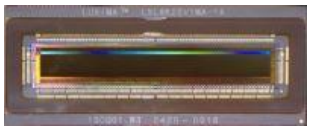
Luxima Technology LLC
159 E. Live Oak Ave., Suite 208
Arcadia, CA 91006, United States of America
Tel: +1 626-510-6288 Email: info@luxima.com

LXL8K25

The LUXIMA™ LXL8K25 image sensor is an 8K High Speed Global Shutter CMOS Linear Sensor with maximum frame rate of 13,132 FPS at a resolution of 8352 x 64. It allows ease of integration and lower system noise with on-chip 12-bit ADC, on-chip programmable biases, on-chip LDO's, on-chip reference generators and 72 parallel SLVS outputs. The sensor supports Y direction windowing. The user can obtain faster frame rates through Y windowing. Color and monochrome options are offered in a 610 pin LGA-LCC package with a small footprint of 55.0 mm × 21.5 mm.



Resolution	Active: 8192 × 64 pixels, Total: 8352 x 84 pixels
Pixel size	5 um x 5 um
Full well	14 Ke-
Read noise	<10 e- @ 2x gain
Responsivity	TBD
Frame rate	**Resolution** — **Frame Rate** 8352 x 64 — 13,132 8352 x 32 — 25,833 8352 x 4 — 168,067 8352 x 2 — 277,008 8352 x 1 — 409,836
Region of interest	Windowing in Y direction supported
Binning	2×2, 2x1, 1x2
Time delay integration capability	16-Stage TDI for monochrome sensors 4-Stage TDI for color sensors
Analog to digital converter	12b on chip ADC
Analog gain	1x – 4x
Clock rate	100MHz typical
Number of data channels	72 SLVS data channels in 1-to-1 multiplexer mode 36 SLVS data channels in 2-to-1 multiplexer mode 18 SLVS data channels in 4-to-1 multiplexer mode
Data output	**Bit Depth** — **Clock Rate 100MHz** 12b — 1200 Mbps per channel 10b — 1000 Mbps per channel 8b — 800 Mbps per channel
Power supply	3.6V Analog, 1.5V Analog, 1.5V Digital, VSLVSH/L
Communication interface	4-Wire serial peripheral interface (SPI)
Estimated power consumption	2.6W Lower power with Multiplexer Mode
Package size	55.0 mm × 21.5 mm
Package type	610 pin LGA-LCC
Color filter	Color or Monochrome
Operating temperature range	0°C to 70°C

LXL8K25 brief v1.2
August 2025