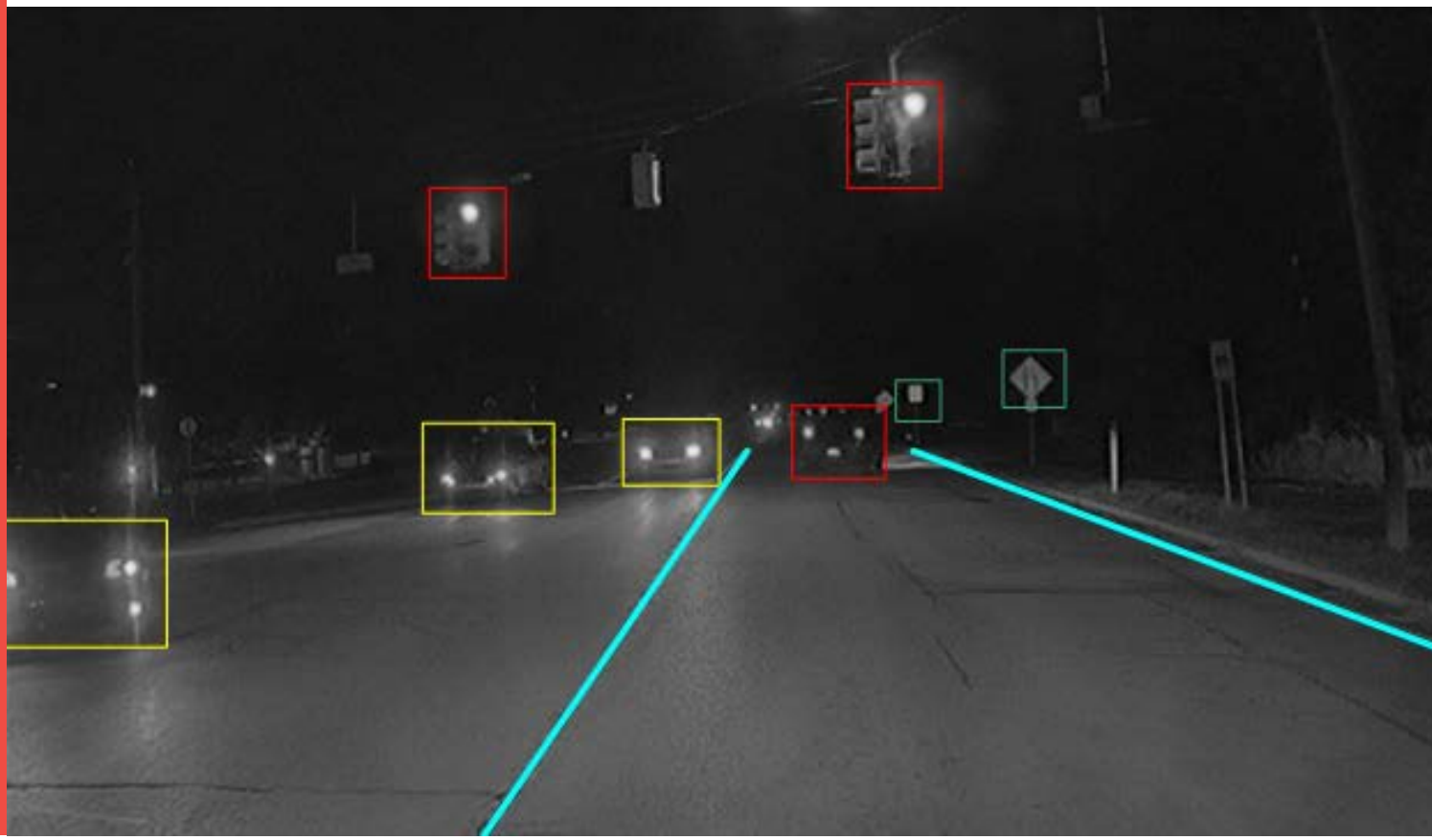


OV10625 HD HDR product brief



lead free

available in a lead-free package

Industry-Leading Sensitivity and High Dynamic Range for Next-Generation Automotive Applications

OmniVision's new OV10625 image sensor is a high performance OmniHDR® imaging solution that brings industry-leading sensitivity and best-in-class high dynamic range (HDR) to advanced driver assistance systems (ADAS).

The sensor's benefits enable a host of ADAS features, including: pedestrian detection, lane-departure warning, lane keeping assist, blind spot detection, and traffic signal recognition, among others.

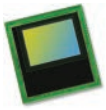
The 1/3.2-inch OV10625 delivers HDR performance of up to 120 dB combined with best-in-class low-light sensitivity of 15 V/lux-sec ensures accurate scene reproduction in a wide range of driving conditions.

