

OV7955 NTSC product brief



available in
a lead-free
package

Driving Down the Cost of Rear-View Cameras

The OV7955 is a low-cost, high-performance analog and digital image sensor designed specifically for mainstream automotive applications. The AEC-Q100 Grade 2 qualified OV7955 offers superior low-light sensitivity in an ultra-compact module size, making it an ideal camera solution for rear-view, surround-view and blind spot detection systems.

Additionally, the OV7955 offers features new to the automotive industry, including built-in memory for initialization, which reduces a camera's overall bill of materials and size. A crop and resize feature allows a standard camera module to be designed into virtually any vehicle platform without requiring mechanical adjustments by cropping the active array while the sensor scales it back up to NTSC format.

Utilizing OmniVision's proprietary high-sensitivity OmniPixel3-HS™ pixel architecture, the sensor offers industry-leading low-light sensitivity of 16 V/lux-sec and excellent signal-to-noise-ratio (SNR).

The OV7955 features the industry's smallest AEC-Q100 qualified automotive package (aCSP), measuring only 5.7 x 5.4 mm, and offers an operating temperature range of -40° C and 105° C.

Find out more at www.ovt.com.

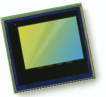
Applications

- Rear View Camera
- Surround View
- Smart Automotive Camera
- Drive Recorder
- Lane Departure Warning
- Blind Spot Detection
- Night Vision with Active Illumination

Product Features

- industry's smallest automotive package
- exceptional low-light performance for 1 lux requirements
- supports NTSC and VGA outputs
- color and B&W sensor options
- automatic exposure/gain with 16 zone control
- crop and resize
- built-in memory for custom register settings
- aperture/gamma control
- low power consumption
- AEC-Q100 qualified
- 2 layer multicolor overlay
- defective pixel correction
- optimized for digital progressive and analog applications
- single 3.3 V power supply

OV7955



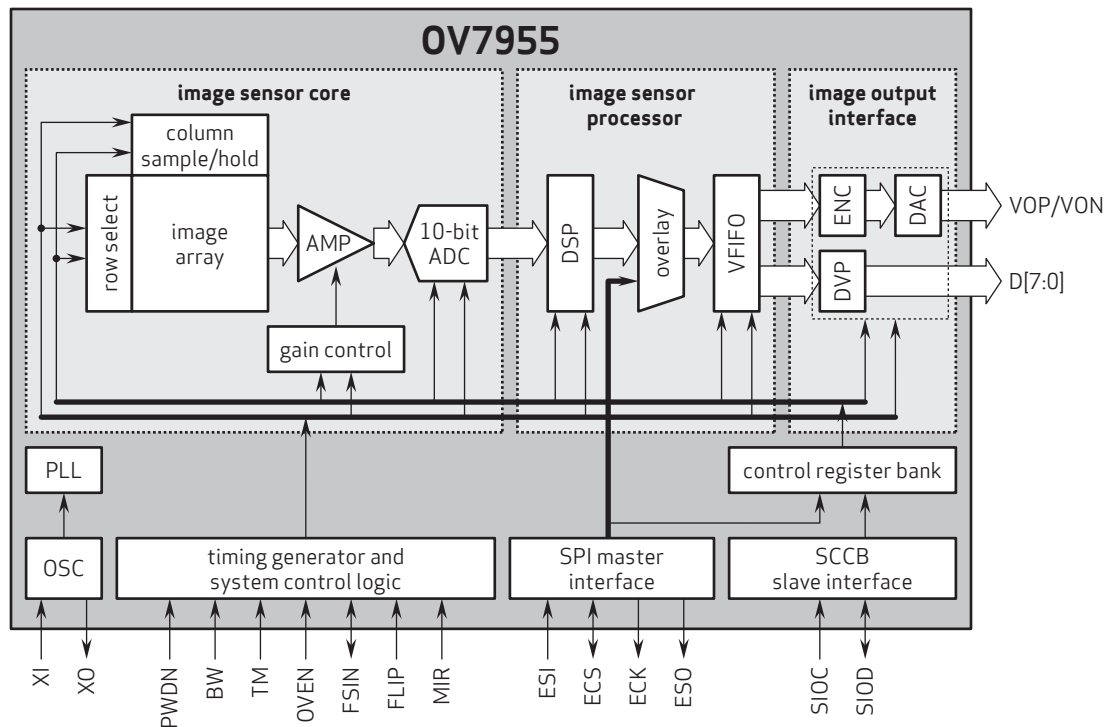
Ordering Information

- **OV7955-N53V-PE**
(color, NTSC, lead-free, 53-pin aCSP™ with protective film)

Product Specifications

- **active array size:** 672 x 492
- **power supply:**
 - core: 1.5V
 - analog: 3.14 - 3.47V
 - I/O: 1.7 - 3.47V
- **power requirements:**
 - active: 200 mW
 - standby: 20 μ A
- **temperature range:**
 - operating: -40°C to +105°C ambient temp and -40°C to +115°C junction temp
- **output formats:** NTSC (TV port), VGA (DV port)
- **optical size:** 1/3.7" (NTSC)
- **lens chief ray angle:** supports up to 25°
- **maximum image transfer rate:**
 - VGA: 60 frames per second (DV)
 - NTSC: 60 fields per second (TV)
- **sensitivity:** 16 V/lux-sec
- **shutter:** rolling shutter
- **max S/N ratio:** 38 dB
- **dynamic range:** 71 dB @ 8x gain
- **scan mode:** progressive
- **pixel size:** 6.0 μ m x 6.0 μ m
- **dark current:** 10.7 mV/sec @ 60°C junction temperature
- **image area:** 4032 μ m x 2952 μ m
- **package dimensions:** 5660 μ m x 5360 μ m

Functional Block Diagram



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