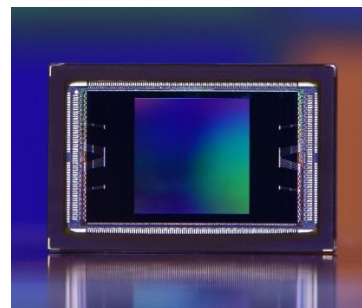


LUX4210

The LUXIMA™ LUX4210 image sensor is a 4.2 Megapixel 1,064 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 48 parallel SLVS 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 341 pin Hybrid LGA-LCC package with a footprint of 26.0 mm × 17.0 mm.



Optical format	1"		
Active resolution	2048 × 2048 pixels		
Pixel	5 um pitch PPD global shutter pixel		
Full well	11K e-		
Read noise	7 e- typical @ analog gain 2		
Responsivity	2.8 V/Lux-s @ 525 nm typical without color filter		
Conversion gain	75 uV/e-		
Dynamic range	64.0 dB		
High dynamic range mode	3 slope HDR capability		
Speed factor	1-row read at a time, or 2-row read at a time		
Frame rate	Frame Size	Speed Factor 1	Speed Factor 2
	2048 × 2048	1,052 FPS	1,064 FPS
	1296 × 1024	2,100 FPS	3,351 FPS
	288 x 256	8,294 FPS	16,317 FPS
	144 × 128	16,317 FPS	31,603 FPS
Region of interest	Windowing and up to 8 simultaneous ROI's are supported		
Binning	Row, column and row + column capability		
Analog to digital converter	12b ADC		
Analog gain options	1x – 32x		
Clock rate	95 MHz typical		
Number of data channels	48 SLVS data channels + 4 SLVS synchronization channels Multiplexer mode: 24 SLVS, 12 SLVS data channels		
Data output rate	Bit Depth	Clock Rate 95MHz	
	12b output	1140 Mbps	
	10b output	950 Mbps	
	8b output	760 Mbps	
Power supply	3.3V Analog, 1.8V Analog & 1.8V Digital		
Power consumption	2.32W: For speed factor of 1, 2.85W: For speed factor of 2 Lower power with Multiplexer Mode		
Communication interface	4-Wire serial peripheral interface (SPI)		
Package type	341 pin Hybrid LGA-LCC in a footprint of 26 mm × 17 mm		
Color filter	Color or Monochrome		