CMOS CAMERA MODULES

your BEST camera module partner

KLT-D1MF-OV8865 V1.0

OmniVision OV8865 MIPI Interface Fixed Focus 8MP M12 Camera Module

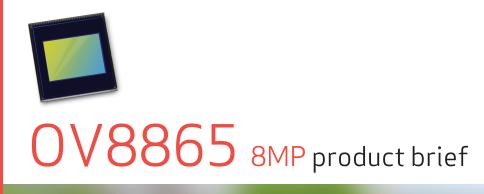


Camera Module No.	KLT-D1MF-OV8865 V1.0
Image Sensor	OV8865
EFL	2.8 mm
F.NO	2.8
Pixel	3264 x 2448
View Angle	120°
Lens Type	1/3.2 inch
Lens Dimensions	13.00 x 13.00 x 23.52 mm
Module Size	50.00 x 22.00 mm
Module Type	Fixed Focus
Interface	MIPI



www.KaiLapTech.com sales@KaiLapTech.com Tel: (852) 6908 1256 Fax: (852) 3017 6778

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High-Performance, Low-Power 8-Megapixel Image Sensor for Mainstream Smartphones and Tablets

OmniVision's OV8865 is a low-power high-performance 8-megapixel camera solution for mainstream smartphones and tablets. Utilizing an improved 1.4-micron OmniBSI-2[™] pixel, the OV8865 delivers best-in-class pixel performance in a smaller, more power efficient package compared to the previous generation OV8835 sensor.

available in

a lead-free

package

The OV8865 offers a number of performance improvements including a five percent improvement in dynamic range and a 50 percent reduction in dark current, resulting in superior high- and low-light images. Furthermore, the OV8865 consumes considerably less power than the OV8835, achieving the sub 200 mW benchmark preferred by high-end mobile device manufacturers. The 1/3.2-inch OV8865 supports an active array of 3264 x 2448 (8-megapixels) operating at 30 frames per second (fps) for high-speed photography. The sensor is also capable of capturing 1080p high-definition (HD) video at 30 fps or 720p at 60 fps.

The OV8865 fits into an industry standard 8.5 x 8.5 x 5 mm package.

Find out more at www.ovt.com.





Applications

Cellular Phones

PC Multimedia

Tablets

Product Features

static defective pixel canceling

supports output formats:

supports horizontal and vertical subsampling

1632x1224, 1408x792

10-bit RAW RGB (MIPI)

- automatic black level calibration (ABLC) supports 2x2 binning, re-sampling filter
- programmable controls for frame rate, standard serial SCCB interface mirror and flip, cropping, and windowing
 - up to 4-lane MIPI serial output interface
 - embedded 1536 bytes one-time programmable (OTP) memory for part identification, etc.
 - two on-chip phase lock loops (PLLs)
 - programmable I/O drive capability
- supports images sizes: 3264x2448, 3264x1836, 2816x1584, built-in temperature sensor

OV08865-G04A-1D (color, chip probing, 200 µm backgrinding, reconstructed wafer with good die)

Product Specifications

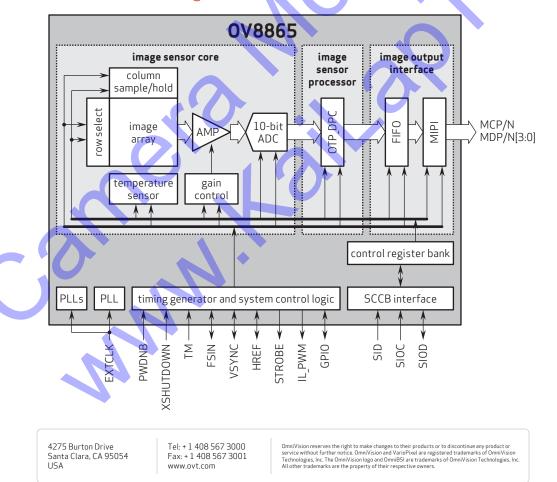
- active array size: 3264 x 2448
- power supply:
- core: 1.2V analog: 2.8V I/O: 1.8V, 2.8V
- power requirements: active: 196 mW (full resolution @ 30 fps) XSHUTDOWN: 5 µW
- temperature range:
 operating: -30°C to +85°C junction temperature
- stable image: 0°C to +60°C junction temperature
- output formats: 10-bit RAW RGB data
 - lens size: 1/3.2"
- lens chief ray angle: 32.2° non-linear

input clock frequency: 6 - 27 MHz max S/N ratio: 36.7 dB

OV8865

- dynamic range: 68.8 dB
- maximum image transfer rate: 30 fps
- sensitivity: 940 mV/lux-sec
- scan mode: progressive
- **pixel size:** 1.4 μm x 1.4 μm
 - dark current: 20 e-/sec @ 60°C junction temperature
- image area: 4614.4 μm x 3472 μm
- **die dimensions:** 5850 μm x 5700 μm

Functional Block Diagram





Version 1.3, October, 2014