OV9756

720p product brief

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 OmniPixel®3-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.

OV9756

Ordering Information

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

Applications

- security and surveillance cameras
- PC multimedia
- wearables
- 960H for analog CCTV applications

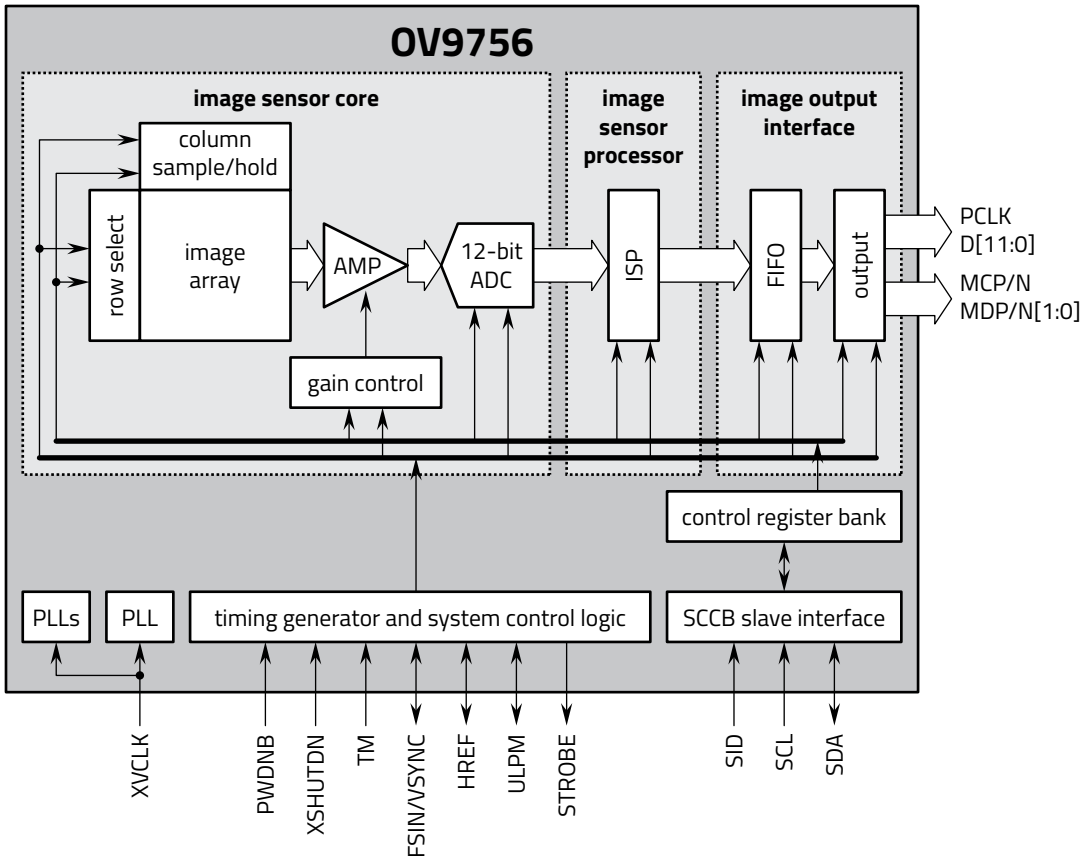
Technical Specifications

- **active array size:** 1280 x 960
- **maximum image transfer rate:**
  - SXGA (1280 x 960): 60 fps
- **power supply:**
  - analog: 3.15V to 3.45V (3.3V nominal)
  - core: 1.7V to 1.9V (1.8V nominal)
  - I/O: 1.7V to 1.9V (1.8V nominal)
- **power requirements:**
  - active: 166 mW
  - standby: 51 µW
  - XSHUTDN: 13 µW
- **output formats:**
  10/12-bit RGB-IR RAW
- **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
- **lens size:** 1/3"
- **lens chief ray angle:** 9° linear
- **pixel size:** 3.75 µm x 3.75 µm
- **image area:** 4860 µm x 3660 µm

Product Features

- 3.75 µm x 3.75 µm pixel
- 1280 x 960 at 60 fps @ 10-bit, 45 fps @ 12-bit
- programmable controls for:
  - frame rate
  - mirror and flip
  - cropping
  - windowing
- supports images sizes:
  - SXGA (1280 x 960)
- 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

Functional Block Diagram



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