

OV9752 720p HD product brief



available in
a lead-free
package

High Performance CameraChip™ Sensor with RGB-IR Color Filter for Advanced Security Applications

OmniVision's OV9752 CameraChip™ captures high quality (HD) images and video in 1280 x 960 pixel resolution as well as infrared information, providing excellent scene reproduction regardless of lighting conditions. These benefits make the OV9752 an ideal camera solution for security systems designed to record during day and night.

The OV9752 replaces the traditional mechanical rotary filter with an RGB-IR dual band color filter to simplify design, reduce package footprint, and capture extremely high quality infrared images and video.

Built on the 3.75-micron OmniPixel3-HS™ pixel architecture, the OV9752 delivers excellent results whether recording visible light or infrared, capturing

clear images and video in high, low, and "no" light environments. The sensors can capture in 1280 x 960 pixel resolution video at 60 frames per second (fps) with 10-bit output, or at 45 fps with 12-bit output. Additionally, the OV9752 features an ultra-low power mode, which allows the sensor to reduce the resolution and frame rates, thus further reducing power consumption.

The OV9752 fits into a 6.3 x 5.2 mm package.

Find out more at www.ovt.com.



Applications

- Security and Surveillance Cameras
- Wearables
- PC Multimedia
- 960H for Analog CCTV Applications

Product Features

- RGB-IR color filter
- 3.75 μm x 3.75 μm pixel
- 1280x960 at 60 fps @ 10-bit, 45 fps @ 12-bit
- programmable controls for frame rate, mirror and flip, cropping, and windowing
- supports images sizes: SXGA (1280 x 960), VGA (640 x 480), and more
- 2k bits of embedded one-time programmable (OTP) memory
- ultra low power mode (ULPM)
- support for output formats: 10/12-bit RGB-IR RAW
- two-wire serial bus control (SCCB)
- MIPI serial output interface (1- or 2-lane) / DVP interface
- 2x binning support
- image quality control: defect pixel correction and automatic black level calibration

OV9752



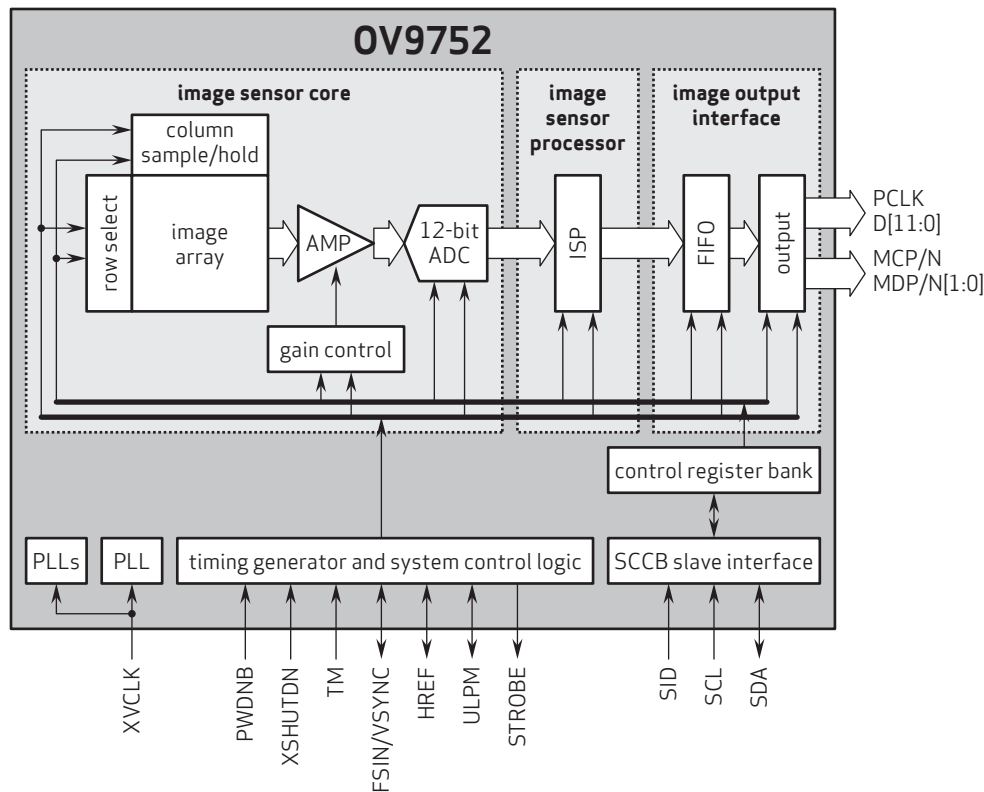
Ordering Information

- OV09752-H55A (RGB-IR, lead-free, 55-pin CSP5)

Product Specifications

- active array size: 1280 x 960
- power supply:
 - core: 1.7 to 1.9V (1.8V nominal)
 - analog: 3.15 to 3.45V (3.3V nominal)
 - I/O: 1.7 to 1.9V (1.8V nominal)
- power requirements:
 - active: 165 mW
- temperature range:
 - operating: -30°C to +85°C junction temperature
 - stable image: 0°C to +60°C junction temperature
- output interface: 2-lane MIPI serial output / DVP parallel output
- output formats: 10/12-bit RGB-IR RAW
- lens size: 1/3"
- lens chief ray angle: 9° linear
- input clock frequency: 6 - 74.5 MHz
- maximum image transfer rate:
 - SXGA (1280x960): 60 fps
 - VGA (640x480): 120 fps
- pixel size: 3.75 μm x 3.75 μm
- image area: 4860 μm x 3660 μm
- die dimensions: 6254 μm x 5194 μm

Functional Block Diagram



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