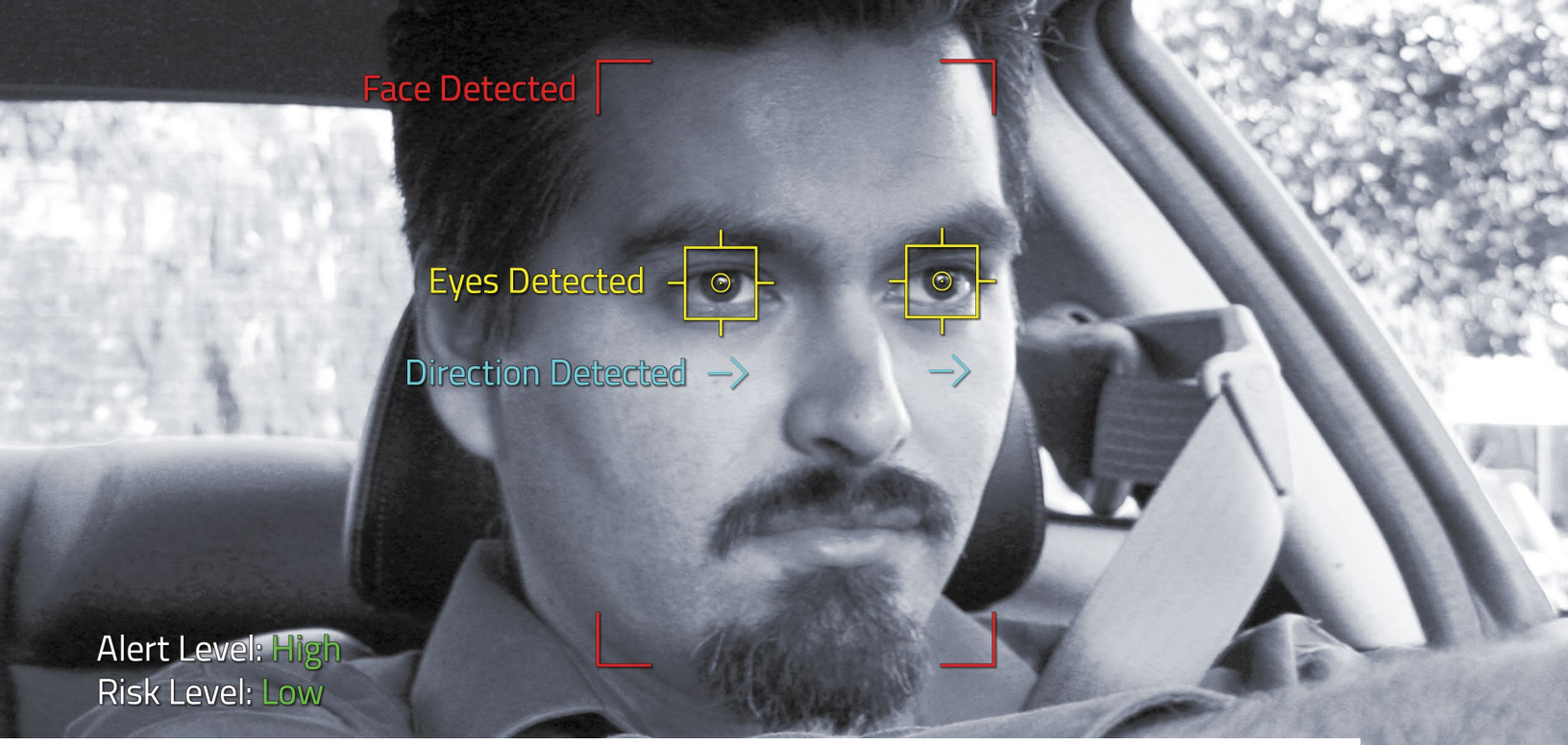


OV7261

VGA product brief

Ultra-Compact Global Shutter Sensor for Automotive Applications

OMNIVISION's OV7261 is a 3-micron global shutter image sensor for driver monitoring systems in automotive applications. The ultra-compact and power-efficient OV7261 features high quantum efficiency at near-infrared wavelengths, bringing significant LED illuminator power reduction for advanced features in vehicles such as gesture control and driver drowsiness and distraction detection.

Built on OMNIVISION's market-proven global shutter technology, the OV7261 enables accurate fast motion capture and stereo vision pixel-level synchronization for driver monitoring systems. The OV7261 captures 640 x 480 (VGA) resolution up to 100 frames per second (fps) and delivers 10-bit RAW image output.

