

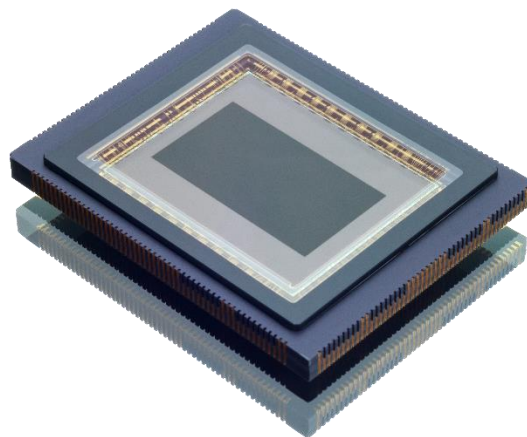
LTN4625A

12MP Image Sensor with sCMOS 2.0 Technology

The Fairchild Imaging LTN4625A is a lightning fast 12MP sCMOS image sensor in an APS-C optical format, supporting 240 frames per second at 12MP resolution.

The sensor is designed to support the demanding imaging needs of machine vision, high-end security/surveillance and scientific applications. The device features an array of 5T pixels on a 5.5µm pitch with an active imaging area of 4608 (H) x 2592 (V) pixels.

The LTN4625A sensor can operate in rolling shutter, global shutter, and global reset mode. Under controlled lighting conditions where global reset is appropriate, it performs like global shutter while delivering performance benefits of rolling shutter. In this mode, the part will deliver <1.5e- read noise and >40,000e- full-well capacity at 240 fps. Furthermore, it has no motion distortion, which is a typical issue in rolling shutter mode.



Key features and benefits

Rolling Shutter (RS), Global Reset (GR), and Global Shutter (GS)
APS-C Optical Format
>88dB single frame Dynamic Range (RS/GR), >77dB (GS)
1.5e- Extreme Low Noise
Superior Low Light Performance
240 fps at 12MP, 600 fps at Full HD (RS/GR) 120 fps at 12MP (GS)

Applications

Professional Video
Scientific
Machine Vision
High-End Security
Aerial Systems

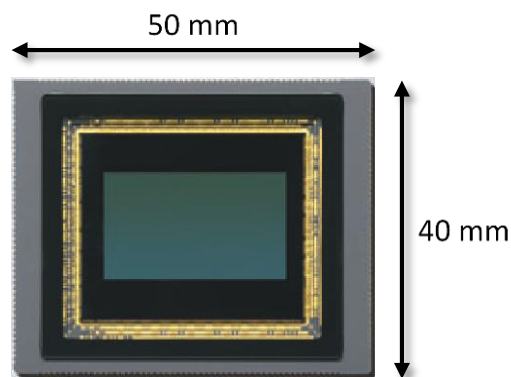
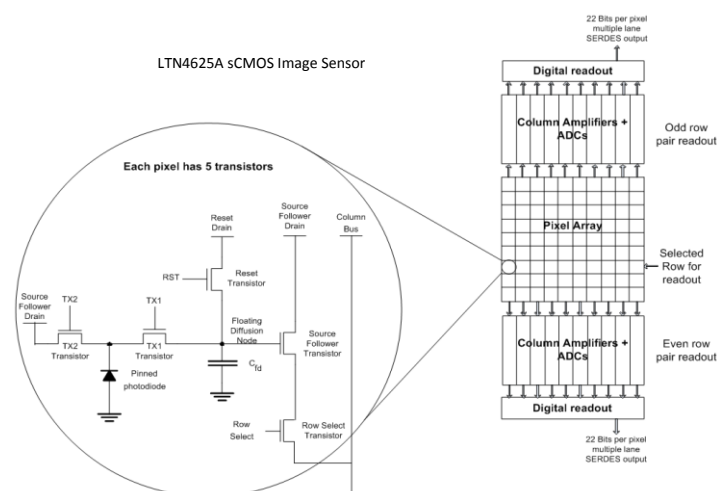
Ideal for capturing scenes in extreme lighting conditions

Specifications

Sensor	
Optical Format	APS-C
Active Array Size	4608 (H) x 2592 (V)
Active Area	25.3 mm x 14.3 mm
Diagonal of Active Area	29.06 mm
Chroma	Monochrome
Maximum Frame Rate	240 fps at 12MP (RS/GS) 120 fps at 12MP (GS)
ADC Resolution	22 bits (2 x 11-bit)
Pixel	
Pixel Size	5.5 μm x 5.5 μm
Shutter Type	Rolling Shutter (RS), Global Reset (GR), and Global Shutter (GS)
Read Noise	<1.5 e- RMS at 240 fps (RS/GR) <5 e- RMS at 120 fps (GS)
Dynamic Range	>88 dB Single Frame (RS/GR) >77 dB Single Frame (GS)
Full Well Capacity	>40,000 e- (RS/GR)
Dark Current	<15 e-/ pixel/ sec at 20°C (RS/GR)
Interface	
I/O Interface	Digital: 32 SERDES (3.125GHz per lane)
Operating	
Power Consumption (Full Resolution)	~6.4W at 240 fps ~5.0W at 60 fps
Supply Voltage	-0.4V, 1.2V, 1.8V, 3.0V, 3.3V
Operating Temp	-40°C to +55°C (at junction)
Packaging	
Package Type	194-pin CLCC

LTN4625A sCMOS Image Sensor

- Patented pixel and sensor architecture
- Dual column amplifier and ADC architecture
- Supports anti-blooming



LTN4625A
Standard CLCC Package



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