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

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.
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

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
  - 1408 x 792: 90 fps
- Power supply:
  - Core: 1.2V
  - Analog: 2.8V
  - I/O: 1.8V
- Power requirements:
  - Active: 101 mW
  - XSHUTDN: <25 µA
- 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

Functional Block Diagram