SONY

Ver.1.0

IMX485LQJ/LQJ1

Diagonal 12.86 mm (Type 1/1.2) CMOS Solid-state Image Sensor with Square Pixel for Color Cameras

Description

The IMX485LQJ/LQJ1 is a diagonal 12.8 mm (Type 1/1.2) CMOS active pixel type solid-state image sensor with a square pixel array and 8.42 M effective pixels. This chip operates with analog 2.9 V, digital 1.2 V, and interface 1.8 V triple power supply, 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 mosaic filters. This chip features an electronic shutter with variable charge-integration time.
(Applications: Surveillance cameras, FA cameras, Industrial cameras)

Features

- ◆CMOS active pixel type dots
- ◆Built-in timing adjustment circuit, H/V driver and serial communication circuit
- ◆Input frequency: 6 to 27 MHz / 37.125 MHz / 74.25 MHz
- ◆Number of recommended recording pixels: 3840 (H) × 2160 (V) approx. 8.29 M pixels
- ◆Readout mode
  - All-pixel scan mode
  - Horizontal / Vertical 2/2-line binning mode
  - Window cropping mode
  - Horizontal / Vertical direction - Normal / Inverted readout mode
- ◆Readout rate
  Maximum frame rate in
  All-pixel scan mode: 12 bit: 60 frame/s, 10 bit: 90 frame/s
- ◆High dynamic range (HDR) function
  - Multiple exposure HDR
  - Digital overlap HDR
- ◆Synchronizing sensors function
- ◆Variable-speed shutter function (resolution 2H units)
- ◆10-bit / 12-bit A/D converter
- ◆CDS / PGA function
  0 dB to 72 dB (step pitch 0.3 dB)
- ◆Supports I/O
  CSI-2 serial data output (2 Lane / 4 Lane / 8 Lane / 4 Lane × 2 ch) RAW10 / RAW12 output
- ◆Recommended exit pupil distance: –30 mm to –∞
- ◆Anti-reflective coating glass on both sides (IMX485LQJ1), Non anti-reflective coating glass (IMX485LQJ)

STARVIS

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Device Structure

◆CMOS image sensor	
◆Image size	Diagonal 12.8 mm (Type 1/1.2) approx. 8.40 M pixels, All pixels
◆Total number of pixels	3864 (H) × 2200 (V) approx. 8.50 M pixels
◆Number of effective pixels	3864 (H) × 2180 (V) approx. 8.42 M pixels
◆Number of active pixels	3864 (H) × 2176 (V) approx. 8.40 M pixels
◆Number of recommended recording pixels	3840 (H) × 2160 (V) approx. 8.29 M pixels
◆Unit cell size	2.9 µm (H) × 2.9 µm (V)
◆Optical black	Horizontal (H) direction: Front 0 pixel, rear 0 pixel
	Vertical (V) direction: Front 20 pixels, rear 0 pixel
◆Dummy	Horizontal (H) direction: Front 0 pixel, rear 0 pixel
	Vertical (V) direction: Front 0 pixel, rear 0 pixel
◆Package	122 pin LGA

Image Sensor Characteristics

(Tj = 60 °C)

Item		Value	Remarks
Sensitivity (F5.6)	Typ.	9530 Digit (IMX485LQJ) 10196 Digit (IMX485LQJ1)	1/30 s accumulation 12 bit converted value
Saturation signal	Min.	3895 Digit	12 bit converted value

Basic Drive Mode

Drive mode	Recommended number of recording pixels	Maximum frame rate [frame/s]	Output interface	ADC [bit]
All pixel	3840 (H) × 2160 (V) approx. 8.29 M pixels	90	CSI-2	10
Horizontal/ Vertical 2/2-line binning	1920 (H) × 1080 (V) approx. 2.07 M pixels	90	CSI-2	10

Image Sensors for Security Cameras:
https://www.sony.net/cis-security/