



CMOS CAMERA MODULES

your BEST camera module partner

KLT-USB1A-OS05A10 V2.0

OmniVision OS05A10 USB Interface Fixed Focus 5MP M12 Camera Module

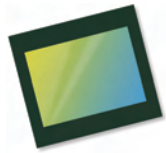


Camera Module No.	KLT-USB1A-OS05A10 V2.0	
Image Sensor	OS05A10	Output Format: MJPG, YVY2
EFL	2.4 mm	25 FPS 2592 x 1944 (Full Frame)
F.NO	2.0	25 FPS 1920 x 1080 (Full HD)
Pixel	2688 x 1944	25 FPS 1280 x 720 (HD 720P)
View Angle	169°(D) 144°(H) 78.5°(V)	Supporting OS
Lens Type	1/2.7 inch	Windows 7, 8.1, 10, Vista
Lens Dimensions	13.10 x 13.10 x 16.06 mm	Windows XP SP2 under UVC
Module Size	30.50 x 28.50 mm	Linux Kernel V2.6.2.1 or later
Module Type	Fixed Focus	MAC OS 10.4 or later
Interface	USB 2.0	Operating Voltage: 5V +/- 5%
IMT Lens Model		Compliant with UVC Version 1.0

Mating USB Cable Part No. KLT-USB1A-Cable
USB Cable Extension Cord. Sold Separately.

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OS05A10 5-megapixel product brief



Versatile 5-Megapixel PureCel® Sensor with High Dynamic Range for a Wide Range of Commercial Security and Consumer Applications



lead free

available in a lead-free package

OmniVision's low-power OS05A10 is a 5-megapixel image sensor that brings crisp 1080p high definition, 2K, and 5-megapixel video to a wide range of commercial security and consumer applications, including 360-degree full-view cameras. Built on OmniVision's advanced PureCel® pixel architecture, the OS05A10 utilizes backside illumination (BSI) technology to deliver enhanced low-light sensitivity and wide field of view (FOV).

Available in the popular 1/2.7-inch optical format, the OS05A10 enables video applications in widely used 4:3 and 16:9 aspect ratios. The sensor can capture 1080p full high definition slow-motion video at 120 frames per second (fps) and 2688 x 1944 resolution at 60 fps.

Additionally, the OS05A10 features a 12-degree chief ray angle (CRA) and a dual-exposure staggered high dynamic range (HDR) mode to enable excellent scene reproduction in difficult high-contrast lighting conditions.

The OS05A10 is compatible with MIPI and LVDS interfaces and comes in a chip scale package (CSP) of 6.6 mm x 5.9 mm.

Find out more at www.ovt.com.



Applications

- Security Cameras
- High Resolution Consumer Cameras
- Action Cameras

Product Features

- 2 μm x 2 μm pixel
- optical size of 1/2.7"
- programmable controls for:
 - frame rate
 - mirror and flip
 - cropping
 - windowing
- supports output formats:
 - 10/12-bit RAW RGB
- supports images sizes:
 - 5MP (2688x1944)
 - 1080p (1920x1080)
 - 720p (1280x720)
- supports 2x2 binning
- standard serial SCCB interface
- 12/10-bit ADC
- up to 4-lane MIPI/LVDS serial output interface (supports maximum speed up to 1500 Mbps/lane)
- 2-exposure staggered HDR support
- programmable I/O drive capability
- light sensing mode (LSM)
- PLL with SCC support
- support for frame sync

OS05A10



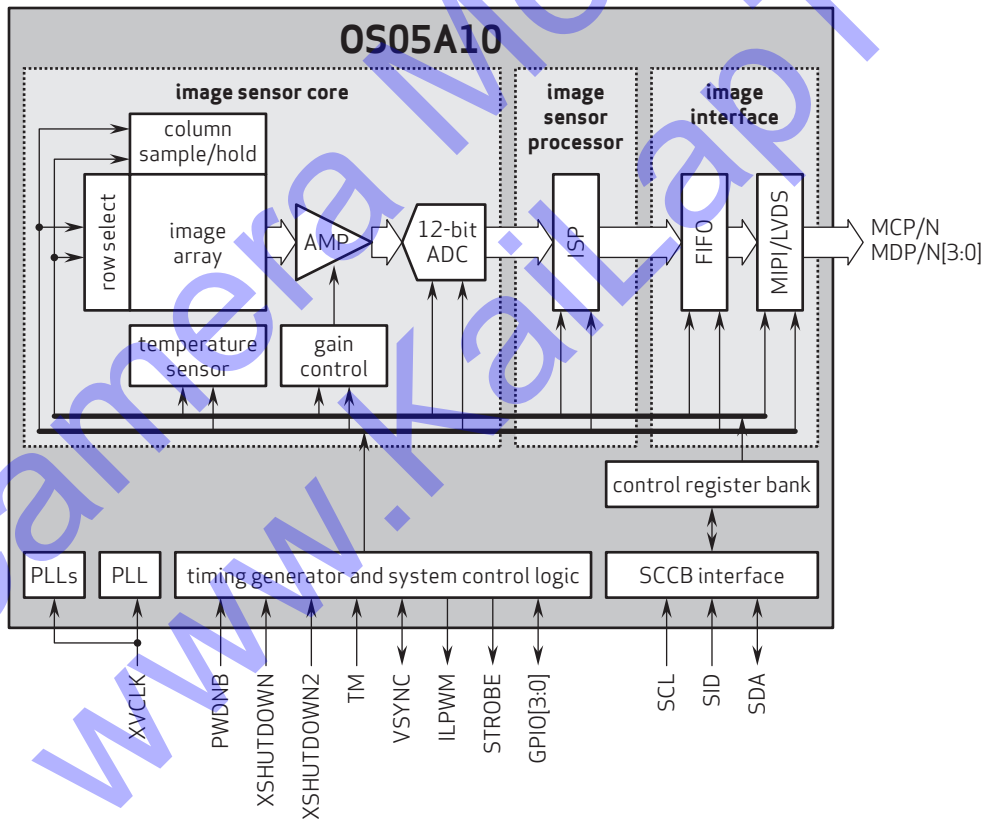
Ordering Information

- OS05A10-H79A-Z
(color, lead-free, 79-pin CSP)

Product Specifications

- active array size: 2688 x 1944
- lens chief ray angle: 11° linear
- power supply:
 - core: 1.2V
 - analog: 2.8V
 - I/O: 1.8V
- power requirements:
 - active: 221 mW
 - standby: 210 μA
 - XSHUTDOWN: 0.6 μA
- temperature range:
 - operating: -30°C to +85°C junction temperature
 - stable image: 0°C to +60°C junction temperature
- output formats: 10/12-bit RGB RAW
- lens size: 1/2.7"
- input clock frequency: 6 - 27 MHz
- scan mode: progressive
- maximum image transfer rate:
 - 2688x1944: 60 fps
 - 2688x1520: 60 fps
- maximum exposure interval: VTS - 8
- minimum exposure interval: 2 t_{row}
- pixel size: 2.0 μm x 2.0 μm
- image area: 5434.56 μm x 3948.05 μm
- package dimensions:
 - CSP: 6638.8 μm x 5935 μm

Functional Block Diagram



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