

[Product Information]

Ver.1.0

IMX269AQR

Diagonal 21.77 mm (Type 4/3) CMOS Image Sensor with Square Pixel for Color Cameras

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Description

The IMX269AQR is a diagonal 21.77 mm (Type 4/3) CMOS active pixel type image sensor with a square pixel array and 21.27 M effective pixels. This sensor incorporates maximum 24 dB PGA circuit and 12-bit A/D converter. 12-bit digital output makes it possible to readout the signals of 21.27 M effective pixels at high-speed of 27.27 frame/s in still picture mode.

In addition, this product is designed for use in consumer use digital still camera. When using this for another application, Sony Semiconductor Solutions Corporation does not guarantee the quality and reliability of product. Therefore, don't use this for applications other than consumer use digital still camera.

In addition, individual specification change cannot be supported because this is a standard product.

Consult your Sony Semiconductor Solutions Corporation sales representative if you have any questions.

Features

- ◆ Type 4/3 CMOS active pixel type dots
- ◆ Input clock frequency 36 MHz
- ◆ All-pixel readout mode
Various readout modes (*)
- ◆ H driver, V driver and serial communication circuit on chip
- ◆ 10 bits / 12 bits A/D converter on chip
- ◆ 12ch LVDS output
- ◆ R, G, B primary color mosaic filters on chip

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

Sony reserves the right to change products and specifications without prior notice.
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Device Structure

◆ CMOS image sensor	
◆ Image size	Diagonal 21.77 mm (Type 4/3)
◆ Total number of pixels	5388 (H) × 4040 (V) approx. 21.77 M pixels
◆ Number of effective pixels	5324 (H) × 3996 (V) approx. 21.27 M pixels
◆ Number of active pixels	5280 (H) × 3956 (V) approx. 20.89 M pixels
◆ Chip size	20.49 mm (H) × 17.83 mm (V)
◆ Unit cell size	3.30 μm (H) × 3.30 μm (V)
◆ Optical black	Horizontal (H) direction: Front 36 pixels, Rear 0 pixel Vertical (V) direction: Front 16 pixels, Rear 0 pixel
◆ Package	84 pin LGA/60 pin LCC

Image Sensor Characteristics

(T_j = 60 °C)

Item	Value	Remarks
Sensitivity (F5.6)	Typ. 1880 LSB	1/30 s integration
Saturation signal	Min. 3840 LSB	

Basic Drive Mode

Drive mode	Number of active pixels	Max frame rate [frame/s]		Output data bit length [bit]
		Data rate 576 Mbps	Data rate 648 Mbps	
Readout mode 1	5280 (H) × 3956 (V) approx. 20.89 M pixels	24.27	27.27	12
Readout mode 2	5280 (H) × 3956 (V) approx. 20.89 M pixels	18.92	21.29	12
Readout mode 3	5280 (H) × 3956 (V) approx. 20.89 M pixels	27.95	31.45	10
Readout mode 4	5280 (H) × 3956 (V) approx. 20.89 M pixels	27.95	31.45	10
Readout mode 5	5280 (H) × 3044 (V) approx. 16.07 M pixels	36.69	41.21	10
Readout mode 6	5280 (H) × 3044 (V) approx. 16.07 M pixels	36.35	40.92	10
Readout mode 7	5280 (H) × 1978 (V) approx. 10.44 M pixels	56.14	63.25	10
Readout mode 8	4128 (H) × 2264 (V) approx. 9.35 M pixels	60.46	67.76	10
Readout mode 9	2640 (H) × 1486 (V) approx. 3.92 M pixels	60.44	68.00	10
Readout mode 10	2640 (H) × 1486 (V) approx. 3.92 M pixels	120.28	135.23	10
Readout mode 11	1760 (H) × 990 (V) approx. 1.74 M pixels	90.19	101.46	12
Readout mode 12	1760 (H) × 1318 (V) approx. 2.32 M pixels	68.05	76.55	12
Readout mode 13	2640 (H) × 1318 (V) approx. 3.48 M pixels	135.41	152.24	10
Readout mode 14	1760 (H) × 790 (V) approx. 1.39 M pixels	112.79	126.89	12
Readout mode 15	2640 (H) × 790 (V) approx. 2.09 M pixels	223.89	251.72	10
Readout mode 16	1760 (H) × 440 (V) approx. 0.77 M pixels	198.49	223.30	12
Readout mode 17	2640 (H) × 440 (V) approx. 1.16 M pixels	394.99	444.08	10
Readout mode 18	2640 (H) × 396 (V) approx. 1.05 M pixels	436.97	491.28	10