

OV7959 NTSC/PAL product brief



High-Performance, Cost Effective Video Capture for Surveillance Applications



available in
a lead-free
package

The OV7959 is a high-performance and cost effective CMOS image sensor developed specifically for surveillance applications. Based on OmniVision's advanced OmniPixel3-HS™ technology, the OV7959 achieves optimum low-light sensitivity and power efficiency, making it an excellent solution for video capture in varying conditions.

The 1/3.6-inch image sensor supports both NTSC and PAL output formats. The OV7959 is capable of operating in extreme low-light conditions and is capable of operating across a wide temperature range of -20°C to 70°C. It has superior IR performance and utilizes very low power. It also supports a built-in OSD function.

Advanced image processing functions, including gain control, white balance, and aperture and defective pixel correction are all programmable through the serial camera control bus (SCCB) interface. Other key features of the OV7959 are the 16-zone automatic exposure control, horizontal and vertical windowing capability and extremely low dark current.

Find out more at www.ovt.com.

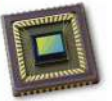
Applications

- Security and Surveillance Cameras

Product Features

- NTSC and PAL output
- excellent low light sensitivity
- automatic exposure/gain control
- auto white balance control
- aperture/gamma correction
- slave compatible serial camera control bus (SCCB) control interface for register programming
- low power consumption
- low dark current
- on-screen display
- 32 bytes of one time programmable memory (OTP)
- SPI master for single static overlay and loading setting
- dynamic overlay controls
- defective pixel correction

OV7959



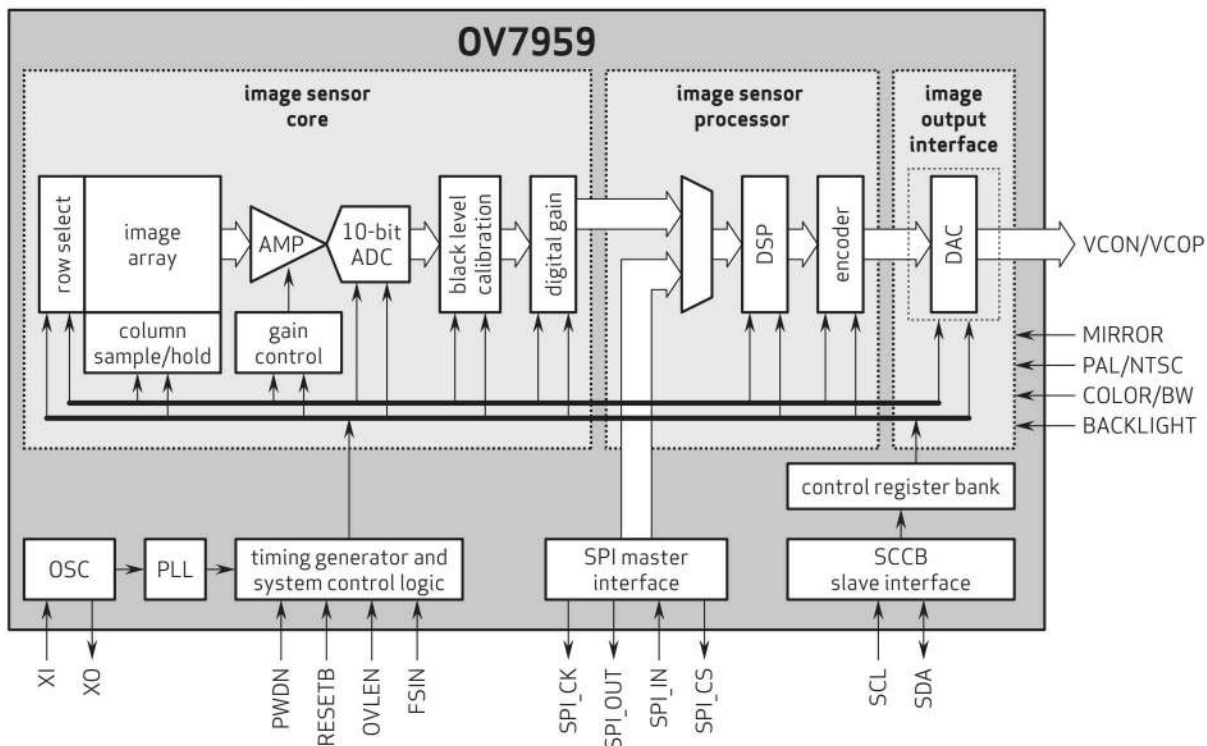
Ordering Information

- OV7959-C48A**
(color, NTSC/PAL, lead-free, 48-pin CLCC)

Product Specifications

- active array size:**
 - NTSC: 648 x 488
- power supply:**
 - core: 1.5V
 - analog: 3.3V
 - I/O: 1.8 - 3.3V
- power requirements:**
 - active: 135 mW
 - standby: 28 μ A
- temperature range:**
 - operating: -20°C to 70°C junction temperature
 - stable image: 0°C to 50°C junction temperature
- optical size:**
 - NTSC: 1/3.6"
 - PAL: 1/3.6"
- chief ray angle:** 0°
(no microlens shift)
- output formats:** NTSC/PAL
- maximum image transfer rate:**
 - NTSC: 60 fields per second
 - PAL: 50 fields per second
- sensitivity:** 12 V/lux-sec
- shutter:** rolling shutter
- max S/N ratio:** 46 dB
- dynamic range:** 72 dB @ 8x gain
- scan mode:** interlaced
- pixel size:** 6.0 μ m x 6.0 μ m
- dark current:** 15.6 mV/sec @ 50°C junction temperature
- image area:** 4008 μ m x 3024 μ m
- package dimensions:** 14.22 mm x 14.22 mm

Functional Block Diagram



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