

CMOS CAMERA MODULES



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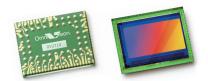
KLT-USB1A-IRSW-OV2710 V4.0 OmniVision OV2710 with IR Switch USB Interfaz Foco fijo 2MP M12 Módulo de cámara



Módulo de cámara No.	KLT-USB1A-IRSW-OV2710 V4.0	
Sensor de imagen	OV2710	Output Format: MJPG, YVY2
EFL	2.02 mm	30 FPS 640 x 480 (VGA)
F.NO	2.5	30 FPS 1280 x 720 (HD 720P)
Pixel	1920 x 1080	30 FPS 1920 x 1080 (Full HD)
Ángulo de visión	118.8°(D) 109.9°(H) 74.6°(V)	Supporting OS
Tipo de lente	1/2.7 pulgada	Windows 7, 8.1, 10, Vista
Dimensiones de la lente	17.00 x 17.00 x 21.17 mm	Windows XP SP2 under UVC
Tamaño del módulo	88.00 x 30.00 mm	Linux Kernel V2.6.2.1 or later
Tipo de módulo	Foco fijo	MAC OS 10.4 or later
Interfaz	USB 2.0	Operating Voltage: 5V +/- 5%
Modelo de lente IMT		Compliant with UVC Version 1.0



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0V2710-1E full HD (1080p) product brief



OmniVision's True 1080p High Definition (HD) Video Image Sensor



The OV2710-1E is a true full HD (1080p) CMOS image sensor designed specifically to deliver high-end HD video to digital video camcorders, notebooks, PC webcam, security and other mobile applications. The 1/2.7-inch OV2710-1E addresses the fast growing demand for affordable, HD-quality digital video solutions for video conferencing and recording.

The OV2710-1E is among the very first no-compromise full HD (1080p) sensors available on the market, meaning it offers HD video format with a display resolution of 1920×1080 pixels, operating at 30 frames per second. Built with OmniVision's proprietary 3 μ m OmniPixel3-HS $^{\text{M}}$ high sensitivity pixel technology, the OV2710-1E delivers low-light sensitivity of 3700 mV/lux-sec, S/N ratio of 40 dB, and

a peak dynamic range of 69 dB, enabling cameras to operate in virtually every lighting condition from bright daylight to nearly complete darkness below $15\,\mathrm{lux}$.

The OV2710-1E supports multiple platform architectures and controllers with both parallel and MIPI interfaces. By allowing system designers to leverage the same opto-electrical design across various products and multiple market segments, the OV2710-1E significantly reduces product development time. OmniVision's OmniPixel3-HS pixel technology has already been proven in high quality webcam/video applications and is now available in 1080p full HD in the OV2710-1E.

Find out more at www.ovt.com.





Applications

- Notebooks
- PC Webcams
- Camcorders
- Security

- Digital Still Cameras
- Telepresence
- Portable Media Players

Product Features

- frame rate, image size, horizontal mirror, vertical flip, cropping, windowing, and panning
- automatic image control functions:
 - automatic exposure (AEC)
 - automatic gain control (AGC) automatic white balance (AWB)
 - automatic black level calibration (ABLC)
- serial camera control bus (SCCB)
- lens correction (LENC)
- defect pixel correction (DPC)
- support for digital video port (DVP) parallel output interface
- integrated auto focus filter

- programmable controls: gain, exposure, support for one lane MIPI interface (up to 800 Mbps)
 - support for 8-/10-bit RAW RGB output
 - support for image sizes:
 - 1080p at 30 fps cropped 720p at 60 fps
 - VGA at 120 fps
 - support for black sun cancellation

 - embedded one-time programmable (OTP) memory
 - on-chip phase lock loop (PLL)
 - built-in 1.5V regulator for core

OV2710-1E



■ 0V02710-A68A-1E (color, lead-free, 68-pin CSP3)

Product Specifications

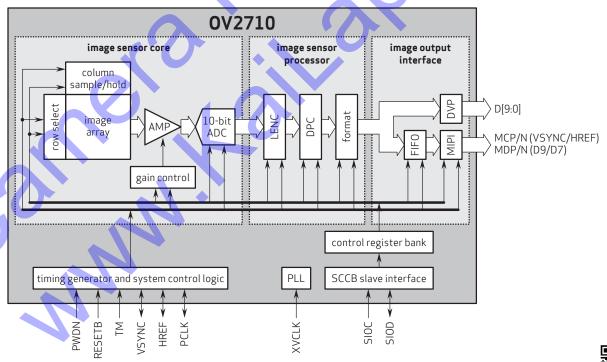
- active array size: 1920 x 1080

- power supply:
 analog: 3.0 3.6V (3.3V typical)
 core: 1.425 1.575V (1.5V typical)
 I/O: 1.7 3.6V (1.8V typical)
- power requirements: active: 350 mW
- power down: 70 µA
- temperature range:

 operating: -30°C to +85°C junction temperature
- stable image: 0°C to +65°C junction temperature
- output interfaces: 10-bit parallel/ one lane MIPI
- output formats: 10-bit RAW RGB
- lens size: 1/2.7"
- lens chief ray angle: 23.6°
- input clock frequency: 6 27 MHz

- scan mode: progressive
- maximum image transfer rate:
- 1080p: 30 fps cropped 720p: 60 fps VGA: 120 fps
- QVGA: 240 fps
- sensitivity: 3700 mV/lux-sec
- shutter: rolling
- max S/N ratio: 40 dB
- dynamic range: 69 dB @ 8x gain
- maximum exposure interval: 1096 tline
- pixel size: 3 µm x 3 µm
- dark current: 20 mV/sec @ 60°C junction temperature
- image area: 5856 µm x 3276 µm
- package dimensions: 7465 µm x 5865 µm

Functional Block Diagram



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