

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.



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



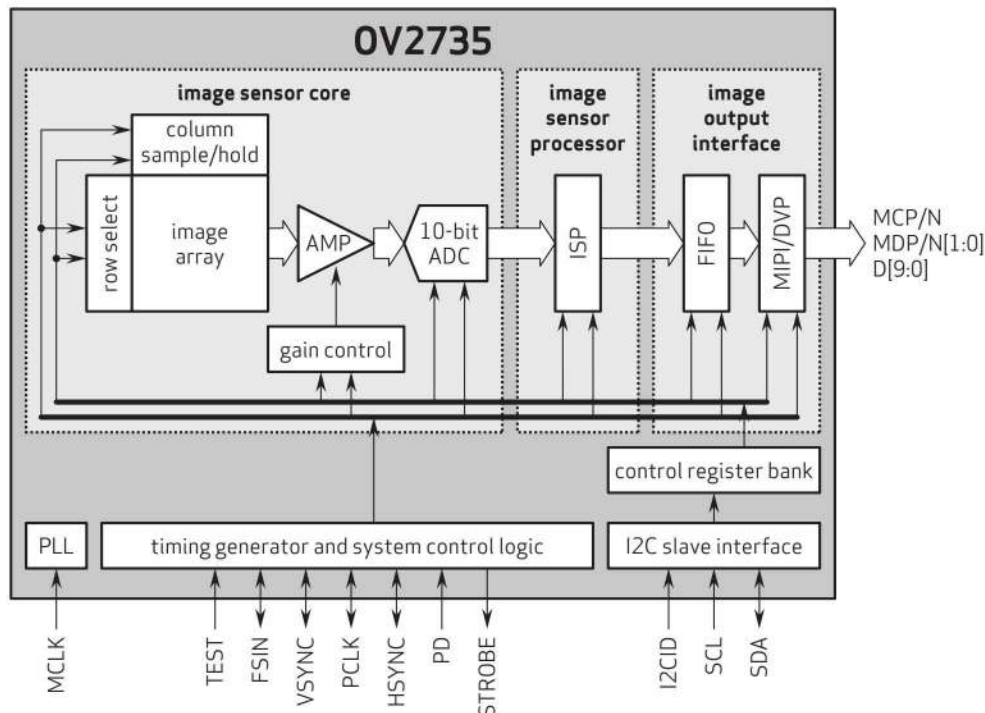
Ordering Information

- OV2735-H66A-1B (color, lead-free) 66-pin CSP
- OV2735-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_{row}
- 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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