

OV7962 VGA product brief



Superior Image Quality for Professional Grade IP Cameras



available in
a lead-free
package

Optimized for digital IP cameras, the OV7962 system on chip (SoC) with advanced image signal processing capabilities delivers vivid image capture even in the most challenging lighting conditions, making it an ideal solution for both indoor and outdoor security applications.

The low-voltage, high-performance OV7962 provides the full functionality of a single-chip digital VGA sensor. Based on OmniVision's 6.0 μm OmniPixel3-HS™ architecture, the OV7962 features the industry's best-in-class low light sensitivity of $>12 \text{ V}/(\text{lux} \cdot \text{sec})$. The OV7962 has an active array of 752×480 to support VGA resolution.

The OV7962 incorporates advanced image processing functions, including exposure control, gain control, white balance, lens correction and defective pixel correction to

provide full-frame images. The functions are programmable through the serial camera control bus (SCCB) interface. For storage purposes, the OV7962 includes 16 bytes of one-time programmable (OTP) memory.

The OV7962 features automatic exposure/gain with 16 zone control, horizontal and vertical windowing capability, aperture/gamma correction, external frame sync capability and extremely low dark current for high temperature applications. The OV7962 comes in a CSP4 package and is capable of operating within a temperature range of -20°C to 70°C .

Find out more at www.ovt.com.

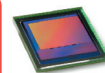
Applications

- Security and Surveillance Cameras

Product Features

- VGA output
- high sensitivity >12 V/(lux·sec)
- automatic exposure/gain with 16 zone control
- horizontal and vertical windowing capability
- auto white balance control
- aperture/gamma correction
- external frame sync capability (Genlock)
- slave compatible serial camera control bus (SCCB) control interface for register programming
- low power consumption
- extremely low dark current for high temperature applications
- 50/60 Hz flicker cancellation
- overlay with four layers, 16 colors and eight transparencies each
- 16 bytes of one-time programmable memory (OTP) to control overlay and set other customer variables
- SPI master for single static overlay and loading setting
- dynamic overlay controls
- defective pixel correction

OV7962



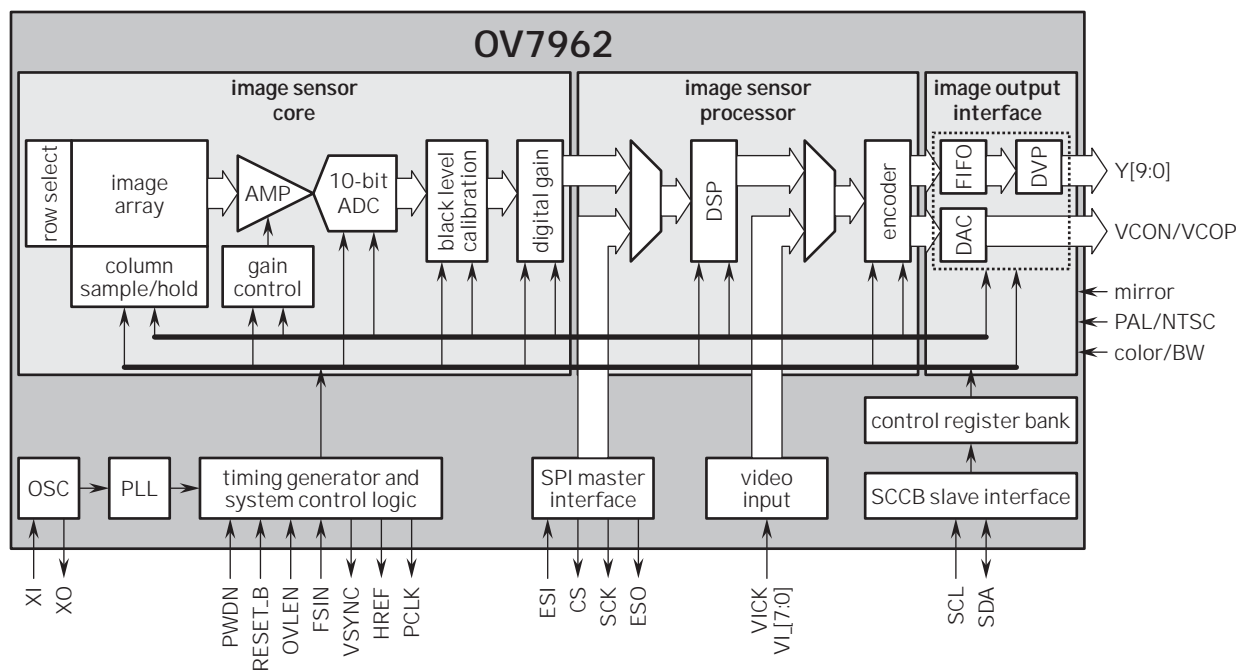
Ordering Information

- OV7962-E62A (color, lead-free, 62-pin CSP4)
- OV07461-E62A (B&W, lead-free, 62-pin CSP4)

Product Specifications

- active array size: 752 x 480
- power supply:
 - core: 1.5 V ± 5%
 - analog: 3.3 V ± 5%
 - I/O: 1.7 - 3.47 V
- power requirements:
 - active: TBD
- temperature range:
 - operating: -20°C to 70°C
 - stable image: 0°C to 50°C
- optical size:
 - 752x480: 1/3.2"
 - 640x480: 1/4"
- lens chief ray angle: 0°
- output formats: RAW RGB, RGB565, RGB666, YUV422, CCIR656
- maximum image transfer rate:
 - 752x480: 30 fps
 - 640x480: 30 fps
 - 320x240: 60 fps
- sensitivity: >12 V/(lux·sec)
- pixel size: 6.0 μm x 6.0 μm OmniPixel3-HS
- image area: 4752 μm x 3552 μm
- package dimensions: 6680 μm x 7130 μm

Functional Block Diagram



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