

## JAL-KM1-OV9712 V3.0

OmniVision OV9712 DVP并行接口 固定焦距 100万像素 M12 摄像头模组

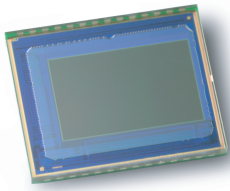


摄像头模组型号	<b>JAL-KM1-OV9712 V3.0</b>
图像感光芯片	OV9712
焦距	2.7 mm
光圈	2.7
像素	1280 x 800
可视角度	120°
镜头类型	1/4 英寸
镜头尺寸	10.4 x 10.4 x 10.59 mm
模组尺寸	100 x 10.4 mm
模组类型	固定焦距
接口	DVP并行

配对连接器型号: **AXT524124**



主板上的对应连接器。分开售卖。



# OV9712-1D <sup>720p</sup> HD video image sensor product brief



## The OV9712-1D Offers Best-in-Class 720p HD Video Performance at 30 Frames Per Second (fps)



available in  
a lead-free  
package

Enabled by OmniVision's proprietary OmniPixel3-HS™ high sensitivity pixel technology with  $3 \times 3 \mu\text{m}$  pixel and low-light sensitivity of 3.7 V/lux-sec, the OV9712-1D provides vivid imaging in virtually every lighting condition from bright daylight to nearly complete darkness. OV9712-1D has been re-optimized to improve QE, sensitivity and SNR.

The 1/4-inch OV9712-1D sensor provides full-frame, sub-sampled or windowed 8-bit/10-bit images in raw RGB format via the digital video port and with complete user control over image quality, formatting and output data transfer. The OV9712-1D offers a chief ray angle (CRA) of 25°.

The OV9712-1D incorporates advanced image processing functions, including exposure control, gain control, white balance, lens correction and defective pixel correction, programmable through the serial camera control bus (SCCB) interface. For storage purposes, it includes one-time programmable (OTP) memory.

The OV9712-1D is available in a CSP2 package and is capable of operating within a temperature range of -30°C to +70°C.

Find out more at [www.ovt.com](http://www.ovt.com).



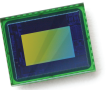
## Applications

- Security
- Car DVR
- Notebooks
- Telepresence
- Mobile Phones
- Digital Still Cameras
- Webcams
- Medical
- Entertainment

## Product Features

- high sensitivity for low-light operation
- ultra low power and low cost
- automatic image control functions:
  - automatic exposure control (AEC)
  - automatic gain control (AGC)
  - automatic white balance (AWB)
  - automatic band filter (ABF)
  - automatic black level calibration (ABLC)
- programmable controls: frame rate, AEC/AGC 16-zone size/position/weight control, mirror, flip and windowing
- image quality controls: lens correction and defective pixel canceling
- output support for raw RGB
- supports image sizes: WXGA (1280x800) and 640x400
- support for horizontal and vertical sub-sampling
- support for black sun cancellation
- standard serial camera control bus (SCCB) interface
- digital video port (DVP) parallel output interface
- embedded one-time programmable (OTP) memory
- on-chip phase lock loop (PLL)
- built-in 1.5V regulator for core

# OV9712-1D



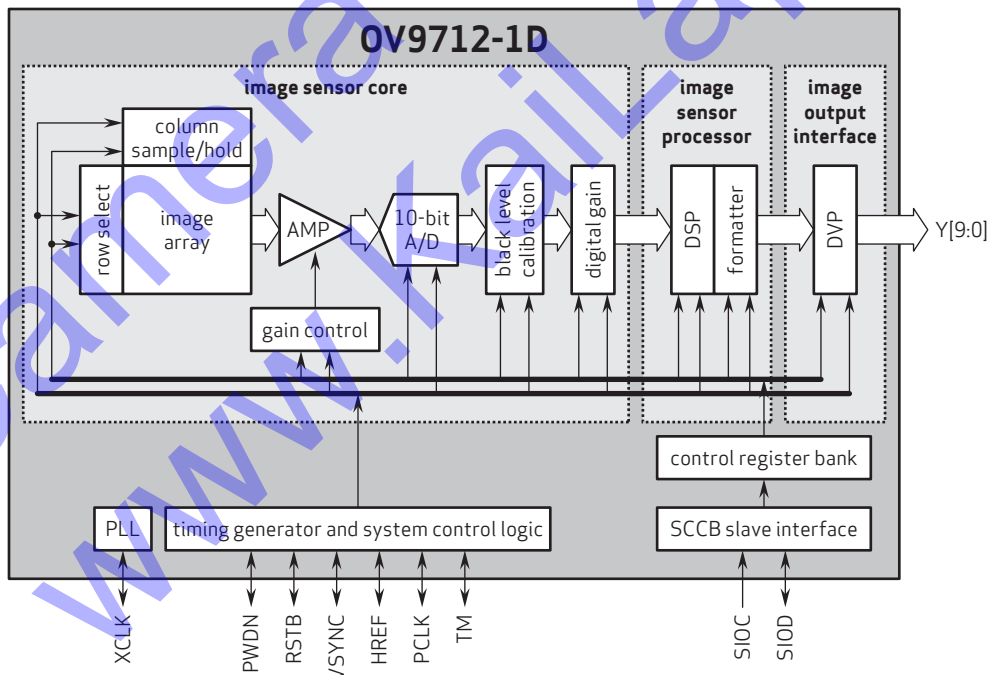
## Ordering Information

- OV09712-V28A-1D** (color, lead-free, 28-pin CSP2)
- OV09712-G04A-1D** (color, chip probing, 200  $\mu$ m backgrinding, reconstructed wafer)
- OV09211-V28A** (B&W, lead-free, 28-pin CSP2)
- OV09211-G04A** (B&W, chip probing, 200  $\mu$ m backgrinding, reconstructed wafer)

## Product Specifications

- active array size:** 1280 x 800
- power supply:**
  - core: 1.5 VDC  $\pm$ 5% (built-in regulator)
  - analog: 3.0 - 3.6V
  - I/O: 1.7 - 3.6V
- temperature range:**
  - operating: -30°C to +70°C junction temperature
  - stable image: 0°C to +50°C junction temperature
- output formats:** 10-bit RAW RGB data
- lens size:** 1/4"
- lens chief ray angle:** 25° non-linear
- input clock frequency:** 6 - 27 MHz
- scan mode:** progressive
- maximum image transfer rate:**
  - WXGA (1280x800): 30 fps
  - HD 720p (1280x720): 30 fps
  - VGA (640x480): 60 fps
- sensitivity:** 3700 mV/lux-sec
- max S/N ratio:** 40 dB
- dynamic range:** 69 dB @ 8x gain
- maximum exposure interval:** 826 x  $t_{ROW}$
- pixel size:** 3  $\mu$ m x 3  $\mu$ m
- dark current:** 20 mV/sec @ 60°C junction temperature
- image area:** 3888  $\mu$ m x 2430  $\mu$ m
- package/die dimensions:**
  - CSP2: 5415  $\mu$ m x 4415  $\mu$ m
  - COB: 5430  $\mu$ m x 4430  $\mu$ m

## Functional Block Diagram



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