The OV7621 comes in an ultra-compact AEC-Q100 Grade 2-qualified 3.9 x 3.4 mm chip scale package.

Find out more at www.ovt.com.

OMNIVISION®

OV7261

Ordering Information

- **OV07261-N35Y-MA** (B&W, lead-free) 35-pin a-CSP™ packed in tray with protective film, tab in top right direction
- **OV07261-N35Y-NA** (B&W, lead-free) 35-pin a-CSP™ packed in tape & reel with protective film, tab in top right direction

Applications

- occupant detection
- driver monitor
- vehicle entry
- stereo vision
- gesture control

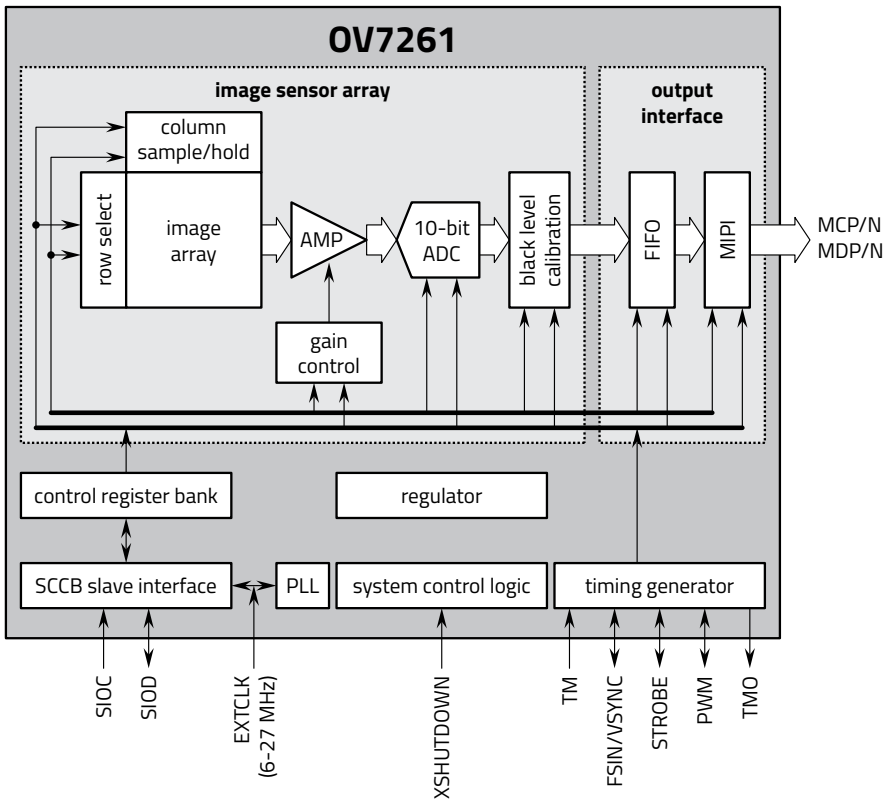
Technical Specifications

- **active array size:** 640 x 480
- **maximum image transfer rate:**
  - 640 x 480: 100 fps
- **power supply:**
  - analog: 2.8V (nominal)
  - core: 1.5V (optional)
  - I/O: 1.8V (nominal)
- **power requirements:**
  - active: 117 mW @ 100 fps, VGA output
  - standby: 15 µA for AVDD, 40 µA for DOVDD without input clock, 700 µA for DOVDD with input clock
  - XSHUTDOWN: 5 µA for AVDD, 5 µA for DOVDD
- **temperature range:**
  - operating: -40°C to +105°C ambient temperature and -40°C to +125°C junction temperature
- **output formats:** 10-bit B&W RAW
- **lens size:** 1/7.5"
- **lens chief ray angle:** 29° non-linear
- **scan mode:** progressive
- **pixel size:** 3 µm x 3 µm
- **image area:** 1968 µm x 1488 µm

Product Features

- 3 µm x 3 µm pixel with OmniPixel®3-GS technology
- automatic black level calibration (ABLC)
- programmable controls for:
  - frame rate
  - mirror and flip
  - cropping
  - windowing
- support output formats: 8/10-bit RAW
- support for image sizes:
  - 640 x 480
  - 320 x 240
  - 160 x 120
- fast mode switching
- supports horizontal and vertical 2:1 and 4:1 monochrome subsampling
- supports 2x2 monochrome binning
- one-lane MIPI serial output interface
- one-lane LVDS serial output interface
- embedded 256 bits of one-time programmable (OTP) memory for part identification
- two on-chip phase lock loops (PLLs)
- built-in 1.5V regulator for core
- PWM
- built-in strobe control

Functional Block Diagram



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