- lens chief ray angle:** 16.8°
- pixel size:** 1.008 μm x 1.008 μm
- image area:** 3322.37 μm x 2499.84 μm
- power supply:**
 - core: 1.2V
 - analog: 2.8V
 - I/O: 1.8V
- power requirements:**
 - active: 181 mW
 - XSHUTDOWN: <25 μA

Functional Block Diagram



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