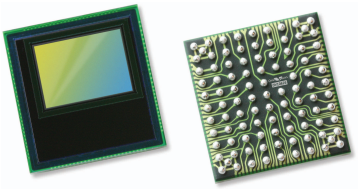


OV10626 HD HDR product brief

Day (Non-HDR)

Day (HDR)

Night (Non-HDR)

Night (HDR)

lead free

available in a lead-free package

Redefined Imaging Performance for Rear and Surround View Automotive Vision Systems

The OV10626 is a single-chip, high-performance camera solution for rear and surround view automotive vision systems. The AutoVision sensor leverages advanced imaging concepts to deliver exceptional high dynamic range (HDR) while maintaining excellent low-light sensitivity.

The OV10626 supports 1/3.7-inch NTSC analog (648x488 resolution) and 1/3.2-inch WVGA digital (752x548 resolution) outputs. The sensor's color HDR of up to 120 dB and low-light sensitivity of 15 V/lux-sec ensures that clear, high-quality images are captured, even in extremely challenging lighting conditions.

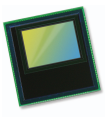
The OV10626 also features a dual overlay function. This feature may be used for reference frames and guiding systems for backup and parking assist systems.

The compact OV10626 is packaged in OmniVision's proprietary AutoVision chip-scale package (aCSP™), which is the industry's most efficient package available. The OV10626 will be qualified to AEC-Q100 Grade-2 Specifications (-40°C to +105°C).

Find out more at www.ovt.com.

OmniVision

OV10626



Applications

- Automotive
  - 360° surround view
  - automotive machine vision
  - lane departure warning
  - traffic sign recognition
  - automatic high beam control
  - object detection
  - pedestrian detection
  - rear view camera
  - blind spot detection
  - mirror replacement
  - occupant sensor
  - night vision

Ordering Information

- **OV10626-N02V-PC-Z**
  (color, lead-free, 102-pin aCSP™, rev 1C, in tray)

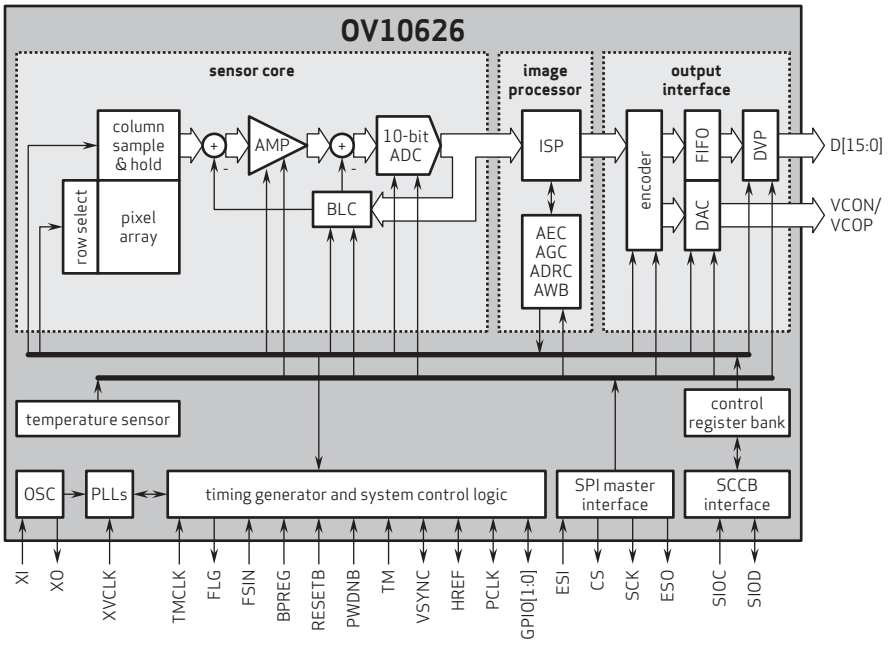
Product Features

- support for image size: WVGA, VGA, QVGA and any cropped size
- high dynamic range
- high sensitivity
- safety features
- low power consumption
- image sensor processor functions:
  - automatic exposure/gain control
  - automatic white balance control
  - lens correction
  - defective pixel cancelation
  - HDR combination and tone mapping
  - automatic black level correction
- supported output formats:
  YUV, RAW, CCIR656
- horizontal and vertical sub-sampling
- serial camera control bus (SCCB) for register programming
- SPI master for overlay and loading settings
- external frame synchronization capability
- 50/60 Hz flicker cancellation
- parallel 16-bit DVP output
- NTSC with overlay and analog output
- embedded temperature sensor
- one time programmable (OTP) memory

Product Specifications

- **active array size:** 752 x 548
- **power supply:**
  - **core:** 1.425 - 1.575V
  - **analog:** 3.14 - 3.47V
  - **I/O:** 1.7 - 3.47V
- **power requirements:**
  - **active:** 350 mW typical @ 3.3V AVDD, 1.5V DVDD, and 1.8V DOVDD
  - **standby:** 2 mW typical @ 3.3V AVDD, 1.5V DVDD, and 1.8V DOVDD
- **temperature range:**
  - **operating:** -40°C to +105°C sensor ambient temperature and -40°C to +125°C junction temperature (operating sensor junction temperatures above +60°C may result in degraded image quality)
- **output interfaces:**
  16-bit parallel DVP, analog NTSC (single end and differential)
- **output formats:** up to 20-bit combined RAW, separated 8-/10-bit RAW, 8-/10-bit YUV422
- **lens size:**
  - **VGA and NTSC:** 1/3.7"
  - **WVGA:** 1/3.2"
- **lens chief ray angle:** 9°
- **input clock frequency:** 6 - 27 MHz
- **maximum image transfer rate:**
  60 fps full resolution
- **sensitivity:** 15 V/lux-sec
- **scan mode:** progressive
- **shutter:** rolling shutter
- **maximum exposure interval:** 838 x t_{ROW}
- **pixel size:** 6 µm x 6 µm
- **image area:** 4608 µm x 3384 µm
- **package dimensions:**
  - **aCSP:** 7310 µm x 7810 µm

Functional Block Diagram



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