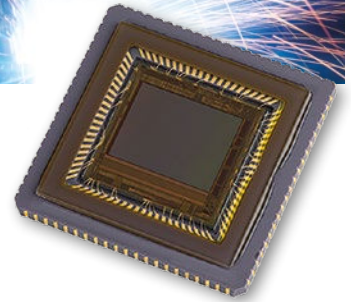


Lince1M3, Achieving 980fps with 1.3MP Resolution



Lince1M3 is a CMOS digital image sensor optimized for medical, Intelligent Transportation Systems (ITS) and industrial machine vision applications requiring high-speed. The sensor incorporates a sophisticated readout channel with a high-accuracy 12-bit ADC to deliver the best quality images under any illumination condition.

The exposure and read-out timings are generated by a complex control-unit that enables a wide variety of operational modes. Trigger management is specially designed for those industrial applications demanding ultra-low trigger-to-exposure latency.



SENSOR FEATURES

<p>1.3 Megapixel resolution with a 1,244 x 1,024 pixel array</p>	<p>Ultra-high speed of 980fps at full frame & 12 bits</p>
<p>High-performance global shutter pixel for blur-free images</p>	<p>Embedded features to increase frame rate and dynamic range (ROI, binning, HDR, subsampling)</p>

CUSTOMER BENEFITS

<p>Upgrade your inspection system throughput with superior frame rate</p>	<p>Perfect your slow-motion capture with highly dynamic and blur-free images</p>
<p>Improve your production yields with higher contrast images and better defect classification</p>	<p>Deliver the best quality images under any illumination condition</p>



SENSOR CHARACTERISTICS

PARAMETER	LINCE1M3
Resolution – pixels	1,244 (H) x 1,024 (V)
Pixel size – square	10µm
Shutter type	Global shutter
Size type – inch	1
Frame rate @12bits	980fps @ full-frame 1,925fps @ 1,244 x 512 3,710fps @ 1,244 x 256
Bit depth	8 – 10 – 12
SNR _{max} – dB	39.8
Dynamic range – dB	58 (standard mode) up to 100 (HDR mode)
Sensitivity – V/lux.s	14.4
Power consumption	≤2W @max frame rate

KEY ELEMENTS

- » 1.3 Megapixel resolution
- » 10µm global shutter pixel enabling exposure during readout
- » C-mount compatible (16.39mm diagonal)
- » Ceramic LGA package, 28 x 28mm², 181 pins
- » Pin-to-pin and optical compatible with Lince5M
- » 24 LVDS ports (scalable down to 4) providing a speed up to 16.6Gbps
- » SPI control
- » Power down capability for very low power dissipation

EMBEDDED FEATURES

- » High Dynamic Range (HDR)
- » Region of Interest (ROI)
- » Vertical binning
- » Sub sampling
- » Horizontal blanking

TYPICAL APPLICATIONS

- » Machine vision
- » Robotics
- » Intelligent Transportation Systems (ITS)
- » Medical
- » Slow-motion