

LINCE6M5 - MAXIMUM FLEXIBILITY FOR VARIOUS APPLICATIONS



Lince6M5 is a single chip, fully digital, high speed CMOS image sensor, designed for maximum flexibility. It has excellent performance in a large variety of applications, ranging from low noise, high dynamic range surveillance, to high speed slow motion analysis, including high resolution machine vision applications. Lince6M5 incorporates a high speed 6.5MP CMOS active pixel image sensor providing both global and rolling electronic shutter, as well as High Dynamic Range (HDR) features. The sensor array utilizes active CMOS pixels with pinned photodiodes to deliver high image quality whilst maintaining the size, cost, and integration advantage of the CMOS technology.

Lince6M5 is a very versatile sensor that can operate in a large range of applications.imaging challenges.

KEY BENEFITS

- High speed 6.5MP, 170 fps, CMOS active pixel image sensor
- Global and rolling electronic shutter with High Dynamic Range (HDR) features
- Configurable pixel for linear light or HDR response
- 58 dB and 62 dB dynamic range for global and rolling shutter, respectively
- More than 100 dB dynamic range for HDR
- Windowing with up to 32 RoI simultaneous selection with output data compaction
- Pixel binning
- Sub sampling
- Combined windowing binning, sub sampling modes
- Image mirroring and flipping
- Fixed pattern noise, shading and vignetting correction
- Defective pixel correction
- Fine gain and offset control
- <2W power consumption

EMBEDDED FEATURES

- 5 μ m pixel pitch
- 170 fps @ full 6.5MP resolution and 12-bits
- Up to 3,000 fps @ 640 x 480 (ultra high speed mode)
- SPI controls
- 24 LVDS high speed outputs, transferring image data up to 14 Gbit/sec
- 2 additional LVDS ports for clock recovery and image synchronization
- External clock of 9.6 MHz
- Package: 179 pins micro PGA

TYPICAL APPLICATIONS

- High resolution machine vision
- General inspection
- Low light surveillance



Sensor Characteristics

IMAGE SENSOR

Optical format – inch	1
Active imager size – mm	12.8 (H) x 12.8 (V)
Active pixel	2,560 x 2,560
Pixel size – μm	5 x 5
Pixel type	5T active pixel with pinned photodiode
Shutter type	Electronic global shutter and rolling shutter with exposition time control
Frame rate – fps	Programmable: Up to 170 @ 2,560 x 2,560
Sensing modes	Linear and HDR
Dynamic range – dB	58 in global shutter 62 in rolling shutter

MISCELLANEOUS

Die area – mm	18 x 18
Power supply – V	Dual 3.3 / 1.8
Maximum power consumption – W	<2
Operating junction temperature – °C	-40 to +125
Package	179 pins micro PGA