



# OV2735 1080p product brief



## High-Sensitivity 1080p HD OmniPixel3-HS™ Sensor for Mainstream Security Applications



available in  
a lead-free  
package

OmniVision's OV2735 is a high-performance image sensor that brings 1080p high-definition (HD) video capture to mainstream security and surveillance cameras. The OV2735 offers technical advancements such as support for low-power mode, stable image quality within operating temperatures ranging from 0°C to 60°C, and dramatically reduced power consumption. As such, the OV2735 offers security and surveillance camera OEMs an easy upgrade camera solution in the popular 1/2.7-inch optical format.

Built on OmniVision's proven OmniPixel3-HS™ pixel technology, the OV2735 captures full-resolution 1080p HD video at 30 frames per second (fps) and 720p video at 60 fps. The OV2735 also offers MIPI with parallel support and frame synchronization in a compact and power-efficient package.

Find out more at [www.ovt.com](http://www.ovt.com).



## Applications

- Security IPC
- Analog HD Video Cameras

## Product Features

- programmable controls:
  - gain
  - exposure
  - frame rate
  - image size
  - horizontal mirror
  - vertical flip
  - cropping
  - windowing
- automatic image control functions:
  - black level calibration (BLC)
- defective pixel correction (DPC)
- supports binning function
- digital video port (DVP) parallel output interface
- I2C control interface for register programming
- support for two lane MIPI interface (up to 420 Mbps)
- support for image sizes:
  - 1080p @ 30 fps
  - 720p @ 60 fps
  - VGA @ 60 fps
- support for black sun cancellation
- on-chip phase lock loop (PLL)
- support for low power mode

# OV2735



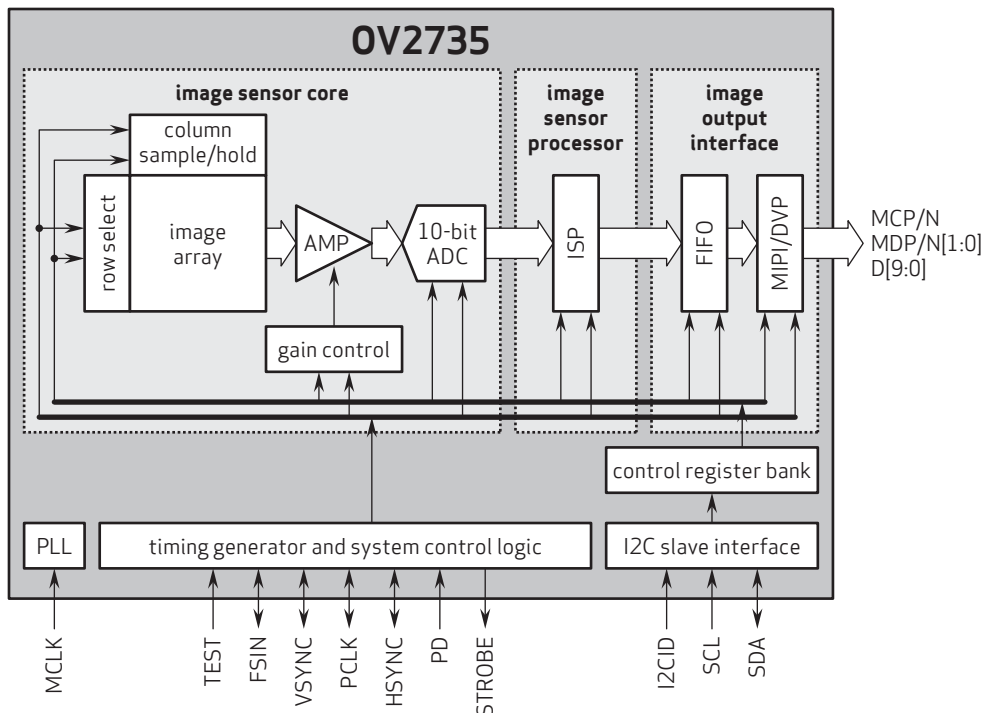
## Ordering Information

- OV02735-H66A-1B (color, lead-free) 66-pin CSP
- OV02735-H66H-1B (color, lead-free) 66-pin CSP

## Product Specifications

- active array size: 1920 x 1080
- power supply:
  - core: 1.7 - 1.9V (1.8V nominal)
  - analog: 2.6 - 3.0V (2.8V nominal)
  - I/O: 1.7 - 3.0V (1.8V nominal)
- power requirements:
  - active: 176 mW
- temperature range:
  - operating: -30°C to +85°C junction temperature
  - stable image: 0°C to +60°C junction temperature
- output interfaces:
  - two-lane MIPI / DVP parallel
- output formats: RAW10
- lens size: 1/2.7"
- lens chief ray angle: 1.2° linear
- input clock frequency: 6 - 27 MHz
- scan mode: progressive
- maximum image transfer rate:
  - 1080p: 30 fps
  - 720p: 60 fps
- sensitivity: 23 Ke-/Lux.sec
- shutter: rolling shutter
- max S/N ratio: 38.6 dB
- dynamic range: 72 dB @ 8x gain
- maximum exposure interval: 1328 t<sub>row</sub>
- pixel size: 3 μm x 3 μm
- image area: 5808 μm x 3288 μm
- package dimensions:
  - CSP: 6956 μm x 4765 μm

## Functional Block Diagram



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