



# CMOS CAMERA MODULES

*your BEST camera module partner*

## KLT-OIS-FF-IMX179-C V1.0

**SONY IMX179 MIPI Interface Fixed Focus 8MP Camera Module  
Micro Gimbal Stabilizer, Optical Image Stabilization (OIS) Platform**



<b>Camera Module No.</b>	<b>KLT-OIS-FF-IMX179-C V1.0</b>
<b>Image Sensor</b>	IMX179
<b>Stabilizer</b>	Micro Gimbal Stabilizer (MGS)
<b>EFL</b>	3.05 mm
<b>F.NO</b>	2.2
<b>Pixel</b>	3280 x 2464
<b>View Angle</b>	87.6°
<b>Lens Type</b>	1/3.2 inch
<b>Lens Dimensions</b>	19.00 x 19.00 x 9.9 mm
<b>Module Size</b>	39.00 x 19.00 mm
<b>Module Type</b>	Auto Focus
<b>Interface</b>	MIPI
<b>IMT Lens Model</b>	IMT-1A65H005-N

**Mating Connector Part No. BAF04-30083-0500**



Mating Connector On Main Board. Sold Separately.

**www.KaiLapTech.com sales@KaiLapTech.com Tel: (852) 6908 1256 Fax: (852) 3017 6778**

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# OIS Camera Modules

(OIS = Optical Image Stabilization Platform)

## World's Smallest Gimbal Stabilizer



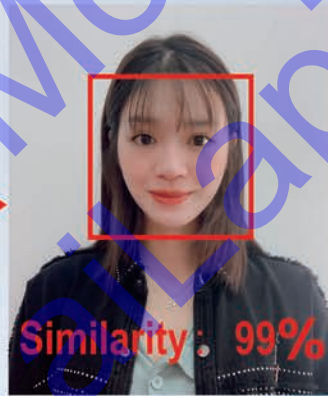
### Core Technologies:

- MGS (micro gimbal stabilizer)  
(The lens and image sensor tilt together)
- $\pm 5^\circ$  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

#### 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



KLT-OIS-FF-OV4689 V7.0A

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

## [Product Brief]

Ver.1.0

# IMX179

### Diagonal 5.7mm (Type 1/3.2) CMOS Image Sensor with Square Pixel for Color Cameras

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#### Description

The IMX179 is a diagonal 5.7 mm (Type 1/3.2) CMOS active pixel type image sensor with a square pixel array and 8.08M effective pixels. This chip operates with three power supplies, analogue 2.7 V, digital 1.2 V, and IF 1.8 V, and has low power consumption. High sensitivity, low dark current, and no smear are achieved through the adoption of R,G, and B primary color pigment mosaic filters. This chip features an electronic shutter with variable charge-storage time.

In addition, this product is designed for use in cellular phone and tablet PC. When using this for another application, Sony does not guarantee the quality and reliability of product.

Therefore, don't use this for applications other than cellular phone and tablet PC. Consult your Sony sales representative if you have any questions.

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#### Functions and Features

- ◆ CMOS active pixel type dots
- ◆ 2-wire serial communication circuit on chip
- ◆ CSI2 serial data output
- ◆ Timing generator, H and V driver circuits on chip
- ◆ CDS/PGA on chip
- ◆ 10-bit A/D converter on chip
- ◆ Automatic optical black (OB) clamp circuit on chip
- ◆ PLL on chip (rectangular wave/sine wave)
- ◆ High sensitivity, low dark current, no smear
- ◆ Excellent anti-blooming characteristics
- ◆ Variable-speed shutter function (1H units)
- ◆ R, G, B primary color pigment mosaic filters on chip
- ◆ Max. 30 frame/s in all-pixel scan mode
- ◆ Pixel rate: >260 MHz (>30 frame/s at All-pixel mode)

◆ CMOS image sensor	
◆ Image size	: Diagonal 5.7 mm (Type 1/3.2)
◆ Total number of pixels	: 3288 (H) × 2512 (V) approx. 8.26M pixels
◆ Number of effective pixels	: 3280 (H) × 2464 (V) approx. 8.08M pixels
◆ Chip size	: 6.18 mm (H) × 5.85 mm (V)
◆ Unit cell size	: 1.4μm (H) × 1.4μm (V)
◆ Substrate material	: Silicon

**Top view**

**Inputs/Outputs:**

- VANA
- VDD1
- VDD2
- GND
- Flash Strobe (GPIO1)
- Shutter Strobe (GPIO2)
- (GPIO3)
- (GPIO4)
- Lane 1
- Lane 2
- CLK
- Lane 3
- Lane 4
- INCK
- SDA
- SCL
- REGEN
- XCLR

**Internal Blocks:**

- Column Block
- Pixel Array
- Logic Block (Image Pipe-Line, CCP2 and CSI2 Link)
- D-Phy Block for CCP2 and CSI2
- PLL Circuit
- Logic Block (Control and Pixel Access)
- Power On Reset
- Vertical Decoder
- Ref Vol. Gen. Circuit
- Bias Circuit
- Power Supply Circuit

Application circuits shown, if any, are typical examples illustrating the operation of the devices. Sony cannot assume responsibility for any problems arising out of the use of these circuits.