

## JAL-OV8865-T378B V2.0

**OmniVision OV8865 MIPI Interface Auto Focus LED Flash 8MP Camera Module**



<b>Camera Module No.</b>	<b>JAL-OV8865-T378B V2.0</b>
<b>Image Sensor</b>	OV8865
<b>EFL</b>	3.69 mm
<b>F.NO</b>	2.2
<b>Pixel</b>	3264 x 2448
<b>View Angle</b>	74.9°
<b>Lens Type</b>	1/3.2 inch
<b>Lens Dimensions</b>	8.5 x 8.5 x 5.5 mm
<b>Module Size</b>	27.5 x 8.5 mm
<b>Module Type</b>	Auto Focus
<b>Add-On</b>	LED Flash
<b>Interface</b>	MIPI

<b>Mating Connector Part No. BBR43-24KB533</b>	
	
Mating Connector On Main Board. Sold Separately.	



# OV8865 8MP product brief



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



available in a lead-free package

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.

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](http://www.ovt.com).



## Applications

- Cellular Phones
- Tablets
- PC Multimedia

## Product Features

- automatic black level calibration (ABLC)
- programmable controls for frame rate, mirror and flip, cropping, and windowing
- static defective pixel canceling
- supports output formats: 10-bit RAW RGB (MIPI)
- supports horizontal and vertical subsampling
- supports images sizes: 3264x2448, 3264x1836, 2816x1584, 1632x1224, 1408x792
- supports 2x2 binning, re-sampling filter
- standard serial SCCB interface
- 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
- built-in temperature sensor

# OV8865



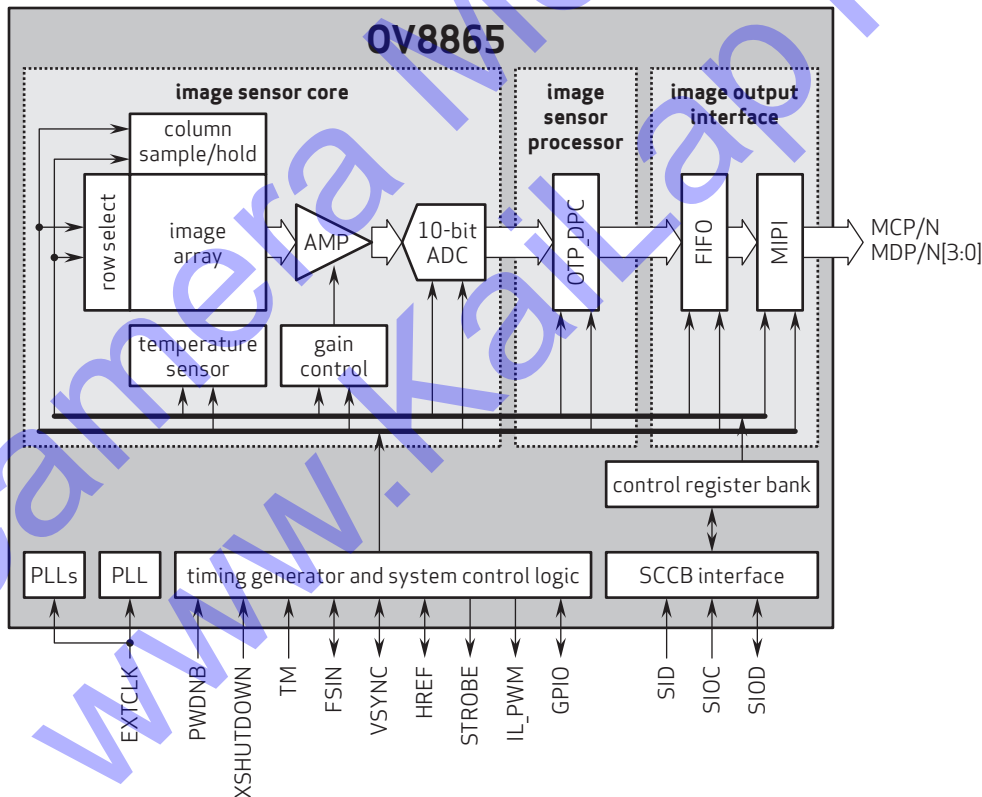
## Ordering Information

- OV8865-G04A-1D (color, chip probing, 200  $\mu\text{m}$  backgrounding, 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  $\mu\text{W}$
- 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
- dynamic range: 68.8 dB
- maximum image transfer rate: 30 fps
- sensitivity: 940 mV/lux-sec
- scan mode: progressive
- pixel size: 1.4  $\mu\text{m}$  x 1.4  $\mu\text{m}$
- dark current: 20 e<sup>-</sup>/sec @ 60°C junction temperature
- image area: 4614.4  $\mu\text{m}$  x 3472  $\mu\text{m}$
- die dimensions: 5850  $\mu\text{m}$  x 5700  $\mu\text{m}$

## Functional Block Diagram



4275 Burton Drive  
Santa Clara, CA 95054  
USA

Tel: +1 408 567 3000  
Fax: +1 408 567 3001  
www.ovt.com

OmniVision reserves the right to make changes to their products or to discontinue any product or service without further notice. OmniVision and VarioPixel are registered trademarks of OmniVision Technologies, Inc. The OmniVision logo and OmniBSI are trademarks of OmniVision Technologies, Inc. All other trademarks are the property of their respective owners.



OmniVision