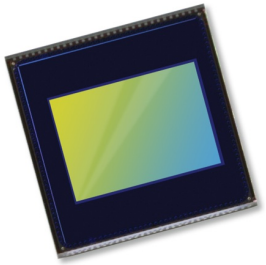
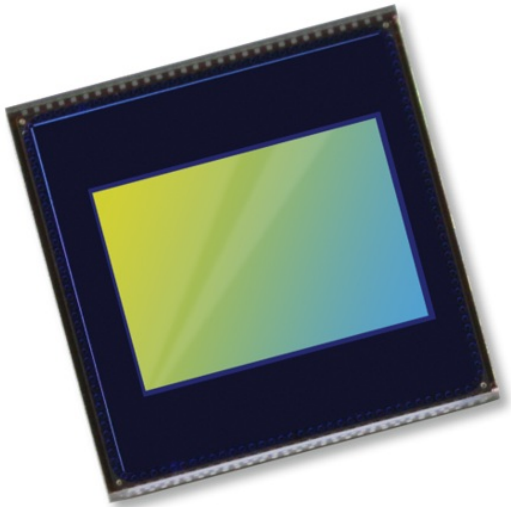


OMNIVISION OV8865 High-Performance Low-Power 8-Megapixel Image Sensor Owner's Manual

OMNIVISION™

OV8865
8 megapixel product brief
High-Performance, Low-Power 8-Megapixel
Image Sensor for Mainstream Smartphones and Tablets
Owner's Manual



Contents

OV8865 High-Performance Low-Power 8-Megapixel Image Sensor

OMNIVISION's OV8865 is a low-power high-performance 8-megapixel camera solution for mainstream smartphones and tablets. Utilizing an improved 1.4-micron OmniBSITM-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**.

Ordering Information

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

Applications

- cellular phones
- tablets
- PC multimedia

Technical Specifications

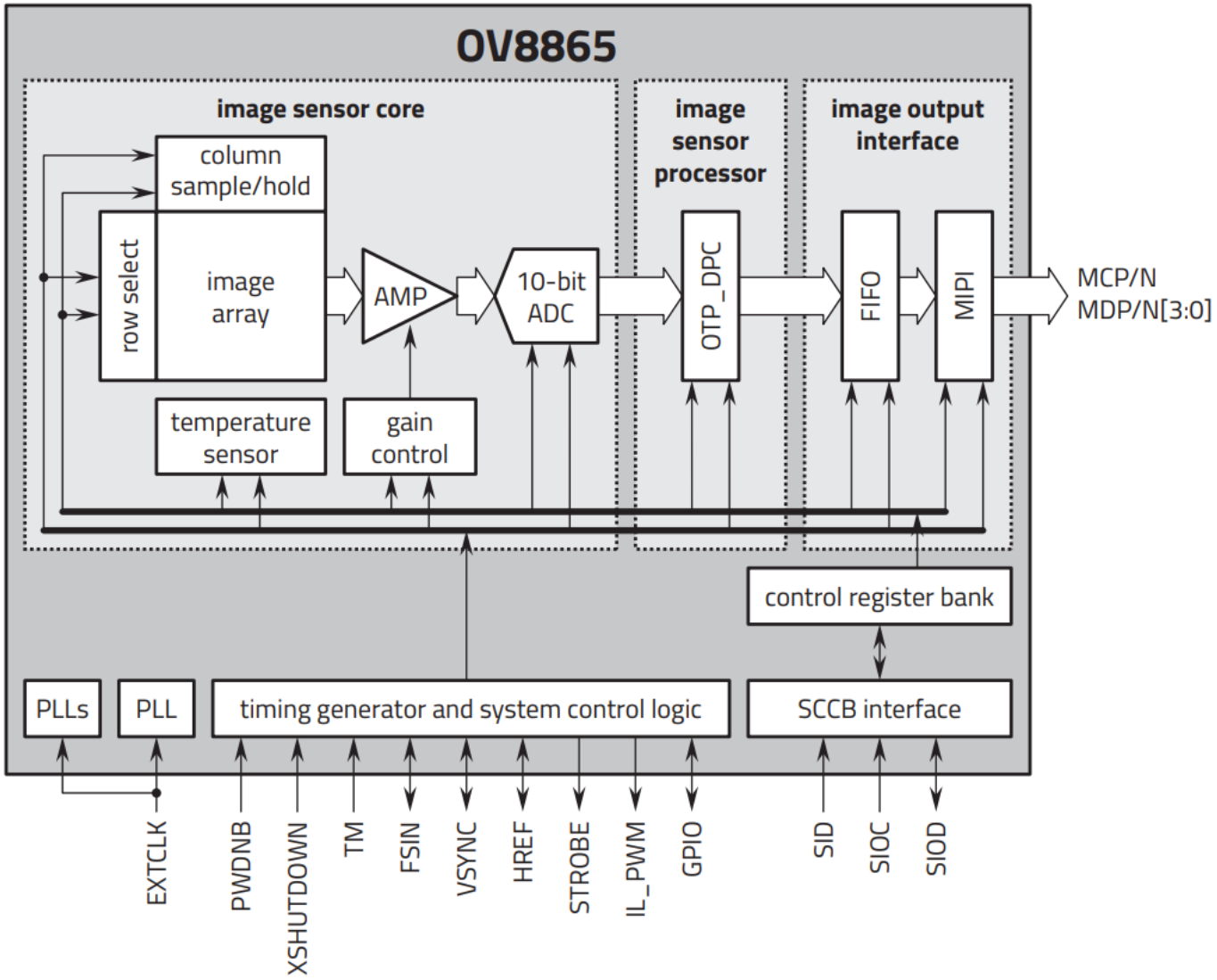
- **active array size:** 3264 x 2448
- **maximum image transfer rate:**
  – 8MP (3264 x 2448): 30 fps
- **power supply:**
  – core: 1.2V
  – analog: 2.8V – I/O: 1.8V, 1.2V
- **power requirements:**
  – active: 196 mW (full resolution @ 30 fps)

  – XSHUTDOWN: 5 µW
- **output formats:** 10-bit RAW RGB
- **temperature range:**
  – operating: -30°C to +85°C junction temperature
  – stable: 0°C to +60°C junction temperature
- **lens size:** 1/3.2″
- **lens chief ray angle:** 28.77° non-linear
- **scan mode:** progressive
- **pixel size:** 1.4 µm x 1.4 µm
- **image area:** 4614.4 µm x 3472 µm

Product Features

- automatic black level calibration (ABLC)
- programmable controls for:
  – frame rate
  – mirror and flip
  – cropping
  – windowing
- static defective pixel canceling
- supports output formats: 10-bit RAW RGB (MIPI)
- supports images sizes:
  – 3264 x 2448
  – 3264 x 1836
  – 2816 x 1584
  – 1632 x 1224
  – 1408 x 792
- supports horizontal and vertical subsampling
- supports 2×2 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

Functional Block Diagram



https://www.ovt.com/products/ov8865/

Version 1.4, March 2023 4275 Burton Drive Santa Clara, CA 95054 USA	Tel: + 1 408 567 3000 Fax: + 1 408 567 3001 www.ovt.com

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Documents / Resources

	OMNIVISION OV8865 High-Performance Low-Power 8-Megapixel Image Sensor [pdf] Owner's Manual OV8865 High-Performance Low-Power 8-Megapixel Image Sensor, OV8865, High-Performance Low-Power 8-Megapixel Image Sensor, Low-Power 8-Megapixel Image Sensor, 8-Megapixel Image Sensor, Image Sensor, Sensor