Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!
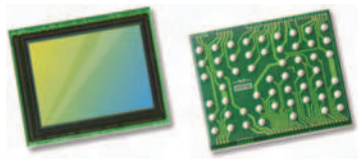


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# OV9756 720p HD product brief



**lead free**

available in
a lead-free
package

## OmniVision's OV9756 with Second-Generation RGB-Ir Color Array Pattern Brings HD Imaging to Security and Smart Home Applications

OmniVision's OV9756 is a high sensitivity CameraChip™ sensor built on a second-generation RGB-Ir color array pattern for security and smart home applications. With a 1/3-inch optical format, the OV9756 delivers full resolution 720p high definition (HD) images and video at 60 frames per second (fps).

The OV9756's advanced color array pattern supports dual band color filters instead of traditional mechanical rotary IR filters, capturing infrared images and video with minimal color aliasing.

Built on a 3.75-micron OmniPixel3-HS™ pixel, the OV9756 can operate in extremely high- and low-light conditions, bringing excellent scene reproduction to a wide range of security and lifestyle camera applications. The OV9756 also features low power mode with system wake-up trigger functionality.
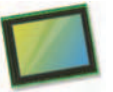
Find out more at www.ovt.com.

**OmniVision.**

## Applications

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

# OV9756

## Ordering Information

- **OV09756-H55A**
  (RGB-Ir, lead-free, 55-pin CSP)

## Product Features

- 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
  - windowing
- supports images sizes:
  - SXGA (1280x960)

- 58 bytes of embedded one-time programmable (OTP) memory for customer use
- ultra low power mode (ULPM)
- support for output formats:
  - 10/12-bit RGB-IR RAW
- two-wire serial bus control (SCCB)
- MIPI/LVDS serial output interface (1- or 2-lane)/DVP interface
- image quality control:
  - automatic black level calibration

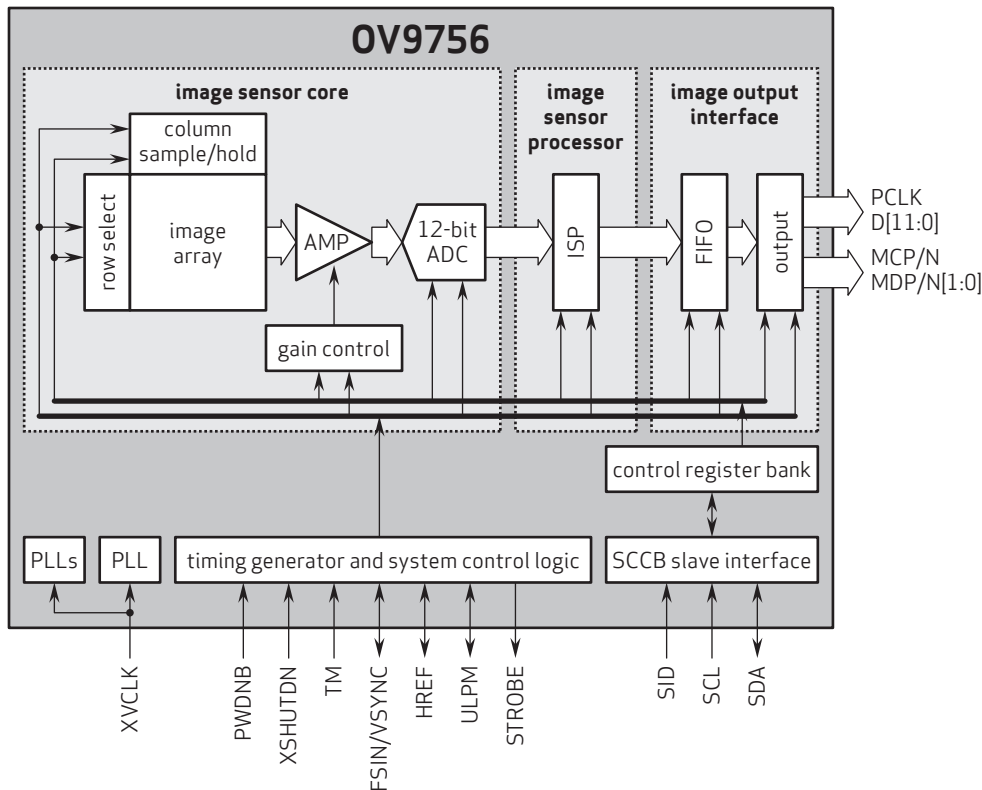## Product Specifications

- **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:** 166 mW
  - **standby:** 51 µW
  - **XSHUTDN:** 13 µW
- **temperature range:**
  - **operating:** -30°C to +85°C junction temperature
  - **stable image:** 0°C to +60°C junction temperature
- **output interface:** 2-lane MIPI/LVDS serial output/DVP parallel output
- **output formats:** 10/12-bit RGB-Ir RAW

- **lens size:** 1/3"
- **input clock frequency:** 6 - 74.5 MHz
- **lens chief ray angle:** 9° linear
- **maximum image transfer rate:**
  - **SXGA (1280x960):** 60 fps
- **sensitivity:** 39.6 Ke⁻/Lux-sec
- **max S/N ratio:** 43.1 dB
- **dynamic range:** 73.4 dB @ 8x gain
- **pixel size:** 3.75 µm x 3.75 µm
- **image area:** 4860 µm x 3660 µm
- **package dimensions:** 6254 µm x 5194 µm

## Functional Block Diagram

OmniVision®