

IMT-1A65H003-N

1/3.2" 8MP COB F2.2 DFOV 72.9 Degree M6.5 Lens



Lens Model	IMT-1A65H003-N
Sensor Format	1/3.2"
Resolution	8 MP
Sensor Type	COB
Structure	5P
Max Image Circle	Ø5.7
F/NO.	2.2 +/- 5%
EFL (mm)	3.85
TTL (mm)	4.5
FOV	Field of View
Diagonal DFOV	72.9°
Horizontal HFOV	61.1°
Vertical VFOV	47.9°
TV Distortion	<1.5%
CRA	<32.4°
Lens Filter	None
Barrel	M6.5*P0.25

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IMT Lens on
the real
Camera



KLT is our
Camera
Modules
Design and
Manufacture
Partner

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KLT-G1MF-OV8865 V1.0

OmniVision OV8865 MIPI Interface Fixed Focus 8MP Camera Module

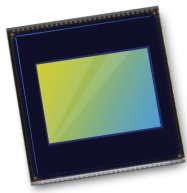


Camera Module No.	KLT-G1MF-OV8865 V1.0
Image Sensor	OV8865
EFL	3.85 mm
F.NO	2.2
Pixel	3264 x 2448
View Angle	72.9°
Lens Type	1/4 inch
Lens Dimensions	8.50 x 8.50 x 5.40 mm
Module Size	24.00 x 8.50 mm
Module Type	Fixed Focus
Interface	MIPI
IMT Lens Model	IMT-1A65H003-N

Mating Connector Part No. DF30FC-40DS-0.4V



Mating Connector On Main Board. Sold Separately.



OV8865 8MP product brief



High-Performance, Low-Power 8-Megapixel Image Sensor for Mainstream Smartphones and Tablets



available in a lead-free package

OmniVision's OV8865 is a low-power high-performance 8-megapixel camera solution for mainstream smartphones and tablets. Utilizing an improved 1.4-micron OmniBSI-2™ pixel, the OV8865 delivers best-in-class pixel performance in a smaller, more power efficient package compared to the previous generation OV8835 sensor.

The OV8865 offers a number of performance improvements including a five percent improvement in dynamic range and a 50 percent reduction in dark current, resulting in superior high- and low-light images. Furthermore, the OV8865 consumes considerably less power than the OV8835, achieving the sub 200 mW benchmark preferred by high-end mobile device manufacturers.

The 1/3.2-inch OV8865 supports an active array of 3264 x 2448 (8-megapixels) operating at 30 frames per second (fps) for high-speed photography. The sensor is also capable of capturing 1080p high-definition (HD) video at 30 fps or 720p at 60 fps.

The OV8865 fits into an industry standard 8.5 x 8.5 x 5 mm package.

Find out more at www.ovt.com.



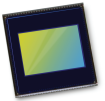
Applications

- Cellular Phones
- Tablets
- PC Multimedia

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: 3264x2448, 3264x1836, 2816x1584, 1632x1224, 1408x792
- supports 2x2 binning, re-sampling filter
- standard serial SCCB interface
- up to 4-lane MIPI serial output interface
- embedded 1536 bytes 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

OV8865



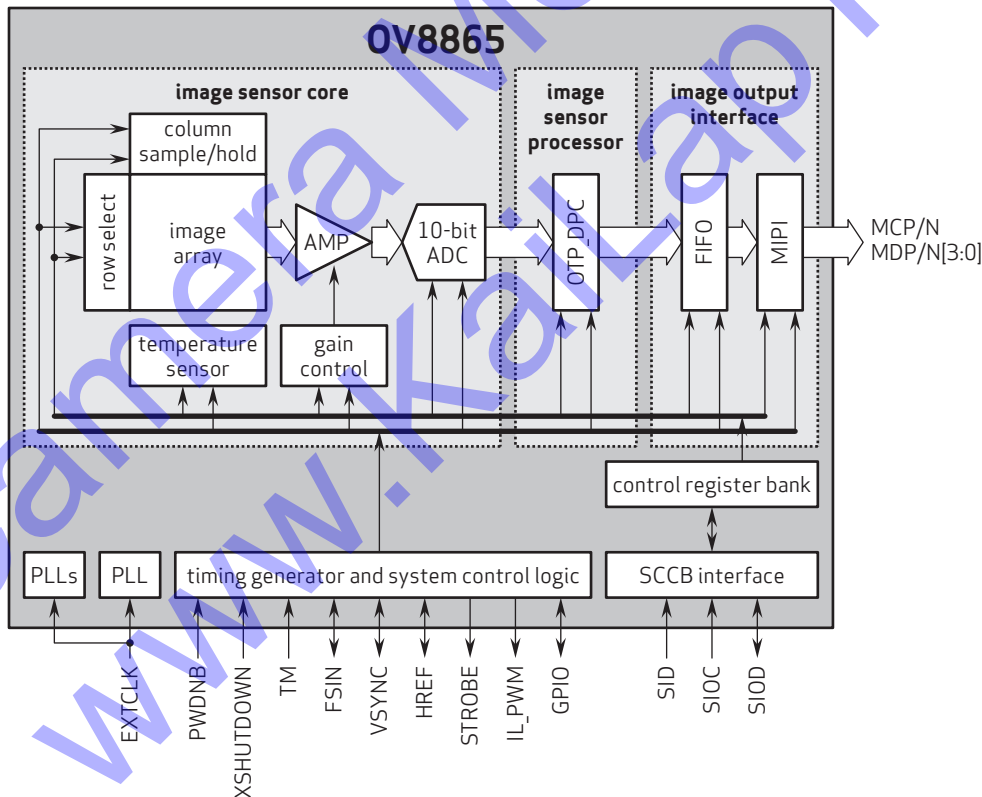
Ordering Information

- OV8865-G04A-1D (color, chip probing, 200 μm backgrounding, reconstructed wafer with good die)

