OV2735 1080p product brief



lead free

available in a lead-free package

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

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.

OmniVision

OV2735

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

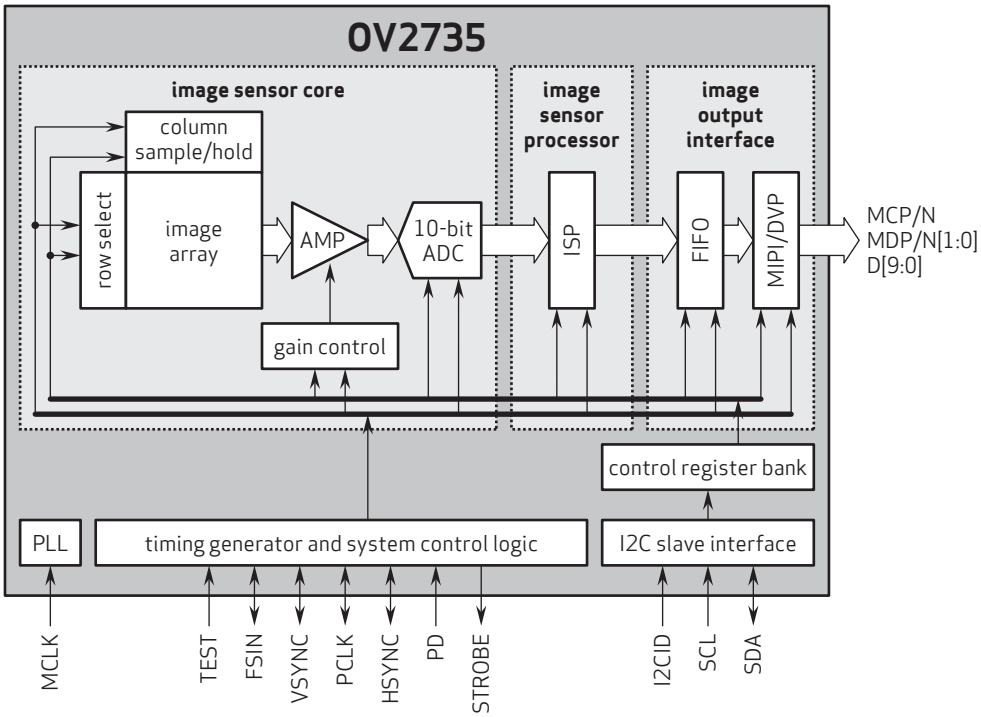
Ordering Information

- **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:** 12° 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



4275 Burton Drive
Santa Clara, CA 95054
USA

Tel: + 1 408 567 3000
Fax: + 1 408 567 3001
www.ovt.com

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Version 1.3, March, 2018