

# OS04D10



## 4-megapixel product brief

### High-Performance, Low-Power 2K 4-Megapixel Image Sensor for Consumer Security and Surveillance Cameras

The OSO4D is a 4-megapixel (MP) image sensor that brings 2K resolution digital images and high-definition (HD) video at 30 frames per second (fps) to IP and HD analog security cameras, including smart home, doorbell and baby monitoring devices. The OSO4D CMOS image sensor utilizes a high-performance backside-illuminated (BSI) pixel while also providing 40% power consumption savings, as well as improvements of over 30% in signal-to-noise ratio (SNR1) and 40% in sensitivity when compared with its predecessor.

The OSO4D image sensor's 2.0-micron (µm) BSI pixel is based on OMNIVISION's PureCel®Plus technology and enables higher sensitivity, ultra-low noise and better overall image quality. Select conversion gain (SCG) allows the sensor

to flexibly select low and high conversion gain depending on the lighting conditions. On-chip auto explorer control (AEC) and auto gain control (AGC) further accelerate system-on-chip (SoC) booting time. Low power consumption is beneficial for battery operated devices, especially doorbell security cameras. It comes in a cost-effective 1/3-inch optical format and is pin-to-pin compatible with OMNIVISION's OSO4L image sensor as well as other new products that will be launched in the future.

The OSO4D supports MIPI interfaces.

Find out more at www.ovt.com.





#### **Ordering Information**

OSO4D10-A44A-001A (color, lead-free)

#### **Applications**

- security surveillance systems
- IP cameras

- HD analog cameras
- **Technical Specifications**
- active array size: 2560 x 1440
- maximum image transfer rate:
- 2568 x 1448: 30 fps
- power supply:
- analog: 2.8V
- I/0: 1.8V core: 1.2V
- power requirements:
- active: ~88 mW standby: 5 µA
- output interfaces: 10-bit 2-lane MIPI

- temperature range:operating: -30°C to +85°C junction temperature
- stable: 0°C to +60°C junction temperature
- output formats: 10-bit RAW RGB
- lens size: 1/3"
- lens chief ray angle: 12° linear
- pixel size: 1.998 μm x 1.998 μm
- image area: 5130.864 μm x 2893.104 μm

#### **Product Features**

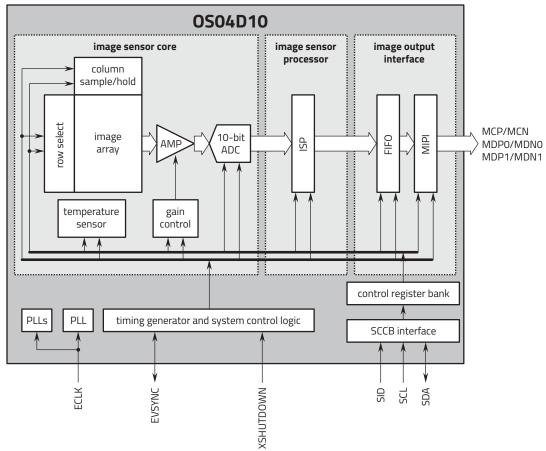
- programmable controls:frame rate
- mirror and flip
- cropping - windowing
- supports 2x2 color binning function
- support for output format: 10-bit 2-lane MIPI TX
- SCCB control interface for register programming

- supports MIPI serial output interface (1-lane/2-lane)
- dvnamic DPC

calibration

- supports image sizes:2568 x 1448 @ 30 fps
- supports automatic black level
- supports multi-camera synchronous function
- · supports fast boot function

#### **Functional Block Diagram**





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