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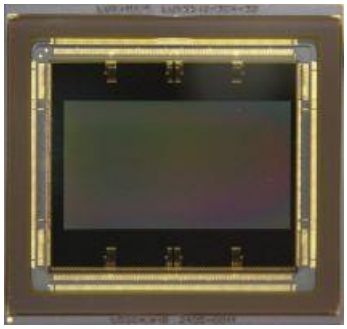
LUX9512

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 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 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	12 Ke-
Read noise	9 e-
Responsivity	5.5 V/lux-sec @ 525nm without color filter
High dynamic range mode	3 slope HDR capability
Frame rate	**Resolution** **Frame Rate** 4096 × 2304 1,333 FPS 2048 × 1080 5,565 FPS 2048 x 512 11,631 FPS 2048 x 128 44,209 FPS 2048 x 64 82,919 FPS 2048 x 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 – 6x
Clock rate	100 MHz maximum
Number of data channels	128 LVDS data channels + 8 LVDS synchronization channels Multiplexer mode: 64 LVDS or 32 LVDS data channels
Output data rate	**Bit Depth** **Clock Rate 100MHz** 12b 1200 Mbps 10b 1000 Mbps 8b 800 Mbps
Power supply	3.3V Analog, 1.8V Analog & 1.8V Digital
Power consumption	5.6W Typical 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 or Monochrome

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