

OV9674 1.3MP product brief



OV9674 CameraChip™ Sensor Delivers 1.3-Megapixel High Definition Imaging to Advanced Consumer Video Applications



available in
a lead-free
package

OmniVision's OV9674 is a high definition (HD) OmniBSI™ image sensor designed for advanced consumer video imaging applications such as dashboard camera recorders and DIY vehicle camera systems. The OV9674 captures clear 1.3-megapixel HD images and video at 30 frames per second (fps) in a wide range of lighting conditions. The OV9674 enables advanced imaging functionality such as high dynamic range (HDR), lens shading correction, and de-noise.

Built on a 4.2-micron OmniBSI™ pixel, the OV9674 supports high quality output in a variety of RAW formats and enables high speed serial data transfer with MIPI CSI-2, parallel 12-bit DVP output. Featuring a 1/2.56-inch optical format, the OV9674 fits into a 7.43 mm x 7.19 mm chip scale package (CSP) and operates at commercial temperature grade from -30°C to +85°C.

Find out more at www.ovt.com.



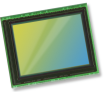
Applications

- Security and Surveillance Cameras

Product Features

- support for image size: 1280x1080, VGA, QVGA and any cropped size
- OmniHDR-S™ technology
- high sensitivity
- safety features
- low power consumption
- image sensor processor functions: automatic exposure/gain control, lens correction, defective pixel cancellation, HDR combination and tone mapping, automatic black level correction
- supported output formats: RAW
- horizontal and vertical sub-sampling
- serial camera control bus (SCCB) for register programming
- high speed serial data transfer with MIPI CSI-2, parallel 12-bit DVP output
- external frame synchronization capability

OV9674



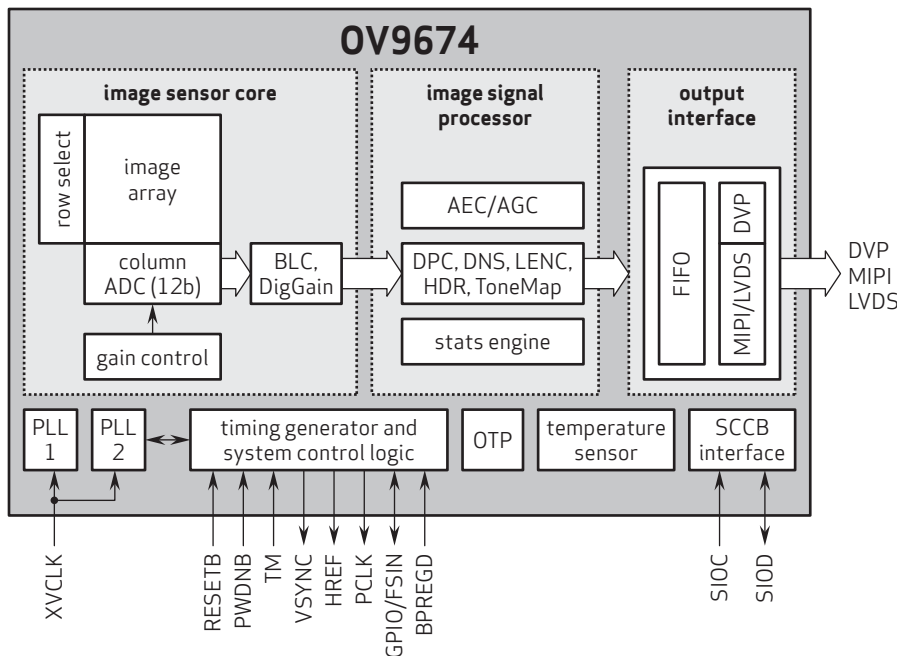
Ordering Information

- OV09674-N78A**
(color, lead-free, 78-pin CSP, packed in tray)

Product Specifications

- active array size:** 1280 x 1080
- lens size:** 1/2.56"
- lens chief ray angle:** 9°
- input clock frequency:** 6 - 27 MHz
- scan mode:** progressive
- shutter:** rolling shutter
- maximum image transfer rate:** 30 fps full resolution
- sensitivity:** 8.4 V/lux-sec
- max S/N ratio:** 41.5 dB
- dynamic range:** 120 dB
- pixel size:** 4.2 μm x 4.2 μm
- image area:** 5410 μm x 4570 μm
- package dimensions:** 7430 μm x 7190 μm
- power supply:**
 - analog: 3.14 - 3.47V
 - digital: 1.425 - 1.575V
 - D0VDD: 1.7 - 1.9V
 - AVDD: 1.7 - 1.9V
- power requirements:**
 - active: 250 mW
 - standby: 100 μW
- temperature range:**
 - operating: -30°C to +85°C junction temperature
 - stable image: 0°C to +50°C junction temperature
- output interfaces:** 12-bit DVP, MIPI/LVDS CSI-2
- output formats:**
 - 20-bit combined RAW
 - 12-bit compressed combined RAW
 - separated 12-bit RAW
 - 2x12-bit compressed RAW
 - 16-bit log domain combined RAW
 - 3x12-bit uncompressed RAW

Functional Block Diagram



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