## CMOS CAMERA MODULES

your BEST camera module partner

## KLT-USB1A-IRSW-OV2710 V2.0

### OmniVision OV2710 带红外开关 USB 接口 固定焦距 200万像素 M12 摄像头模组

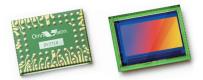


摄像头模组型号	KLT-USB1A-IRSW-OV2710 V2.0	
图像感光芯片	OV2710	输出格式: MJPG, YVY2
焦距	1.86 mm	30 FPS 640 x 480 (VGA)
光圈	2.4	30 FPS 1280 x 720 (HD 720P)
像素	1920 x 1080	30 FPS 1920 x 1080 (Full HD)
可视角度	118°(D) 110°(H) 76°(V)	支持的操作系统
镜头类型	1/2.7 英寸	Windows 7, 8.1, 10, Vista
镜头尺寸	16.50 x 16.50 x 21.20 mm	Windows XP SP2 under UVC
模组尺寸	30.00 x 80.00 mm	Linux Kernel V2.6.2.1 or later
模组类型	固定焦距	MAC OS 10.4 or later
接口	USB 2.0	工作电压: 5V +/- 5%
IMT镜头型号		符合UVC 1.0版



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# OV2710-1E 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.

available in

a lead-free

nackage

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 x 1080 pixels, operating at 30 frames per second. Built with OmniVision's proprietary 3 µm OmniPixel3-HS<sup>™</sup> 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 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
- **Product Features**
- programmable controls: gain, exposure, support for one lane MIPI interface 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

- (up to 800 Mbps)
- support for 8-/10-bit RAW RGB output format
- support for image sizes: - 1080p at 30 fps - cropped 720p at 60 fps - VGA at 120 fps

Digital Still Cameras

Portable Media Players

Telepresence

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

### **Product Specifications** scan mode: progressive

■ active array size: 1920 × 1080

OV02710-A68A-1E (color, lead-free, 68-pin CSP3)

- power supply:

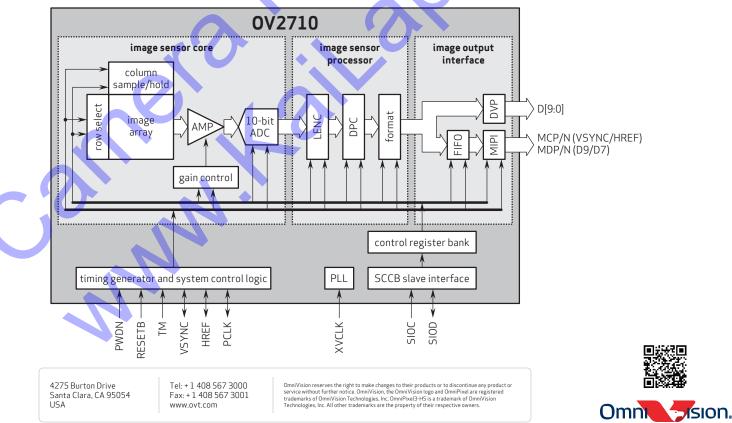
   analog: 3.0 3.6V (3.3V typical)
   core: 1.425 1.575V (1.5V typical)
   I/0: 1.7 3.6V (1.8V typical)
- power requirements:
   active: 350 mW power down: 70 µA
- temperature range:
   operating: -30°C to +85°C junction temperature - stable image: 0°C to +65°C junction
- temperature
- output interfaces: 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

- 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



Version 1.1, October, 2015

## OV2710-1E