

OV9734-OV9234 720p HD product brief



OmniVision's Smallest 720p High Definition Sensor for Next-Generation Notebooks and Mobile Devices

lead free

available in a lead-free package

The OV9734 is an ultra-compact and power efficient CameraChip™ image sensor designed for slim notebooks, tablets, handsets, and other devices that require a thin bezel. Built on OmniVision's PureCel® technology, the OV9734 CameraChip™ delivers premium quality images and video, while consuming significantly less power than previous generation image sensors.

OmniVision's 1/9-inch OV9734 is capable of capturing crisp 720p HD video at 30 frames per second (fps) or VGA video at 45 fps, while consuming approximately 25 percent less power than the previous generation 720p sensor. Additionally, the OV9734 meets the video quality specifications for popular video conferencing platforms.

To fit ultra-thin bezel devices, the OV9734 comes in a compact package that can meet 2.5 mm z-height and is 47 percent smaller in y-dimension compared to the previous generation 720p sensor.

The OV9234, a black and white version of the OV9734, is also available as a dedicated IR camera solution for facial recognition and other biometric applications. Both sensors are available in CSP and COB packaging.

Find out more at www.ovt.com.

OmniVision

OV9734-OV9234



Applications

- Smartphones
- PC Multimedia
- Tablets
- Digital Still Cameras
- Toys

Ordering Information

- **OV09734-H16A-2A**
  (color, lead-free, 16-pin CSP)
- **OV09234-H16A**
  (b&w, lead-free, 16-pin CSP)

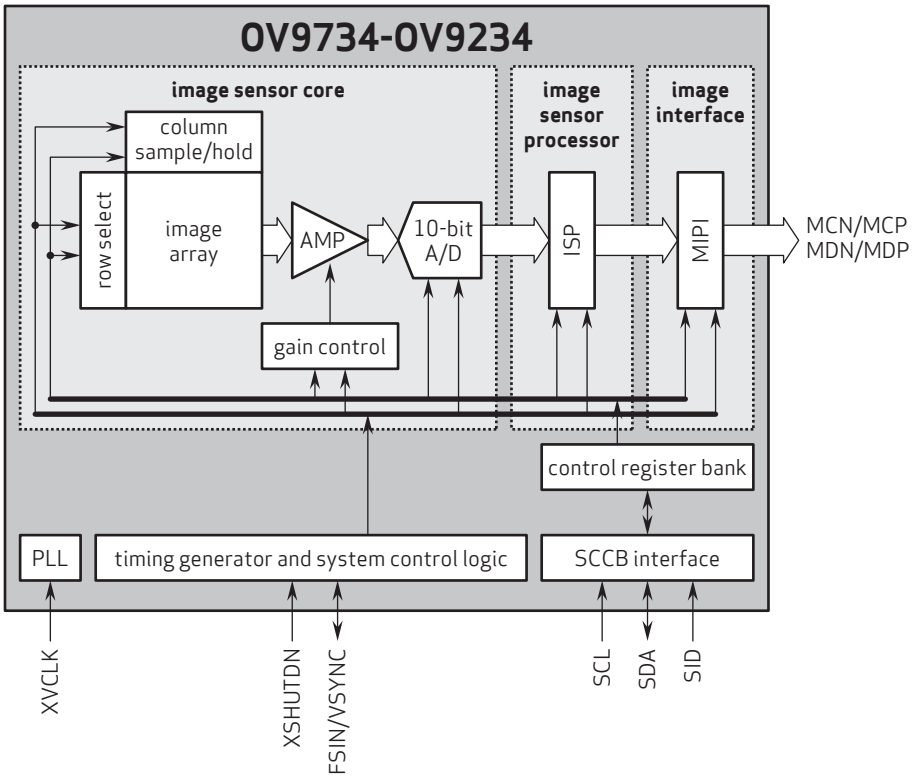
Product Features

- support for image sizes:
  - full size (1280x720)
  - VGA (640x480)
  - 2x2 RGB binning (640x360)
  - 2x2 B&W binning (640x360)
- support for output formats:
  RAW output with 1-lane MIPI
- on-chip phase lock loop (PLL)
- capable of maintaining register values at software power down
- programmable controls for:
  - frame rate
  - mirror and flip
  - gain/exposure
  - windowing
- support for horizontal and vertical sub-sampling
- automatic black level calibration (ABLC)
- defect pixel correction (DPC)
- support for black sun cancellation
- standard SCCB interface
- GPIO tri-state configurability and programmable polarity

Product Specifications

- **active array size:** 1280 x 720
- **power supply:**
  - **core:** 1.2VDC ±5%
  - **analog:** 2.6 - 3.0V (2.8V normal)
  - **I/O:** 1.8V
- **power requirements:**
  - **active:** 69 mW
  - **XSHUTDN:** 0.9 µW
- **temperature range:**
  - **operating:** -30°C to +85°C junction temperature
  - **stable image:** 0°C to +50°C junction temperature
- **output formats:** 10-bit RAW RGB
- **lens size:** 1/9"
- **lens chief ray angle:** 32.1°
- **input clock frequency:** 6 - 27 MHz
- **scan mode:** progressive
- **maximum image transfer rate:** 30 fps
- **sensitivity:** 585 mV/Lux-sec
- **shutter:** rolling shutter
- **max S/N ratio:** 36.4 dB
- **dynamic range:** 68.4 dB @ 16x gain
- **maximum exposure interval:** 798 x t_{ROW}
- **pixel size:** 1.4 µm x 1.4 µm
- **dark current:** 2 e^-/sec @ 50°C junction temperature
- **image area:** 1819.58 µm x 1033.34 µm
- **package dimensions:** 2532 µm x 1722 µm

Functional Block Diagram



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