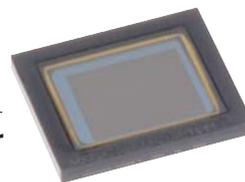




Sony's CMOS Image Sensor for Automotive

IMX224

1/3-type 1.27megapixels CMOS image sensor



1. Realizes the capture of high-resolution color images even under dark nighttime conditions equivalent to 0.005 lux
 - Employs original 3.75 μm unit pixel that demonstrates improved conversion efficiency from light to electric signals, resulting in the attainment of the world's highest sensitivity of 2,350 mV
 - Incorporates programmable gain amplifier capable of amplifying electric signals up to 72 dB
2. Supports a WDR system that allows for extended exposure time and thereby improved resolution compared with conventional models when combined with a compatible ISP
3. Includes a pixel structure with heightened sensitivity to near infrared light

Product Features

- Number of recommended recording pixels: 1280 (H) \times 960 (V) approx. 1.23M pixel
- Readout rate
Maximum frame rate in Quad VGA mode: 120 frame / s
- Wide dynamic range (WDR) function
- Variable-speed shutter function (resolution 1H units)
- 10-bit / 12-bit A/D converter on chip
- CDS / PGA function
- Supports I/O switching
CMOS logic parallel SDR output
Low voltage LVDS (150 mVp-p) serial (1 ch / 2 ch / 4 ch switching) DDR output
CSI-2 serial data output (1 Lane / 2 Lane / 4 Lane, RAW10 / RAW12 output)
- AEC-Q100 Grade 2

Product Specifications

Model name		IMX224
Number of effective pixels		1305 (H) x 977 (V) 1.27 megapixels
Image size		Diagonal 6.09mm (type 1/3)
Unit cell size		3.75 μ m (H) x 3.75 μ m (V)
Frame rate	Full	10bit 120fps, 12bit 60fps
	1/2 sub sampling mode	10bit 240fps, 12bit 120fps
	2 x 2 binning mode	10bit 120fps, 12bit 60fps
	HD mode	10bit 120fps, 12bit 60fps
Sensitivity (F5.6 standard value, 1/30 second storage time)		2350mV (green pixel)
Saturation signal (minimum value)		1210mV
Power supply	Analog	3.3V
	Digital	1.2V
	Interface	1.8V
Interface		Parallel CMOS / MIPI CSI-2 Low voltage version serial LVDS
Package		72pin BGA
Package size		9.0mm x 7.5mm

Image captured with the "IMX224"



0.05lx, F1.4, 16.7msec exposure time, 72dB gain

Image captured with conventional technology



0.05lx, F1.4, 16.7msec exposure time, 48dB gain

Image captured with the "IMX224"



0.01lx, F1.4, 33.3msec exposure time, 48dB gain

Image captured with conventional technology



0.01lx, F1.4, 33.3msec exposure time, 48dB gain