

[Product Information]

IMX571BQR

Ver.1.0

Diagonal 28.3 mm (Type 1.8) CMOS Image Sensor with Square Pixel for Color Cameras

Description

The IMX571BQR is a diagonal 28.3 mm (Type 1.8) CMOS active pixel type image sensor with a square pixel array and 26.11 M effective pixels. This sensor incorporates maximum 36 dB PGA circuit and 16-bit A/D converter. 16-bit digital output makes it possible to readout the signals of 26.11 M effective pixels at high-speed of 6.84 frame/s in still picture mode. In addition, it realizes 12-bit digital output for high-speed 4K moving picture by window readout mode. This sensor 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 this 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

- ◆ APS size CMOS active pixel type dots
- ◆ Input clock frequency 72 MHz
- ◆ All-pixel readout mode
 - Various readout modes (*)
- ◆ Rolling shutter function moving picture mode
- ◆ H driver, V driver and serial communication circuit on chip
- ◆ +36 dB gain in CDS/PGA on chip (when A/D 16-bit, 14-bit, 12-bit)
- ◆ Built-in 11-bit/12-bit/14-bit/16-bit A/D converter
- ◆ 8 Lane SLVS-EC output
- ◆ R, G, B primary color mosaic filter on chip
- ◆ Back-illuminated type

* 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

◆ Back-Illuminated CMOS image sensor	
◆ Image size	Diagonal 28.3 mm (Type 1.8)
◆ Total number of pixels	6280 (H) × 4264 (V) approx. 26.78 M pixels
◆ Number of effective pixels	6252 (H) × 4176 (V) approx. 26.11 M pixels
◆ Number of active pixels	6244 (H) × 4168 (V) approx. 26.02 M pixels
◆ Chip size	27.780 mm (H) × 22.302 mm (V)
◆ Unit cell size	3.76 μm (H) × 3.76 μm (V)
◆ Optical black	Horizontal (H) direction: Front 16 pixels, Rear 0 pixel Vertical (V) direction: Front 22 pixels, Rear 0 pixel
◆ Package	184 pin LGA

Image Sensor Characteristics

(T_j = 60 °C)

Item		Value	Remarks
Sensitivity (F5.6)	Typ.	5630 LSB	1/30 s integration
Saturation signal	Min.	14168 LSB	Left for 1 s

Basic Drive Mode

Drive mode	Number of active pixels	Max frame rate [frame/s]	Word length [bit]
Readout mode 0	6244 (H) × 4168 (V) approx. 26.02 M pixels	48.42	10
Readout mode 1	6244 (H) × 4168 (V) approx. 26.02 M pixels	18.82	12
Readout mode 3	6244 (H) × 4168 (V) approx. 26.02 M pixels	24.15	10
Readout mode 5	3122 (H) × 2084 (V) approx. 6.51 M pixels	37.55	12
Readout mode 6	2080 (H) × 1388 (V) approx. 2.89 M pixels	111.84	12
Readout mode 7	2080 (H) × 1386 (V) approx. 2.88 M pixels	111.99	12
Readout mode 10	2080 (H) × 1388 (V) approx. 2.89 M pixels	55.52	12
Readout mode 11	2080 (H) × 1386 (V) approx. 2.88 M pixels	55.52	12
Readout mode 12	2080 (H) × 832 (V) approx. 1.73 M pixels	245.08	12
Readout mode 13	2080 (H) × 832 (V) approx. 1.73 M pixels	245.08	12
Readout mode 14	2080 (H) × 594 (V) approx. 1.24 M pixels	339.77	12
Readout mode 15	2080 (H) × 594 (V) approx. 1.24 M pixels	339.77	12
Readout mode 16	2080 (H) × 462 (V) approx. 0.96 M pixels	432.44	12
Readout mode 17	2080 (H) × 462 (V) approx. 0.96 M pixels	432.44	12
Readout mode 18	2080 (H) × 320 (V) approx. 0.67 M pixels	611.99	12
Readout mode 19	2080 (H) × 319 (V) approx. 0.66 M pixels	611.99	12
Readout mode 20	2080 (H) × 166 (V) approx. 0.35 M pixels	1113.31	12
Readout mode 21	2080 (H) × 164 (V) approx. 0.34 M pixels	1125.28	12