SONY

Ver.1.0

IMX811-AAMR

Diagonal 64.84 mm (Type 4.1) CMOS Image Sensor with Square Pixel for Monochrome Cameras

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Description

The IMX811-AAMR is a diagonal 64.84 mm (Type 4.1) CMOS active pixel type image sensor with a square pixel array and 247.04 M effective pixels. This sensor incorporates maximum 24 dB PGA circuit and 16-bit A/D converter. 16-bit digital output makes it possible to readout the signals of 247.04 M effective pixels at high-speed of 5.3 frame/s in All-pixel readout mode.
(Application: FA cameras)

Features

◆ Type 4.1 CMOS active pixel type dots

◆ Input clock frequency 72 MHz

◆ All-pixel readout mode

　Various readout modes (*)

◆ Rolling shutter function

◆ H driver, V driver and serial communication circuit on chip

◆ +24 dB gain settable in CDS/PGA on chip

◆ Built-in 12-bit/14-bit/16-bit A/D converter

◆ Back-illuminated type

◆ Sensor Slave Mode only

◆ Seal glass: both sides are processed by AR coating

◆ SLVS-EC output

* Please refer to the datasheet for binning/subsampling details of readout modes.

Device Structure

◆ Back-Illuminated CMOS image sensor

◆ Image size   Diagonal 64.84 mm (Type 4.1)

◆ Total number of pixels   19680 (H) × 13308 (V)   approx. 261.90 M pixels

◆ Number of effective pixels   19240 (H) × 12840 (V)   approx. 247.04 M pixels

◆ Number of active pixels   19200 (H) × 12800 (V)   approx. 245.76 M pixels

◆ Unit cell size   2.81 μm (H) × 2.81 μm (V)

◆ Optical black   Horizontal (H) direction: Left 188 pixels, right 188 pixels

                                                       Vertical (V) direction: Top 56 pixels, bottom 56 pixels

◆ Package   786 pin LGA   75.0 mm (H) × 63.6 mm (V)

Image Sensor Characteristics

$(Tj = 60\ °C)$

Item		Value	Remarks
Sensitivity	Typ.	21,280 LSB/lx/s	Zone S
Saturation signal	Min.	15,405 LSB 10,152 LSB	Left for 0.4 s, Zone 0 to II' Left for 30 s, Zone 0 to II'

Basic Drive Mode

Drive mode	Recommended number of recording pixels	Maximum frame rate [frame/s]	Output interface	ADC [bit]
All-pixel readout mode	19200 (H) × 12800 (V) Approx. 245.76 M pixels	12.4	SLVS-EC	12
		10.5	SLVS-EC	14
		5.3	SLVS-EC	16

Image Sensors for Industrial Applications
https://info.sony-semicon.com/en/industry