

OV9755 720p HD product brief



High Performance OV9755 Brings Best-In-Class Low-Light Sensitivity to Mainstream Security Cameras

lead free

available in a lead-free package

OmniVision's OV9755 is a high performance CameraChip™ sensor that brings best-in-class low-light sensitivity to mainstream security, smart home, and IP camera applications. The low-power OV9755 utilizes a large 3.75-micron pixel to capture high definition (HD) and VGA resolution images and video, even in challenging, low-light conditions.

Built on proven OmniPixel3-HS™ technology, the 1/3-inch OV9755 supports a "system wake-up trigger" and low-power mode, supporting camera operations while consuming minimal power (approximately 100 mW). The OV9755's large 3.75-micron pixel is designed to capture crisp and clear 720p HD video recording at 60 frames per second (fps), or VGA resolution video at 90 fps, in a wide range of lighting environments.

Find out more at www.ovt.com.

OmniVision

OV9755

Applications

- Security and Surveillance Cameras
- PC Multimedia
- Wearables

Product Features

- 3.75 µm x 3.75 µm pixel
- 1280 x 720 at 60 fps @ 10-bit, 45 fps @ 12-bit
- programmable controls for frame rate, mirror and flip, cropping, and windowing
- supports image sizes: 720p (1280x720), VGA (640x480), and more
- ultra low power mode (ULPM)
- support for output formats: 10/12-bit RGB RAW
- two-wire serial bus control (SCCB)
- MIPI serial output interface (1-lane)/ DVP interface
- image quality control: defect pixel correction and automatic black level calibration

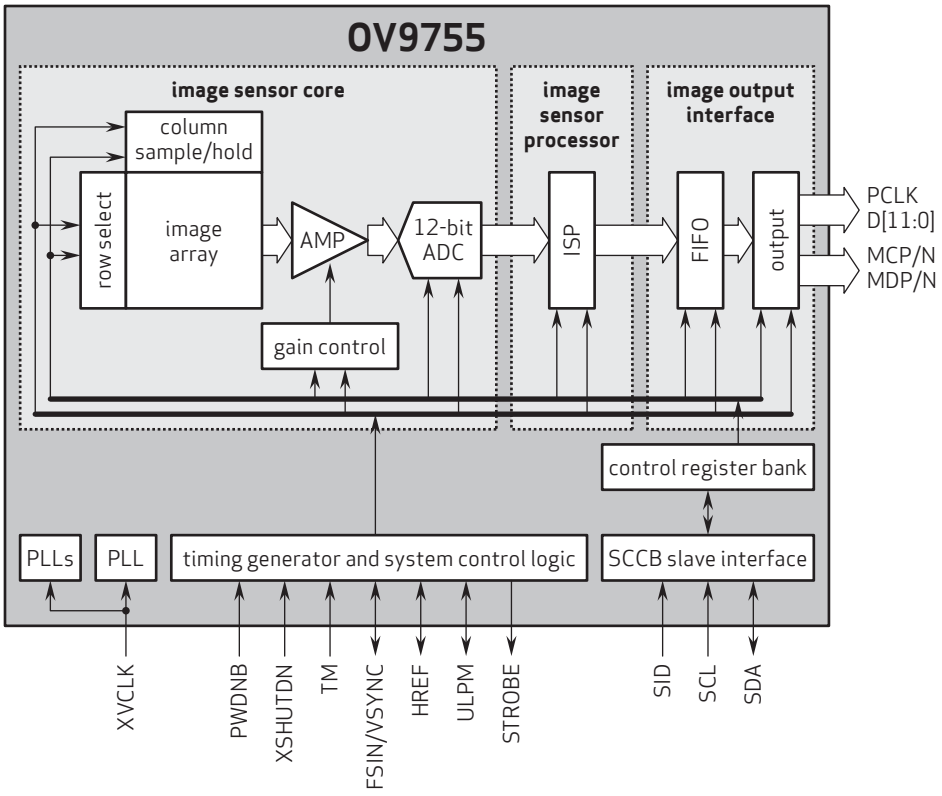
Ordering Information

- **OV09755-H55A**
  (color, lead-free, 55-pin CSP5)

Product Specifications

- **active array size:** 1280 x 720
- **power supply:**
  - **core:** 1.14 to 1.26V (1.2V nominal)
  - **analog:** 3.15 to 3.45V (3.3V nominal)
  - **I/O:** 1.7 to 1.9V (1.8V nominal)
- **power requirements:**
  - **active:** 100 mW
  - **standby:** 500 µW
  - **XSHUTDN:** 25 µW
- **temperature range:**
  - **operating:** -30°C to +85°C junction temperature
  - **stable image:** 0°C to +60°C junction temperature
- **output interface:** 1-lane MIPI serial output/DVP parallel output
- **output formats:** 10/12-bit RGB RAW
- **lens size:** 1/3"
- **lens chief ray angle:** 9° linear
- **input clock frequency:** 6 - 74.5 MHz
- **maximum image transfer rate:**
  - **720p (1280x720):** 60 fps
  - **VGA (640x480):** 90 fps
- **sensitivity:** 43Ke⁻/lux-sec
- **max S/N ratio:** 42.6 dB
- **dynamic range:** 73.04 dB @ 16x gain
- **pixel size:** 3.75 µm x 3.75 µm
- **dark current:** 30 e⁻/sec @ 60°C junction temperature
- **image area:** 4852.20 µm x 2756 µm
- **package dimensions:** 6429 µm x 3864 µm

Functional Block Diagram



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