The OV10625 supports digital RAW data output and fits into one of the industry's most compact and efficient packages.

Find out more at www.ovt.com.

OmniVision

OV10625



Applications

- Automotive
  - pedestrian detection
  - lane-departure warning
  - lane keeping assist
  - blind spot detection
  - traffic signal recognition

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
  - lens correction
  - defective pixel cancelation
  - 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
- external frame synchronization capability
- 50/60 Hz flicker cancellation
- parallel 16-bit DVP output
- embedded temperature sensor
- one time programmable (OTP) memory

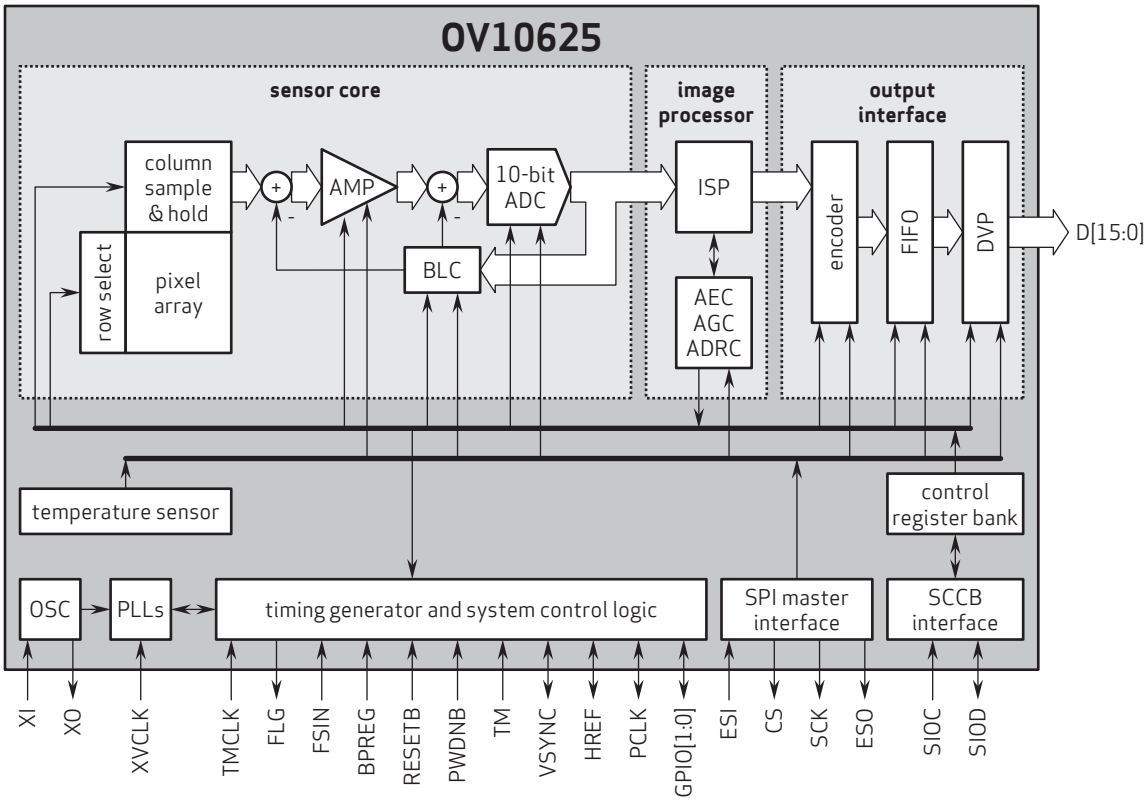
Ordering Information

- **OV10625-N02V-1A-Z** (lead-free)
  102-pin a-CSP™, rev 1A, packed in tray with protective film

Technical Specifications

- **active array size:** 752 x 548
- **maximum image transfer rate:** 60 fps full resolution
- **power supply:**
  - **core:** 1.425 - 1.575V
  - **analog:** 3.14 - 3.47V
  - **I/O:** 1.7 - 3.47V
- **power requirements:**
  - **active:** 380 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
- **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
- **output formats:** up to 20-bit combined RAW, separated 8-/10-bit RAW
- **lens size:**
  - **VGA:** 1/3.7"
  - **WVGA:** 1/3.2"
- **lens chief ray angle:** 9°
- **scan mode:** progressive
- **shutter:** rolling shutter
- **pixel size:** 6 µm x 6 µm
- **image area:** 4608 µm x 3384 µm

Functional Block Diagram



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Version 1.2, August 2020