JAL-KK6-OV7725 V2.0

OmniVision OV7725 Parallela DVP Interfaccia Messa a fuoco fissa 0.3 MP VGA Modulo telecamera


Modulo telecamera n.	JAL-KK6-OV7725 V2.0
Sensore d'immagine	OV7725
EFL	2.0 mm
F.NO	2.5
Pixel	480 x 640
Vista ad angolo	170°
Tipo di lente	1/4 pollice
Dimensioni dell'obiettivo	10.4 x 10.4 x 12.28 mm
Dimensione del modulo	40 x 12.5 mm
Tipo di modulo	Messa a fuoco fissa
Interfaccia	Parallela DVP

Connettore di accoppiamento Codice. FH12A-24S-0.5SH
Connettore di accoppiamento sulla scheda principale.Venduto separatamente.
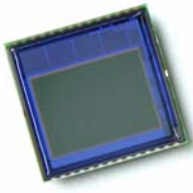
OV7725 VGA product brief

lead free
available in
a lead-free
package

High Performance, All-digital VGA Camera Solution

The OV7725 CameraChip™ sensor is a high-performance 1/4 inch, single-chip VGA camera and image processor in a small footprint package. Operating at full functionality, the OV7725 meets all PC multimedia and cameraphone market requirements in terms of performance, quality and reliability. The low-power OV7725 excels in low light conditions and can operate in a wide temperature range, from -20°C to +70°C.

The OV7725 incorporates a 640 x 480 image array, capable of operating at 60 frames per second in VGA mode with complete user control over image quality, formatting and output data transfer.

The OV7725 provides full-frame, sub-sampled or windowed 8-bit/10-bit images in a wide range of formats, controlled through the serial camera control bus (SCCB) interface. The OV7725 possesses all required camera processing functions including exposure control, gamma, white balance, color saturation, hue control and more. These functions are also programmable through the SCCB interface.

Find out more at www.ovt.com.

Omni Vision.

OV7725

Applications

- camera phones
- toys
- digital still cameras
- webcams
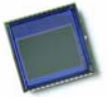
ordering information

- **OV07725-V28A**
  (color, lead-free, CSP2-28)
- **OV07221-V28A**
 (b&w, lead-free, CSP2-28)

Product Features

- high sensitivity for low-light operation
- standard SCCB interface
- output support for:
  - raw RGB
  - RGB (GRB 4:2:2, RGB565/555/444)
  - YCbCr (4:2:2) formats
- supports image sizes: VGA, QVGA, and any size scaling down from CIF to 40x30
- VarioPixel® method for sub sampling
- automatic image control functions including:
  - automatic exposure control (AEC)
  - automatic gain control (AGC)
  - automatic white balance (AWB)
  - automatic band filter (ABF)
  - automatic black-level calibration (ABLC)

- image quality controls including color saturation, hue, gamma, sharpness (edge enhancement), and anti blooming
- ISP includes noise reduction and defect correction
- lens shading correction
- saturation level auto adjust (UV adjust)
- edge enhancement level auto adjust
- noise suppression technology auto adjust
- frame synchronization capability

Product Specifications

- **array size:** 640 x 480
- **power supply**
  analog: 3.0V to 3.6V
  digital core: 1.8 VDC ± 10%
  I/O: 1.7V to 3.3V
- **power requirements**
  active: 120 mW (60 fps VGA, YUV)
  standby: <20 µA
- **temperature range**
  -20ºC to +70ºC
- **output formats:**
  8-bit YUV/YCbCr 4:2:2, RGB565 555/444, GRB 4:2:2, Raw RGB Data, 10-bit Raw RGB Data
- **lens size:** 1/4"
- **lens chief ray angle:** 25° non-linear
- **maximum image transfer rate:**
  - 60 fps for VGA

- **scan mode:** progressive
- **electronic exposure**
  up to 510:1 (for selected fps)
- **sensitivity:** 3800 mV/lux-sec
- **max S/N ratio:** 50 dB
- **dynamic range:** 60 dB
- **pixel size:** 6.0 µm x 6.0 µm
- **fixed pattern noise:**
  < 0.03% of $V_{PEAK-TO-PEAK}$
- **dark current:** 40 mV/s
- **image area:**
  3984 µm x 2952 µm
- **package dimensions:**
  - CSP2: 5345 µm x 5265 µm
  - COB: 5360 µm x 5260 µm

Functional Block Diagram
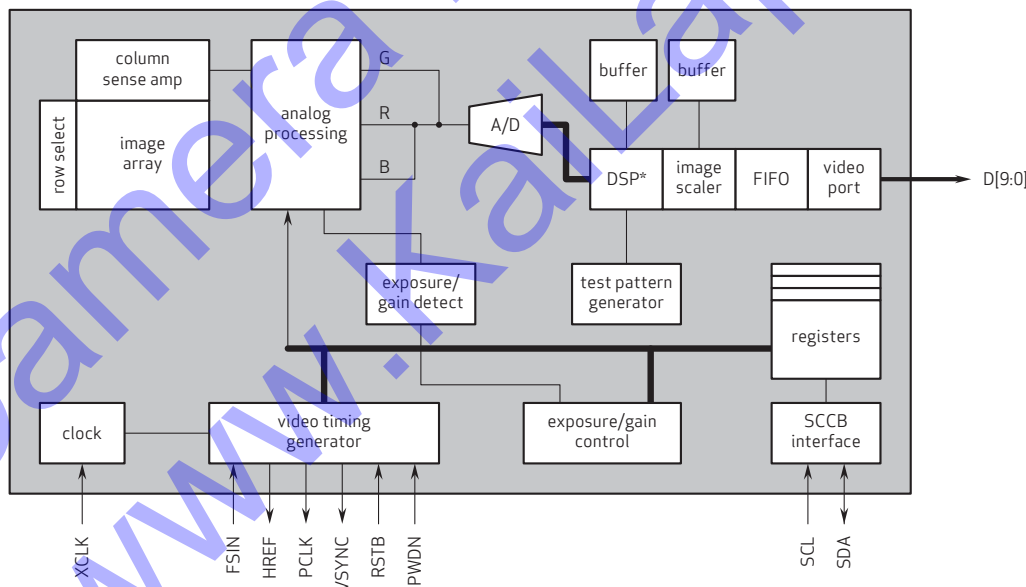
note 1 DSP* (lens shading correction, de-noise, white/black pixel correction, auto white balance, etc.)

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Omni Vision®

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