

OV0VA10 VGA product brief



SoC Provides Thin-Bezel Notebooks With Industry's Best VGA Camera Image Quality, Power Consumption and Overall Value



available in a lead-free package

OmniVision's OV0VA10 SoC integrates the industry's most advanced VGA image sensor and signal processor in a single chip-scale package. The SoC's OmniPixel®3-HS architecture enables entry level, thin-bezel notebook designers to provide the very best VGA camera performance with excellent low light image capture for applications such as videoconferencing. Additionally, it offers 30% lower power consumption than the leading competitor to extend battery life.

The OV0VA10's OmniPixel®3-HS architecture further enhances color performance with symmetric pixel design to eliminate color shading and optimize the signal-to-noise ratio. It also offers high quantum efficiency for truer-to-life color reproduction and

superior low light performance, while operating at 30 fps for smooth video conferencing. This SoC's integrated image sensor has a 1/10" optical format and 2.2 μm pixel size, enabling a 4 mm camera module in the Y dimension for the latest entry level notebooks with thinner bezels.

Additionally, the OV0VA10 is manufactured using an advanced 200 mm wafer process and is offered in a 8" chip-scale package with a DVP interface.

Find out more at www.ovt.com.



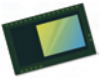
Applications

- Mobile Phone Cameras
- Tablet Cameras
- Notebook Cameras
- PC Cameras
- Web Cameras
- Toys

Product Features

- supports VGA (640x480) resolution
- advanced 2.2 μm x 2.2 μm pixel architecture
- embedded image processor functionality:
 - auto black level calibration
 - auto white balance
 - auto exposure control
 - gamma correction
 - lens shading calibration
 - de-mosaic
 - color correction
 - defect pixel correction
 - windowing
 - special effects
- supports 2x2 mono binning mode
- supports I2C bus controlling registers inside chip
- supports external frame synchronization
- supports DVP (8-bit) data output interface
- supports SPI (1/2/4-bit) data output interface

OV0VA10



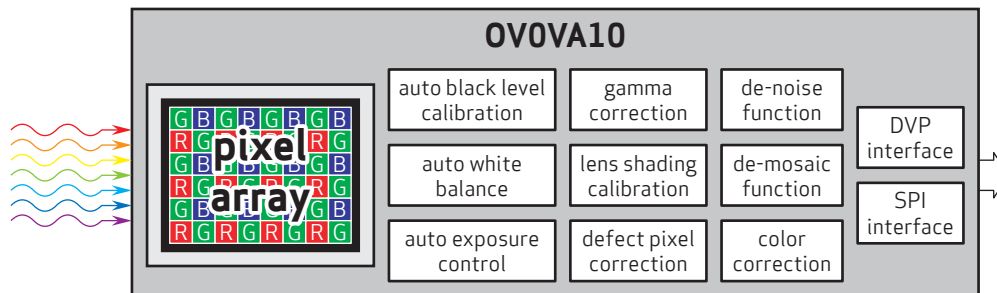
Ordering Information

- OV0VA10-A19A-Z (color, lead-free)
19-pin CSP

Product Specifications

- active array size: 640 x 480
- power supply:
 - analog: 2.6 - 3.0V
 - I/O: 1.7 - 3.0V
- power requirements:
 - active: <70 mW
 - standby: <30 μA
- temperature range:
 - operating: -20°C to +70°C
 - stable: 0°C to +50°C
- output format: YUV422, RAW8, Y only
- lens size: 1/10"
- lens chief ray angle: 29.99° linear
- input clock frequency: 6 - 48 MHz
- maximum image transfer rate:
 - VGA: 30 fps
- maximum exposure interval: VTS-1
- maximum exposure: 1 row
- pixel size: 2.2 μm x 2.2 μm
- image area: 1434.4 μm x 1082.4 μm
- package dimensions:
 - CSP: 2809 μm x 1759 μm

Functional Block Diagram



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