JAL-KH5-OV2643 V1.0

OmniVision OV2643 DVP Parallel Schnittstelle Fixer Fokus 2MP Kameramodul

Kameramodul Nr.	JAL-KH5-OV2643 V1.0
Bildsensor	OV2643
EFL	3.23 mm
F.NO	2.8
Pixel	1600 x 1200 (UXGA)
Blickwinkel	75°
Linsentyp	1/4 Zoll
Objektivabmessungen	8.5 x 8.5 x 4.7 mm
Modulgröße	8.5 x 8.5 mm
Modultyp	Fixer Fokus
Schnittstelle	DVP Parallel

Gegenstecker Teile-Nr. 24-5804-024-000-829

Gegenstecker auf der Hauptplatine. Separat erhältlich.

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OV2643 2 MP product brief

High-Performance 2-Megapixel SOC Camera for the High-Volume, Feature Rich Phone Market

Designed to address the increasing demand for 2-megapixel resolution cameras in mainstream feature phones, the OV2643 brings high-definition (HD) video and excellent low-light sensitivity to this high-volume market. The OV2643 targets high-performance applications in a 1/4-inch optical format that fits the critical 6.5 x 6.5 mm camera module size. The OV2643 implements OmniVision's advanced 2.2-micron OmniPixel3-HS™ architecture to achieve a sensitivity of 1250 mV/lux-sec, enabling excellent image quality under the most challenging lighting conditions.

The OV2643 is a system on a chip (SOC) CMOS image sensor with advanced image signal processing that allows it to offer the quality and functionality of most high-performance DSC cameras, including support for 720p HD video recording at 30 frames per second, excellent sensitivity and high quality image capture while meeting the cost, size and performance requirements of the feature phone market.

The OV2643 offers automatic image control functions, which include automatic exposure control, automatic white balance and automatic black level calibration. It also features all standard image quality controls such as color saturation, hue, gamma, sharpness (edge enhancement), lens correction, defective pixel canceling and noise canceling and support for black sun cancelation.

The OV2643 comes with a standard serial SCCB interface and digital video port (DVP) parallel output interface, offering support for UXGA, SVGA and 720p with programmable controls for frame rate as well as video operations.

Find out more at www.ovt.com.

Omni Vision.

Applications

- Mobile Phones
- Entertainment
- Notebooks and Webcams

Product Features

- ultra low power and low cost

- automatic image control functions:
  - automatic exposure control (AEC)
  - automatic white balance (AWB)
  - automatic band filter (ABF)
  - automatic black level calibration (ABLC)

- programmable controls for frame rate, AEC/AGC 16-zone size/position/weight control, mirror and flip, and windowing

- image quality controls: color saturation, hue, gamma, sharpness (edge enhancement), lens correction, defective pixel canceling, and noise canceling

- support for output formats: RAW RGB, RGB565/555, YUV422, YCbCr422 and GBR422

- support for images sizes: UXGA, SVGA, and 720p

- support for video operations

- support for horizontal and vertical sub-sampling, binning

- standard serial SCCB interface

- digital video port (DVP) parallel output interface

- on-chip phase lock loop (PLL)

- programmable I/O drive capability

- support for black sun cancellation

- built-in regulator for DVDD

- suitable for module size of 6.5 mm x 6.5 mm

OV2643

Product Specifications

- **active array size:** 1624 x 1212

- **power supply:**
  - **core:** 1.5 VDC ±5%
  - **analog:** 2.6 - 3.0 V
  - **I/O:** 1.7 - 3.0 V

- **power requirements:**
  - **active:** 150 mW
  - **standby:** 30 μA

- **temperature range:**
  - **operating:** -20°C to 70°C junction temperature
  - **stable image:** 0°C to 50°C junction temperature

- **output formats:** YUV422/YCbCr422, GBR422, RGB565/555, 8/10-bit RAW RGB data

- **lens size:** 1/4"

- **lens chief ray angle:** 25° non-linear

- **input clock frequency:** 6 - 27 and 54 MHz

- **max S/N ratio:** 39 dB

- **dynamic range:** 66 dB @ 8x gain

- **maximum image transfer rate:**
  - UXGA (1600x1200): 15 fps
  - SVGA (800x600): 30 fps
  - 720p (1280x720): 30 fps

- **sensitivity:** 1250 mV/lux-sec

- **shutter:** rolling shutter

- **scan mode:** progressive

- **maximum exposure interval:** 1227 x t_{ROW}

- **gamma correction:** programmable

- **pixel size:** 2.2 μm x 2.2 μm

- **image area:** 3590 μm x 2710 μm

- **package dimensions:** 5035 μm x 4635 μm

Functional Block Diagram