SONY

[Product Information]

Ver.1.0

IMX397CLN

Diagonal 2.799 mm (Type 1/6.4) effective 0.33 Mega-Pixel(VGA) CMOS Image Sensor with Square Pixel for B/W Cameras

Description

IMX397CLN is a diagonal 2.799 mm (Type 1/6.4) CMOS active pixel type image sensor with a square pixel array and 0.33 M effective pixels. By introducing Global Shutter technology with low PLS (Parasitic Light Sensitivity), high sensitivity and low noise, motion blur is suppressed. It equips an electronic shutter with variable integration time. It operates with three power supply voltages: analog 2.8 V, digital 1.2 V and 1.8 V for input / output interface and achieves low power consumption.
(Application: FA Cameras, Sensing)

Features

- ◆CMOS active pixel type dots
- ◆Global shutter function
- ◆CSI-2 serial data output (DPHY ver1.1 compliant)
- ◆2-wire serial communication circuit
- ◆8-bit / 10-bit A/D converter
- ◆CDS / PGA (digital 24 dB, analog 18 dB)
- ◆Automatic optical black clamp circuit
- ◆Variable-speed electronic shutter (1H units)
- ◆Independent flipping and mirroring
- ◆Pixel binning readout and H / V sub-sampling function
- ◆Dual sensor synchronization operation
- ◆Trigger (Internal & External)
- ◆Compact and Thin package
- ◆High CRA-compatibility

Device Structure

◆CMOS image sensor	
◆Image size	Diagonal 2.799 mm (Type 1/6.4)
◆Total number of pixels	656 (H) × 524 (V) approx. 0.34 M pixels
◆Number of effective pixels	656 (H) × 496 (V) approx. 0.33 M pixels
◆Number of active pixels	648 (H) × 488 (V) approx. 0.32 M pixels
◆Number of recording pixels	640 (H) × 480 (V) approx. 0.31 M pixels
◆Unit cell size	3.45 µm (H) × 3.45 µm (V)
◆Package	46 pin BGA

Image Sensor Characteristics

(Tj = 60 °C)

Item		Value	Remarks
Sensitivity (F2.8)	Min.	2564 LSB	1/120 s accumulation
Saturation signal	Min.	1023 LSB	

Basic Drive Mode

Drive mode	Recommended number of recording pixels (H x V)	Maximum frame rate Power save function On [frame/s]	Maximum frame rate Power save function Off [frame/s]
Full Resolution	640 x 480	60	240
2 Binning	320 x 240	120	480
4 Binning	160 x 120	240	890
8 Binning	80 x 60	480	1350
2 Sub-sampling	320 x 240	120	480
4 Sub-sampling	160 x 120	240	890
8 Sub-sampling	80 x 60	480	1350