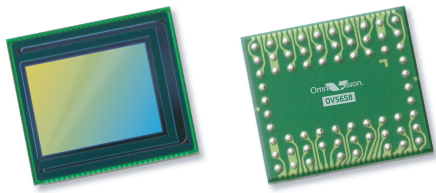


## KLT-KX5-OV5658 V1.0

OmniVision OV5658 MIPI インターフェース 固定焦点 5MP M12 カメラモジュール



カメラモジュール番号	KLT-KX5-OV5658 V1.0
イメージセンサー	OV5658
EFL	2.3 mm
F.NO	2.5
ピクセル	2592 x 1944 (QXGA)
視野角	159°
レンズタイプ	1/3.2 インチ
レンズ寸法	13.7 x 13.7 x 21.5 mm
モジュールサイズ	22 x 22 mm
モジュールのタイプ	固定焦点
インターフェース	MIPI
IMTレンズモデル	IMT-1B12E005-6
嵌合コネクタ	Flex Cable Golden Finger



# OV5658 5-megapixel product brief



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



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



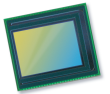
## Applications

- Security and Surveillance

## Product Features

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

# OV5658



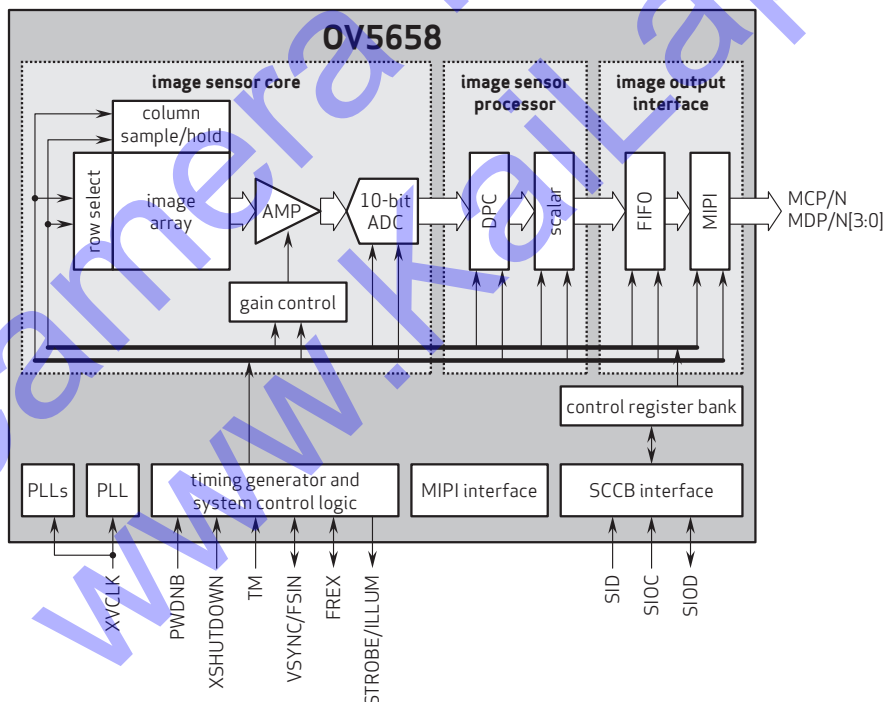
## Ordering Information

- OV05658-G04A** (color, chip probing, 200  $\mu\text{m}$  backgrinding, reconstructed wafer with good die)
- OV05658-A66A** (color, lead-free, 66-pin CSP3)

## Product Specifications

- active array size:** 2592 x 1944
- input clock frequency:** 6 - 27 MHz
- power supply:**
  - core: 1.5V
  - analog: 2.6 - 3.0V
  - I/O: 1.7 - 3.0V
- max S/N ratio:** 37 dB
- dynamic range:** 73.7 dB @ 8x gain
- power requirements:**
  - active: 150 mA (325 mW)
  - standby: 300  $\mu\text{A}$
  - XSHUTDOWN: 2  $\mu\text{A}$
- maximum image transfer rate:**
  - SMP (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
- temperature range:**
  - operating: -30°C to +70°C junction temperature
  - stable image: 0°C to +50°C junction temperature
- sensitivity:** 1200 mV/lux-sec
- scan mode:** progressive
- output interfaces:** 4-lane MIPI/LVDS serial
- pixel size:** 1.75  $\mu\text{m}$  x 1.75  $\mu\text{m}$
- output formats:** RAW RGB data
- dark current:** 1.3 mV/sec @ 50°C junction temperature
- lens size:** 1/3.2"
- image area:** 4592  $\mu\text{m}$  x 3423  $\mu\text{m}$
- lens chief ray angle:** 11° non-linear
- package/die dimensions:**
  - CSP3: 6360  $\mu\text{m}$  x 5670  $\mu\text{m}$
  - COB: 6350  $\mu\text{m}$  x 5660  $\mu\text{m}$

## Functional Block Diagram



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