



Day (Non-HDR)



Day (HDR)



Night (Non-HDR)



Night (HDR)

# OV10626

## HD product brief



### 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 (648 x 488 resolution) and 1/3.2-inch WVGA digital (752 x 548 resolution) outputs. The sensor's color HDR of up to 120 dB and low-light sensitivity of 16V/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 (a-CSP™), 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](http://www.ovt.com).



- OV10626-N02V-PE-Z (color, lead-free)
- 102-pin a-CSP™, rev 1E, 50°C packed in tray with protective film)

## 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

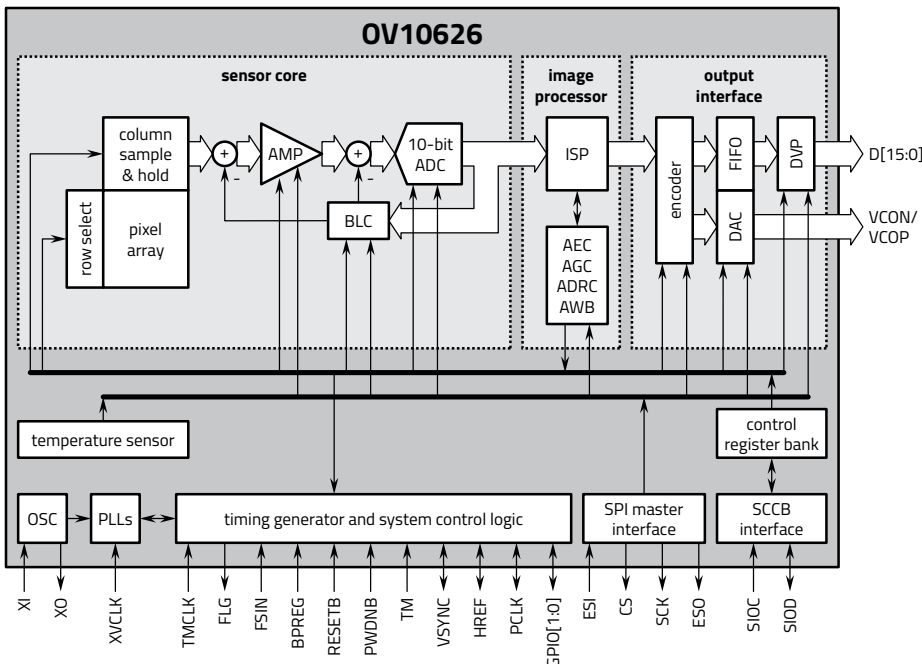
## Technical Specifications

- active array size:** 752 x 548
- maximum image transfer rate:**
  - 60 fps full resolution
- power supply:**
  - analog: 3.14V ~ 3.47V
  - core: 1.425V ~ 1.575V
  - I/O: 1.7V ~ 3.47V
- power requirements:**
  - active: 410 mW typical @ 3.3V AVDD, 1.5V DVDD, and 1.8V DOVDD
  - standby: 260 μW typical @ 3.3V AVDD, 1.5V DVDD, and 1.8V DOVDD
- output formats:** up to 20-bit combined RAW, separated 8-/10-bit RAW, 8-/10-bit YUV422
- 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)
- lens size:**
  - VGA and NTSC: 1/3.7"
  - WVGA: 1/3.2"
- lens chief ray angle:** 9°
- scan mode:** progressive
- pixel size:** 6 μm x 6 μm
- image area:** 4608 μm x 3384 μm

## 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 cancellation
  - 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

## Functional Block Diagram



Version 1.8, June 2024