CMOS CAMERA MODULES

your BEST camera module partner

KLT-OIS-FF-OV4689 V7.0A

OmniVision OV4689 Stabilisation optique de l'image MGS MIPI Interface Mise au point fixe 4MP Module de caméra
Micro stabilisateur de cardan, Plateforme de stabilisation optique d'image (OIS)

Module de caméra No.	KLT-OIS-FF-OV4689 V7.0A
Capteur d'image	OV4689
Stabilisateur	Micro stabilisateur de cardan(MGS)
EFL	3.56 mm
F.NO	2.8
Pixel	2688 x 1520
Angle de vue	122°
Type d'objectif	1/3 pouce
Dimensions de l'objectif	25.00 x 25.00 x 16.11 mm
Taille du module	80.00 x 25.00 mm
Type de module	Mise au point fixe
Interface	MIPI

Référence du connecteur d'accouplement. AXE534124

Connecteur d'accouplement sur la carte principale. Vendu séparément.

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OIS Camera Modules

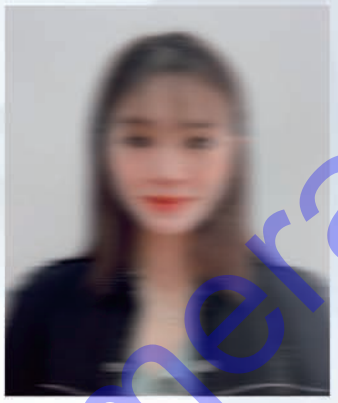
(OIS = Optical Image Stabilization Platform)

World's Smallest Gimbal Stabilizer

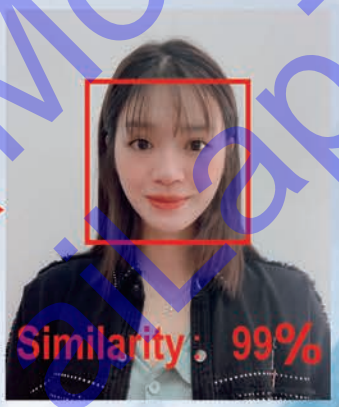
Core Technologies:

- MGS (micro gimbal stabilizer)
  (The lens and image sensor tilt together)
- ±5deg max. compensation angle
  (More than enough for walking and jogging)
- Innovative anti-shaking solutions with 10+ patents
- Integrated design, including a gyroscope and an MGS driver IC

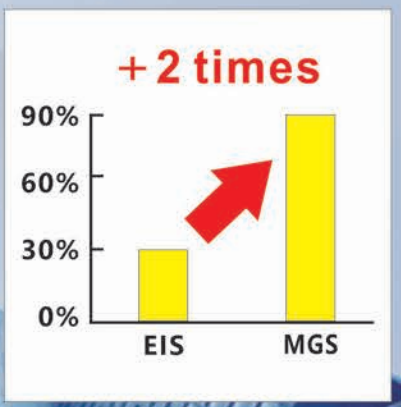
EIS:



MGS:



Face recognition success rate



MGS can significantly reduce blur especially in low-light conditions, and thus support dynamic face recognition and other emerging technologies

Main Advantages:

- Support horizontal FOV over 100deg
- Support all-glass lens
- 2m+ drop test
- Easy to use
- One-stop anti-shaking solution provider
- Light weight down to 5g
- Small size down to 19×19mm
- Competitive price

Ordering Models

KLT-OIS-USB1A-IMX258 V1.0

KLT-OIS-AF-IMX258-C V1.0

MGA190 series:

Size: 19×19×9.9mm
Auto Focus MGS
Largest FOV: 100deg
Max. compensation angle: ±5deg
Weight: 5g
Support a wide variety of lenses and image sensors
Supported sensors:
OmniVision OV5640, Sony IMX179 & IMX258

KLT-OIS-FF-OV4689 V7.0A

MGF250 series:

Size: 25x25x15mm
Fixed Focus MGS
Largest FOV: 140deg
Max. compensation angle: ±5deg
Weight: 28g
Support a wide variety of lenses and image sensors
Supported sensors:
Onsemi AR1335, OmniVision OV2718 & OV4689

Module	Resolution	Sensor	Focus	DFOV
KLT-OIS-AF-IMX258-C V1.0	13 MP OIS	IMX258-C	Auto	87.6
KLT-OIS-USB1A-IMX258 V1.0	13 MP OIS	IMX258	Auto	87.6
KLT-OIS-FF-OV4689 V7.0A	4 MP OIS	OV4689	Fixed	122

Product Applications:

AI face recognition

Body worn camera

Robot

AR/VR smart glasses

Sport DV

OV4689 4MP product brief

High Frame Rate 4-Megapixel CameraChip™ Sensor with Excellent Low-Light Sensitivity and High Dynamic Range for Security Applications

lead free

available in a lead-free package

The OV4689 is a high performance 4-megapixel CameraChip sensor in a native 16:9 format designed for next-generation surveillance and security systems. The sensor utilizes an advanced 2-micron OmniBSI-2™ pixel to provide best-in-class low-light sensitivity and high dynamic range (HDR).

The 1/3-inch OV4689 can capture full-resolution 4-megapixel high definition (HD) video at 90 frames per second (fps), 1080p HD at 120 fps, and binned 720p HD at 180 fps. The sensor's high frame rates enable crisp, clean image and video capture of fast moving objects.

