

LUX9512

The LUXIMA™ LUX9512 image sensor is a 9.5 Megapixel 1,333 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 128 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 696 pin LGA-LCC package with a footprint of 39.8 mm × 37.8 mm.

Optical format	2"	
Active resolution	4096 × 2304 pixels	
Pixel	6.5 um pitch PPD global shutter pixel	
Full well	11,500 e-	
Read noise	12 e-	
Responsivity	5.2 V/Lux-s	
Conversion gain	65 uV/e-	
Dynamic range	59.7 dB	
High dynamic range mode	3 slope HDR capability	
Frame rate	Resolution	Frame Rate
	4096 × 2304	1,333 FPS
	2048 × 1080	5,565 FPS
	2048 × 512	11,631 FPS
	2048 × 128	44,209 FPS
	2048 × 64	82,919 FPS
	2048 × 32	147,493 FPS
Region of interest	Windowing and up to 8 simultaneous ROI's are supported	
Binning	2x2, 1x2, 2x1	
Analog to digital converter	12b on chip ADC	
Analog gain options	1x – 9x	
Clock rate	100 MHz maximum	
Number of data channels	128 SLVS data channels + 8 SLVS synchronization channels	
	Multiplexer mode: 64 SLVS or 32 SLVS data channels	
Data output rate	Bit Depth	Clock Rate 100MHz
	12b output	1200 Mbps
	10b output	1000 Mbps
	8b output	800 Mbps
Power supply	3.3V Analog, 1.8V Analog & 1.8V Digital	
Power consumption	5.7W	
	Lower power with Multiplexer Mode	
Communication interface	4-Wire serial peripheral interface (SPI)	
Package type	696 pin LGA-LCC in a footprint of 39.8 mm × 37.8 mm	
Color filter	Color RGB or Monochrome	