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LUX1310

The LUXIMA™ LUX1310 image sensor is a 1.3 Megapixel 1,070 FPS Global Shutter CMOS Digital Sensor developed for the high speed machine vision, barcode scanning, automation, dental scanning, motion analysis, industrial and biomedical markets. It allows ease of integration and lower system noise with on-chip 12 bit ADC and 16 parallel LVDS outputs. The sensor supports 8 simultaneous Region-Of-Interest readouts with flexible window positions. The user can obtain faster frame rates through X, Y windowing. Color and monochrome options are offered in an 88 ceramic LCC package with a small footprint of 16.9 mm × 16.9 mm.

Optical format	2/3”
Active resolution	1280 × 1024 pixels
Pixel	6.6 um pitch PPD global shutter pixel
Full well	17,000 e-
Read noise	25 e-
Responsivity	9.6 V/Lux-s @ 525 nm
Conversion gain	73 uV/e-
Dynamic range	56.7 dB
High dynamic range mode	Dual-slope and Triple-slope response supported
Frame rate	1,070 FPS @ 1280 × 1024 4,168 FPS @ 640 × 512 8,300 FPS @ 256 × 256 Up to 1,000,000 FPS @ 1280 × 1 Faster frame rates with smaller X, Y window size
Region of interest	Windowing and up to 8 simultaneous ROI’s are supported
Binning	2 × 2
Analog to digital converter	12 bit
Analog gain options	1x – 16x
Clock rate	25 MHz - 90 MHz (90 MHz typical @ 1,070 FPS)
Data output	16 LVDS channels Multiplex Mode (8 LVDS, 4 LVDS, 2 LVDS channels) 300 Mbps per port @ 25 MHz – 1,080 Mbps per port @ 90 MHz
Power supply	3.3V Analog, 1.9V Analog, 1.8V Digital
Power consumption	2.194W @ 1,070 FPS Full Resolution Adjustable with lower frame rates, e.g. 670 mW @ 250 FPS
Package type	88 Ceramic LCC in a small footprint of 16.9 mm × 16.9 mm
Color filter	Color or Monochrome

LUX1310 brief v3.3
January 2025