The OV4689 provides timing to capture full-resolution HDR using frame-based "sequential HDR" or line-based "staggered HDR", and quarter resolution HDR using "alternate row HDR". The benefits of using "staggered HDR" compared to "sequential HDR" are significant reduction in motion artifacts and lower memory requirement for host processing. These modes produce high quality full-resolution 4-megapixel HDR video under extreme variations of bright and dark conditions, ensuring high contrast and excellent scene reproduction.

The OV4689 features a high-speed 4-lane MIPI serial output interface to facilitate the required high data transfer rate. The OV4689 is available in a chip scale package (CSP).

Find out more at www.ovt.com.

OmniVision

OV4689

Applications

- Security and Surveillance

Product Features

- automatic black level calibration (ABLC)
- programmable controls for frame rate, mirror and flip, cropping, and windowing
- static defective pixel canceling
- supports output formats: 10-bit RAW RGB (MIPI)
- supports horizontal and vertical subsampling
- supports images sizes: 4MP, 3MP, EIS1080p, 1080p, EIS720p
- fast mode switching
- support 2x2 binning, 4x4 binning, re-sampling filter
- standard serial SCCB interface
- up to 4-lane MIPI serial output interface
- embedded 4K bits 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
- supports staggered, sequential and alternative row HDR timing

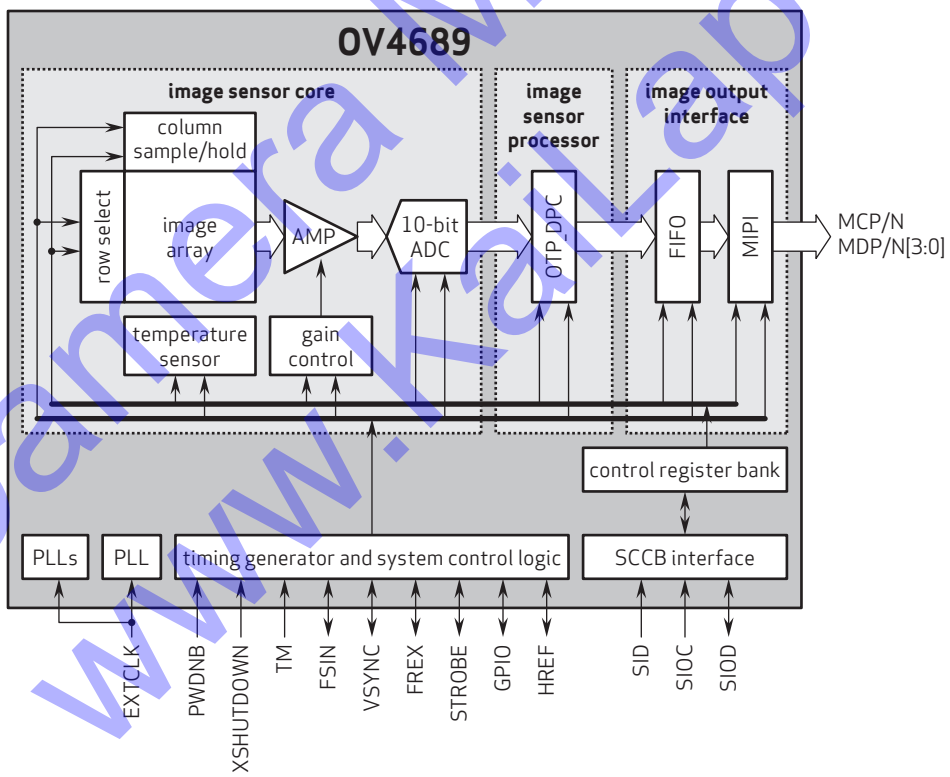
Ordering Information

- **OV04689-H67A**
  (color, lead-free, 67-pin CSP5)

Product Specifications

- **active array size:** 2688 x 1520
- **power supply:**
  - **core:** 1.1 - 1.3V
  - **analog:** 2.6 - 3.0V
  - **I/O:** 1.7 - 3.0V
- **power requirements:**
  - **active:** 163 mA (261 mW)
  - **standby:** 1 mA
  - **XSHUTDOWN:** <10 µA
- **temperature range:**
  - **operating:** -30°C to +85°C junction temperature
  - **stable image:** 0°C to +60°C junction temperature
- **output formats:** 10-bit RAW RGB data
- **lens size:** 1/3"
- **input clock frequency:** 6 - 64 MHz
- **lens chief ray angle:** 0°
- **max S/N ratio:** 38.3 dB
- **dynamic range:** 64.6 dB @ 1x gain
- **maximum image transfer rate:**
  - **2688x1520:** 90 fps
  - **1920x1080:** 120 fps
  - **1280x720:** 180 fps
- **sensitivity:** 1900 mV/lux-sec
- **scan mode:** progressive
- **maximum exposure interval:** 1548 x T_{ROW}
- **pixel size:** 2 µm x 2 µm
- **dark current:** 4 mV/sec @ 60°C junction temperature
- **image area:** 5440 µm x 3072 µm
- **package dimensions:** 6630 µm x 5830 µm

Functional Block Diagram



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