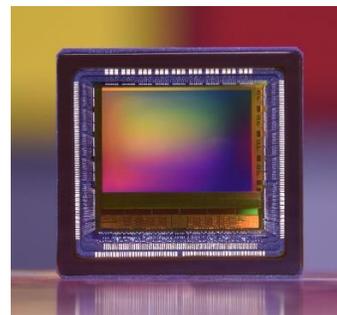


LUX2805

The LUXIMA™ LUX2805 image sensor is a 2.8 Megapixel 500 FPS Global Shutter CMOS Digital Sensor for applications in the 3D scanning, intraoral scanning, dental, motion analysis, laser triangulation, line profiling, and wafer inspection 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 a 238-Pin uPGA package with a footprint of 23 mm × 21.5 mm.



Optical format	1"
Active resolution	2048 × 1400 pixels
Pixel	6.6 um pitch PPD global shutter pixel
Full well	13,500 e- typical @ Analog Gain 1.7
Read noise	27 e- typical @ Analog Gain of 1.7
Responsivity	8.5 V/Lux-s @ 525 nm without Color filter 6.5 V/Lux-s @ 525 nm with Color filter
Conversion gain	65 uV/e-
Dynamic range	54.0 dB typical @ Analog Gain of 1.7
High dynamic range mode	Dual-slope and Triple-slope response supported
Frame rate	500 FPS @ 2048 × 1400 700 FPS @ 1920 × 1080 3,700 FPS @ 800 × 480 5,000 FPS @ 608 × 352 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	8b/10b/12b
Analog gain options	1x – 4x
Clock rate	95 MHz
Data output	16 Channels, Multiplexer Mode (8 or 4 LVDS Channels) 1140Mbps per channel @ 95MHz @ 12-bit mode 950Mbps per channel @ 95MHz @ 10-bit mode 760Mbps per channel @ 95MHz @ 8-bit mode
Power supply	3.3V Analog, 1.8V Analog, 1.8V Digital
Power consumption	0.9W @ 500 FPS Full Resolution Lower power with Multiplexer Mode
Package type	238-Pin uPGA in a footprint of 23 mm × 21.5 mm
Color filter	Bayer RGB or Monochrome