CMOS CAMERA MODULES

your BEST camera module partner

KLT-KX6-OV5658 V1.0

OmniVision OV5658 MIPI Schnittstelle Fixer Fokus 5MP Kameramodul

Kameramodul Nr.	KLT-KX6-OV5658 V1.0
Bildsensor	OV5658
EFL	4.27 mm
F.NO	2.8
Pixel	2592 x 1944 (QSXGA)
Blickwinkel	67°
Linsentyp	1/3.2 Zoll
Objektivabmessungen	8.5 x 8.5 x.5.62 mm
Modulgröße	28 x 8.5 mm
Modultyp	Fixer Fokus
Schnittstelle	MIPI

Gegenstecker Teile-Nr. 24-5804-024-000-829
Gegenstecker auf der Hauptplatine. Separat erhältlich.

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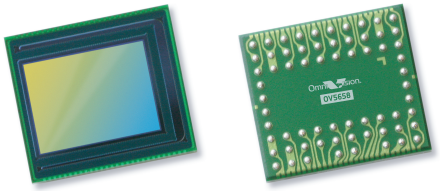


OV5658 5-megapixel product brief

Full Resolution 5-Megapixel HD Video with High Dynamic Range for High-End Security and Surveillance Systems

lead free

available in a lead-free package

The OV5658 is a 5-megapixel CameraChip™ sensor designed specifically for high-end security and surveillance applications. The high performance OV5658 leverages a 1.75-micron OmniBSI+™ pixel to deliver industry-leading sensitivity and high dynamic range (HDR) while maintaining the standard form factor for security applications.

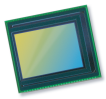
The sensor's industry-leading image and video quality ensure crisp and clear scene reproduction, even when recording in difficult lighting conditions. Additionally, the OV5658's resolution (up to 2592 x 1944 pixels) enables advanced features such as video analytics, biometrics and facial recognition.

The OV5658 is the world's first security targeted, 1/3.2-inch sensor capable of capturing full-resolution 5-megapixel video at 30 frames per second (fps). The sensor is also capable of recording both 1080p or 720p HD video at 60 fps, or at 30 fps with extra pixels for electronic image stabilization (EIS).

Find out more at www.ovt.com.

Camera Module Factory
www.kaiLaptech.com

OV5658



Applications

- Security and Surveillance

Product Features

- 1.75 µm x 1.75 µm pixel with OmniBSI+™ technology for high performance (high sensitivity, low crosstalk, low noise)
- support for image sizes: 5 Mpixel (2592x1944), EIS 1080p (2112x1188), 1080p (1920x1080), EIS 720p (1536x864), 720p (1280x720), and VGA (640x480)
- programmable controls for frame rate, mirror and flip, cropping, windowing, and scaling
- image quality controls: defect pixel correction, lens shading correction, and black level calibration
- support for output formats: 10-bit RAW RGB
- supports horizontal and vertical subsampling
- fast mode switching
- supports 2x2 binning, re-sampling filter
- supports 3D applications
- EIS 1080p scalar (allows scale down to EIS 1080p or any size below)
- standard serial SCCB interface
- up to 4-lane MIPI/LVDS serial output interface
- embedded 64 bytes of one-time programmable (OTP) memory for part identification, etc.
- two on-chip phase lock loop (PLL)
- programmable I/O drive capability
- built-in 1.5V regulator for core
- supports alternate row HDR timing

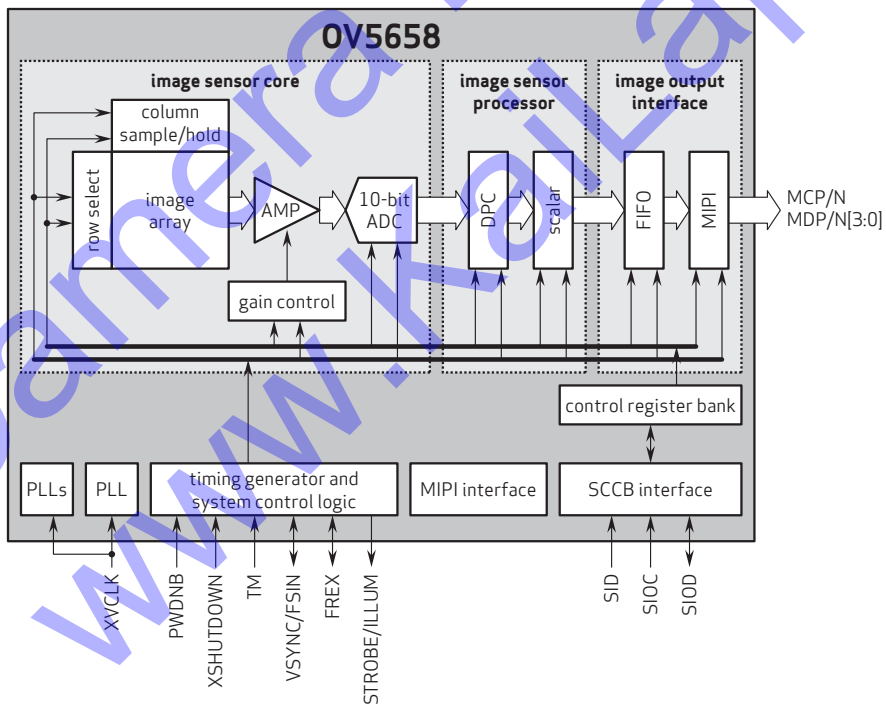
Ordering Information

- **OV05658-G04A** (color, chip probing, 200 µm backgrinding, recontructed wafer with good die)
- **OV05658-A66A** (color, lead-free, 66-pin CSP3)

Product Specifications

- **active array size:** 2592 x 1944
- **power supply:**
  - **core:** 1.5V
  - **analog:** 2.6 - 3.0V
  - **I/O:** 1.7 - 3.0V
- **power requirements:**
  - **active:** 150 mA (325 mW)
  - **standby:** 300 µA
  - **XSHUTDOWN:** 2 µA
- **temperature range:**
  - **operating:** -30°C to +70°C junction temperature
  - **stable image:** 0°C to +50°C junction temperature
- **output interfaces:** 4-lane MIPI/LVDS serial
- **output formats:** RAW RGB data
- **lens size:** 1/3.2"
- **lens chief ray angle:** 11° non-linear
- **input clock frequency:** 6 - 27 MHz
- **max S/N ratio:** 37 dB
- **dynamic range:** 73.7 dB @ 8x gain
- **maximum image transfer rate:**
  - **5MP (2592x1944):** 30 fps
  - **EIS 1080p (2112x1188):** 30 fps
  - **1080p (1920x1080):** 30 fps
  - **EIS 720p (1536x864):** 30 fps
  - **720p (1280x720):** 60 fps
  - **VGA (640x480):** 90 fps
- **sensitivity:** 1200 mV/lux-sec
- **scan mode:** progressive
- **pixel size:** 1.75 µm x 1.75 µm
- **dark current:** 1.3 mV/sec @ 50°C junction temperature
- **image area:** 4592 µm x 3423 µm
- **package/die dimensions:**
  - **CSP3:** 6360 µm x 5670 µm
  - **COB:** 6350 µm x 5660 µm

Functional Block Diagram



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