

OV9755 720p HD product brief



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



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.



Applications

- Security and Surveillance Cameras
- Wearables
- PC Multimedia

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

OV9755



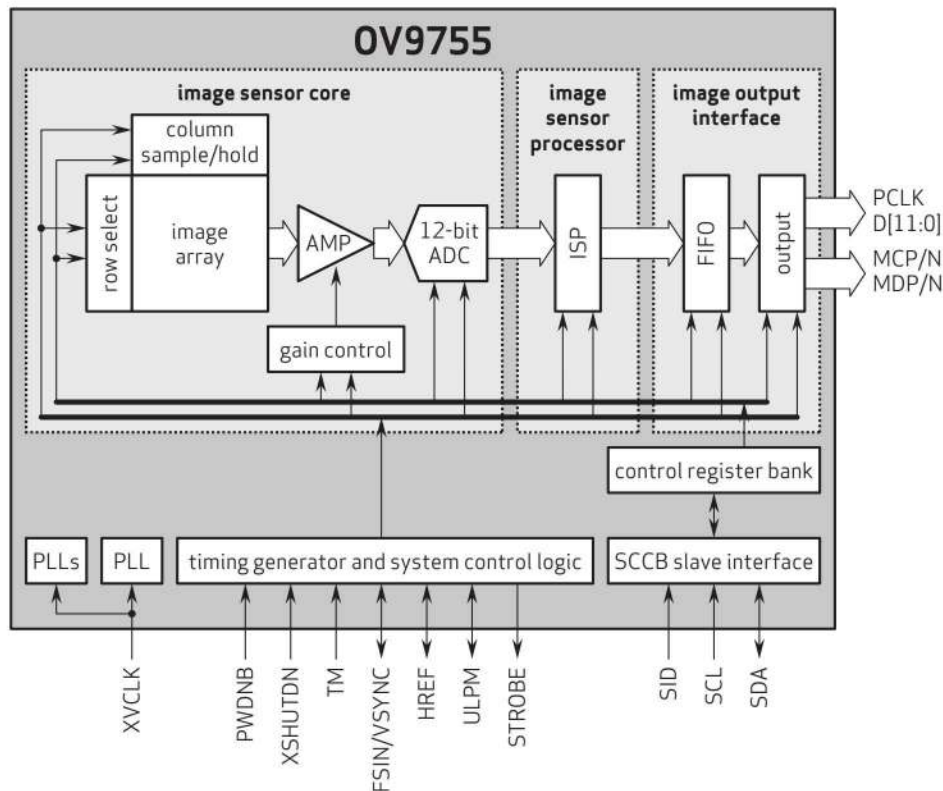
Ordering Information

- OV9755-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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