KLT-USB1A-OV9732 V1.0
OmniVision OV9732 USB Interface Fixed Focus 1MP Camera Module
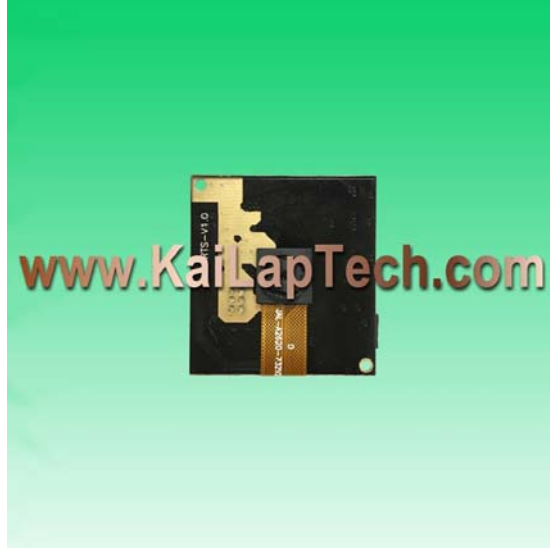
Camera Module No.	KLT-USB1A-OV9732 V1.0	
Image Sensor	OV9732	Output Format: MJPG, YVY2
EFL	3.37 mm	30 FPS 1280 x 720 (Full HD)
F.NO	2.8	30 FPS 640 x 480 (0.3MP VGA)
Pixel	1280 x 720	30 FPS 176 x 144 (0.02MP)
View Angle	67.4°	Supporting OS
Lens Type	1/4 inch	Windows 7, 8.1, 10,Vista
Lens Dimensions	8.50 x 8.50 x 4.87 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
IMT Lens Model	USB 2.0	Operating Voltage: 5V +/- 5%
Interface	IMT-1A6E001-6	Compliant with UVC Version 1.0

Mating USB Cable Part No. KLT-USB1A-Cable

USB Cable Extension Cord. Sold Separately.
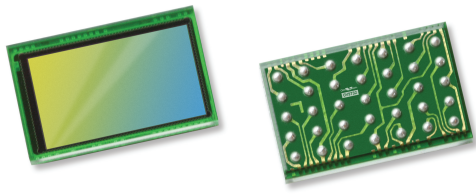
OV9732 720p HD product brief

Power-Efficient and Compact HD CameraChip™ Sensor for Battery-Powered Smart-Home and Security Applications

lead free

available in a lead-free package

OmniVision's OV9732 is a low-power and ultra-compact CameraChip™ sensor that brings 720p high definition (HD) video to mainstream security systems and wireless battery-powered smart-home cameras. Compared to the previous generation OV9712, the OV9732 is 35 percent smaller and delivers dramatically improved pixel performance.

The OV9732 CameraChip sensor utilizes OmniPixel3-HS™ high sensitivity 3.0 µm pixel technology to bring industry-leading scene reproduction to a wide range of security and lifestyle camera

applications that operate in extremely high- and low-light conditions. The sensor's narrow 9-degree chief ray angle (CRA) supports consumer-grade optical lens systems and reduces image artifacts for enhanced performance.

When operating in low-power mode, the 1/4-inch OV9732 requires just 99 mW to capture 720p HD video at 30 frames per second.

Find out more at www.ovt.com.

OmniVision.

