

OV2686 2MP product brief



available in
a lead-free
package

Cost-Effective, Low-Power 2-Megapixel Sensors for Feature Phones, Smartphones and Tablets

The OV2686 (SoC) is a low-power 2-megapixel CameraChip™ sensor for feature phones and front-facing camera applications in smartphones and tablets. The 1/5-inch sensor leverages a 1.75-micron OmniPixel3-HS™ pixel to deliver high quality 2-megapixel images and video at 15 frames per second (fps). The sensor's high sensitivity and low dark current deliver exceptional image and video quality, even in low-light conditions.

The OV2686 is a cost-effective sensor with a smaller footprint and smaller die size. Compared to previous generations, the OV2686 offers improved image quality with the latest OmniPixel3-HS pixel architecture. Using OmniVision's proprietary sensor technology, the sensor reduces or eliminates common lighting and electrical sources of image contamination, such as fixed pattern noise, smearing, etc., to produce a clean, stable, color image.

Find out more at www.ovt.com.



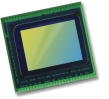
Applications

- Cellular and Picture Phones
- PC Multimedia
- Home Entertainment
- Toys

Product Features

- 1.75 μm x 1.75 μm pixel with OmniPixel3-HS™ technology
- 2MP at 15 fps
- optical size of 1/5"
- supports images sizes:
 - UXGA (1600x1200)
 - HD+ (1600x900)
 - SXGA (1280x960)
 - 720p (1280x720), and more
- support for output formats: 10-bit RGB RAW, 8-bit YUV
- programmable controls for frame rate, mirror and flip, cropping, and windowing
- two-wire serial bus control (SCCB)
- 28.5° CRA
- digital video port (DVP) parallel output interface
- automatic image control functions:
 - automatic exposure control (AEC)
 - automatic gain control (AGC)
 - auto white balance (AWB)
- on-chip phase lock loops (PLLs)
- image quality control:
 - defect pixel correction (DPC)
 - denoise
 - lens shading

OV2686



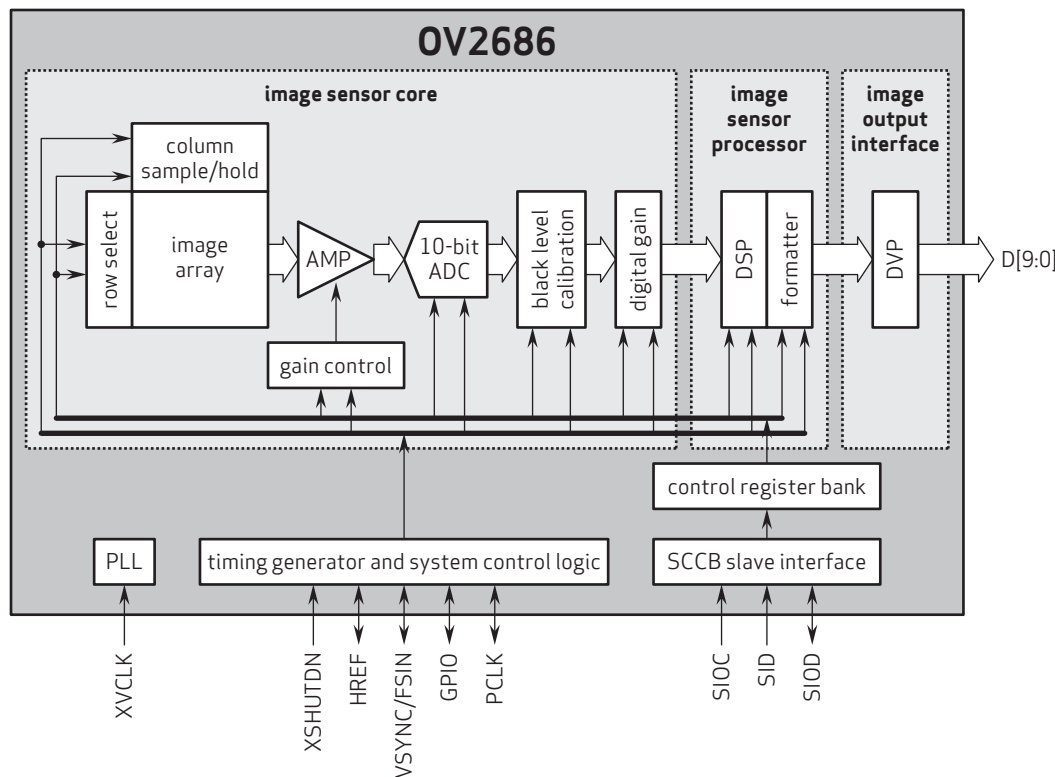
Ordering Information

- OV02686-H38A
(color, lead-free, 38-pin CSP5)

Product Specifications

- active array size: 1616 x 1216
- power supply:
 - core: 1.8V
 - analog: 2.8V
 - I/O: 1.8V/2.8V
- power requirements:
 - active: 137 mW
 - XSHUTDN: <1 μA
- temperature range:
 - operating: -30°C to +85°C junction temperature
 - stable image: 0°C to +50°C junction temperature
- output interfaces: 10-bit DVP parallel output
- output formats: 10-bit RGB RAW, 8-bit YUV422
- lens size: 1/5"
- lens chief ray angle: 28.5° non-linear
- input clock frequency: 6 - 27 MHz
- maximum image transfer rate: 15 fps
- scan mode: progressive
- pixel size: 1.75 μm x 1.75 μm
- image area: 2840 μm x 2150 μm
- package/die dimensions:
 - CSP5: 4254 μm x 3984 μm

Functional Block Diagram



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