Product Specifications

- active array size: 3264 x 2448
- power supply:
 - core: 1.2V
 - analog: 2.8V
 - I/O: 1.8V, 2.8V
- power requirements:
 - active: 196 mW (full resolution @ 30 fps)
 - XSHUTDOWN: 5 μW
- 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: 1/3.2"
- lens chief ray angle: 32.2° non-linear
- input clock frequency: 6 - 27 MHz
- max S/N ratio: 36.7 dB
- dynamic range: 68.8 dB
- maximum image transfer rate: 30 fps
- sensitivity: 940 mV/lux-sec
- scan mode: progressive
- pixel size: 1.4 μm x 1.4 μm
- dark current: 20 e⁻/sec @ 60°C junction temperature
- image area: 4614.4 μm x 3472 μm
- die dimensions: 5850 μm x 5700 μm

Functional Block Diagram



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OmniVision




KLT-USB1A-IMX179 V1.0

Sony IMX179 USB Interface Auto Focus 8MP Camera Module



Camera Module No.	KLT-USB1A-IMX179 V1.0	
Image Sensor	IMX179	Output Format: MJPG, YVY2
EFL	3.85 mm	30 FPS 1920 x 1080 (Full HD)
F.NO	2.2	30 FPS 1280 x 720 (HD 720P)
Pixel	3264 x 2448	20 FPS 3264 x 2448 (8MP)
View Angle	72.9°	Supporting OS
Lens Type	1/3.2 inch	Windows 7, 8.1, 10, Vista
Lens Dimensions	8.50 x 8.50 x 5.17 mm	Windows XP SP2 under UVC
Module Size	30.50 x 25.00 mm	Linux Kernel V2.6.2.1 or later
Module Type	Auto Focus	MAC OS 10.4 or later
IMT Lens Model	IMT-1A65H003-N	Operating Voltage: 5V +/- 5%
Interface	USB 2.0	Compliant with UVC Version 1.0

Mating USB Cable Part No. KLT-USB1A-Cable

USB Cable Extension Cord. Sold Separately.

[Product Brief]

Ver.1.0

IMX179

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

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.

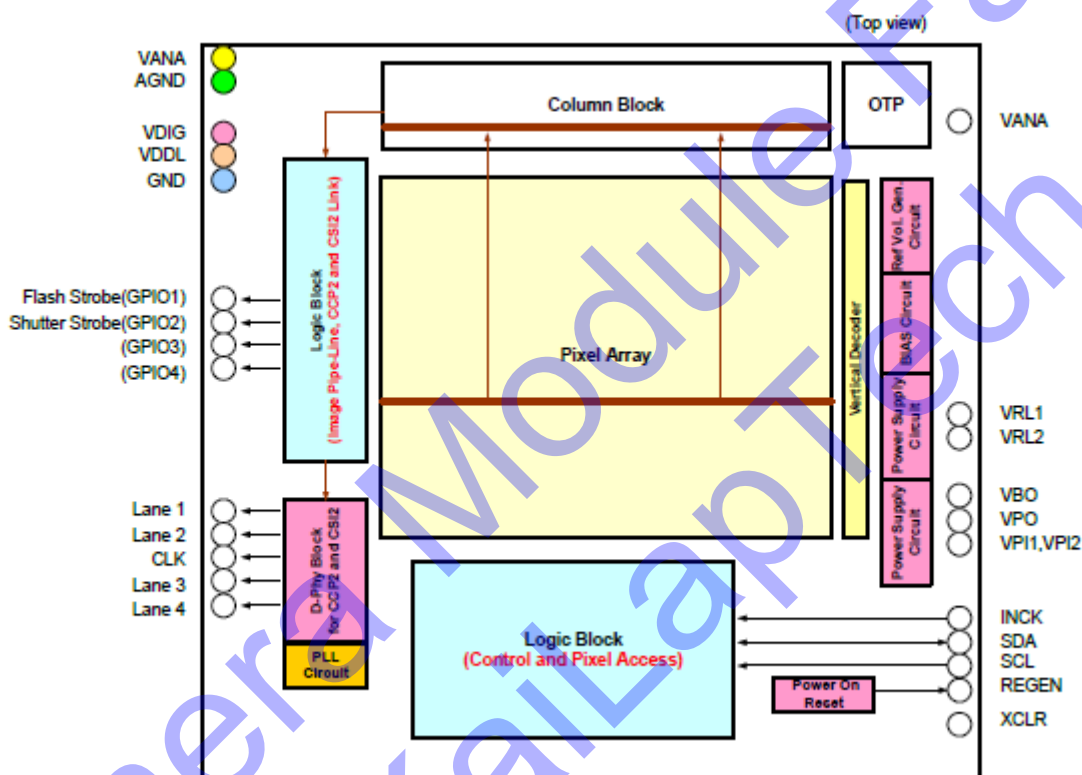
Functions and Features

- ◆ 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)

Device Structure

- ◆ 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

Block Diagram



* Exmor R is a trademark of Sony Corporation. The Exmor R is a Sony's CMOS image sensor with significantly enhanced imaging characteristics including sensitivity and low noise by changing fundamental structure of Exmor™ pixel adopted column parallel A/D converter to back-illuminated type.

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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.