OV9732

Applications

- IP Cameras
- Life Style Cameras
- Surveillance
- Motion Cameras

Product Features

- support for image sizes:
  full size (1280x720), VGA (640x480),
  2x2 RGB binning (640x360)
- support for output formats:
  10-bit RAW output
  with 1-lane MIPI and DVP
- on-chip phase lock loop (PLL)
- programmable controls for frame rate,
  mirror and flip, gain/exposure,
  and windowing
- support for horizontal and
  vertical sub-sampling

- low power mode (LPM) function
- capable of maintaining register values
  at software power down
- standard SCCB interface
- GPIO tri-state configurability and
  programmable polarity
- FSIN
- image quality control:
  defect pixel correction (DPC) and
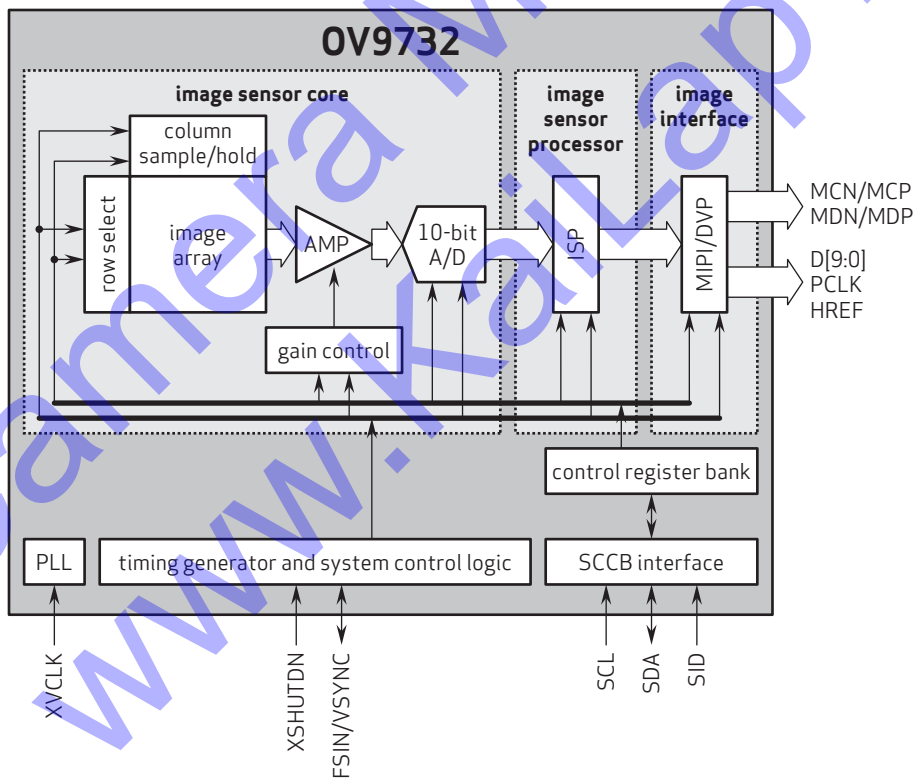 automatic black level calibration (ABLC)
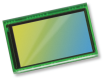
Ordering Information

- **OV09732-H35A**
  (color, lead-free, 35-pin CSP5)

Product Specifications

- **active array size:** 1280 x 720
- **power supply:**
  - **core:** 1.7 - 1.9V (1.8V normal)
  - **analog:** 2.7 - 2.9V (2.8V normal)
  - **I/O:** 1.7 - 1.9V (1.8V normal)
- **power requirements:**
  - **active:** 99 mW
  - **standby:** 36 μW
- **temperature range:**
  - **operating:** -30°C to +70°C junction
    temperature
  - **stable image:** 0°C to +50°C junction
    temperature
- **output formats:** 10-bit RAW RGB
- **lens size:** 1/4"
- **lens chief ray angle:** 9°
- **input clock frequency:** 6 - 27 MHz

- **maximum image transfer rate:** 30 fps
- **sensitivity:** 2.066 V/lux-sec
- **scan mode:** progressive
- **shutter:** rolling shutter
- **max S/N ratio:** 39 dB
- **dynamic range:** 72 dB @ 8x gain
- **maximum exposure interval:** 798 x t_{ROW}
- **pixel size:** 3 μm x 3 μm
- **dark current:** 5 mV/sec
  @ 60°C junction temperature
- **image area:** 3888 μm x 2208 μm
- **package dimensions:**
  4704 μm x 2994 μm

Functional Block Diagram

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