

OV6930 product brief



lead free

available in a lead-free package

industry's smallest HVGA image sensor

With a packaged footprint of only 1.8 x 1.8 mm, the OV6930 is the ideal solution for camera applications that require less than a 2.8 mm outside diameter, such as medical endoscopes. The OV6930's unique architecture combines ultra-low power consumption with OmniVision's best-in-class pixel technology, OmniPixel3-HS™, enabling low-light performance of 3300 mV/(Lux-second).

In addition to its small footprint and extraordinary performance, the OV6930 offers raw serial output, allowing cabling up to 14 feet with two wires.

The low-voltage OV6930 provides either full-frame or cropped analog images in RAW RGB format via serial camera control bus (SCCB) interface control.

The device offers an image array capable of operating up to 30 frames per second (fps) in 400 x 400 HVGA or 60fps in 400 x 200 resolution, with simplified exposure control programmable through the SCCB interface. OmniVision's image sensors leverage proprietary technology to improve image quality by reducing or eliminating common lighting/electrical sources of image contamination, such as fixed pattern noise and smearing, to produce a clean, fully stable, color image.

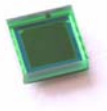
No other image sensor on the market offers high performance and sensitivity in such a small form factor.

OmniVision

applications

- medical and dental devices
- security and surveillance
- toys and games

OV6930



ordering information

- **OV06930-A08A**
  (color, analog, 8-pin CSP3)

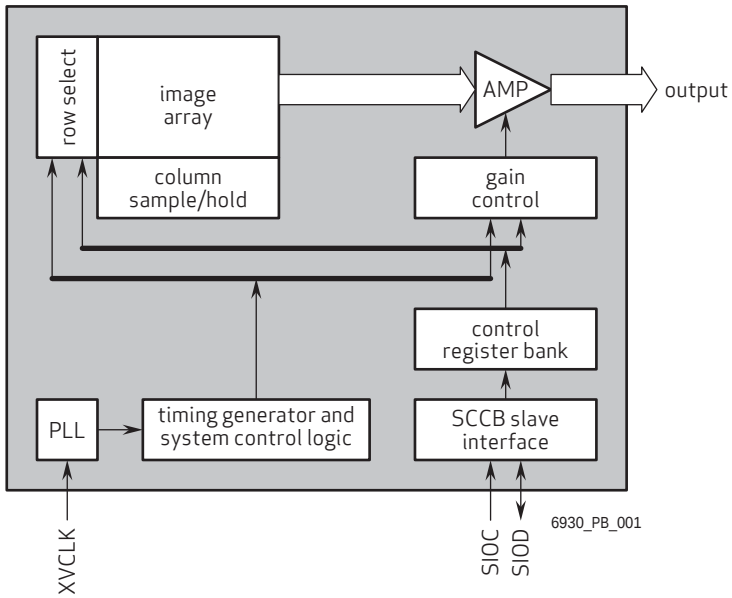
product features

- optical size of 1/10"
- analog output
- automatic/manual control of AEC and AGC
- on-chip phase lock loop (PLL)
- low power consumption
- single 3.3V power supply
- SCCB interface
- OmniPixel3-HS structure using 0.11 µm process

product specifications

- **array size:** 400 x 400
- **power supply:**
  - **analog:** 3.3V ± 5%
  - **I/O:** 3.3V ± 5%
- **power requirements:**
  - without 75 ohm loading: ~10 mW
  - with 75 ohm loading: 80 mW
- **temperature range:**
  - **operating:** -20°C to 70°C
  - **stable image:** 0° to 50°C
- **output formats:**
  analog signal output
- **optical size:** 1/10"
- **frame rate:**
  - **half VGA (400 x 400):** 30 fps
  - **400 x 200:** 60 fps
- **color mosaic:** RGB Bayer pattern
- **pixel size:** 3.0 µm x 3.0 µm
- **image area:** 1224 µm x 1212 µm
- **package dimensions:**
  1815 µm x 1815 µm

functional block diagram



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