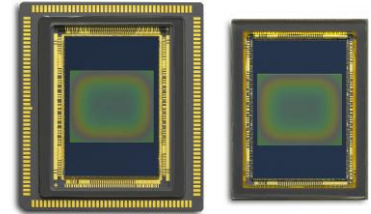


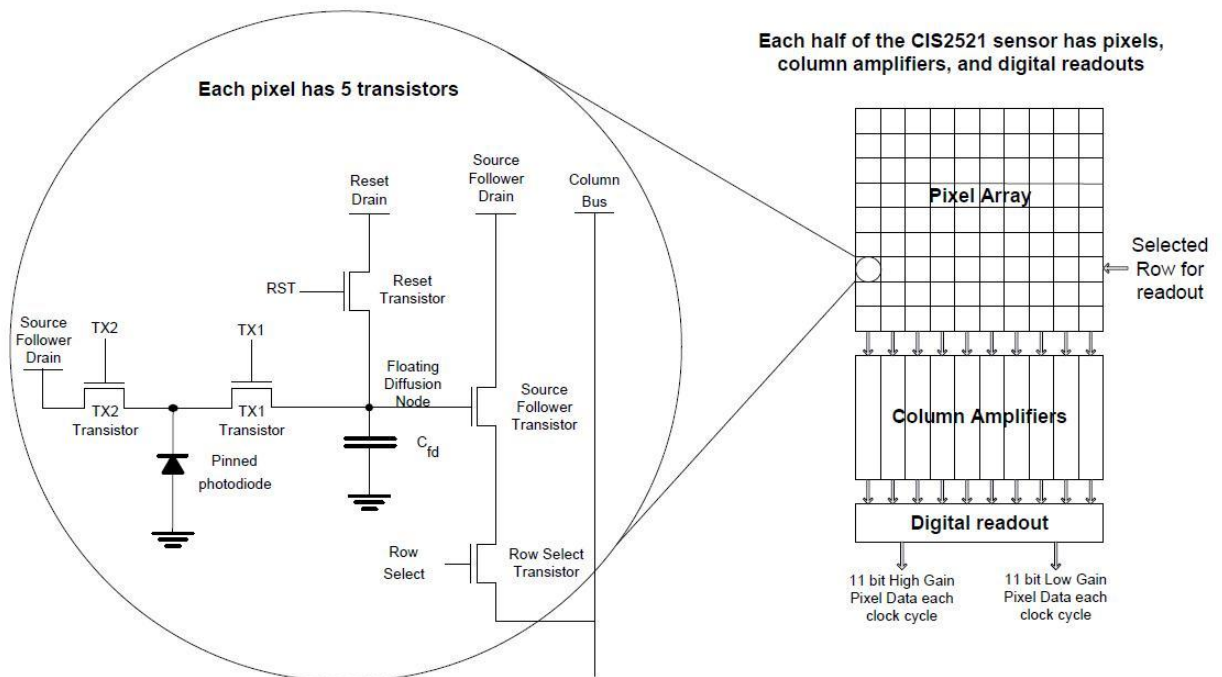
Fairchild Imaging CIS2521

5.5 Megapixel Ultra Low Noise sCMOS Image Sensor

The Fairchild Imaging CIS2521 is a large format, ultra low-noise CMOS image sensor intended for applications requiring high quality imaging under extremely low light conditions. The device features an array of 5 transistor (5T) pixels on a 6.5µm pitch with an active imaging area of 2560(H) x 2160(V) pixels. The CIS2521 delivers extreme low-light sensitivity with read noise less than 2e- RMS in Rolling Shutter, less than 5e- RMS in Global Shutter, and Quantum Efficiency (QE) above 55%. The sensor runs in Rolling and Global Shutter readout modes. The sensor has two ADC channels per column with one optimized for low light levels and the other optimized for high light levels, enabling high dynamic range data collection in a single image. The sensor supports user-programmable row start/stop control for region of interest (ROI) readout. The sensor is housed in a 168-pin LCC package. These features, combined with 5.5 megapixel resolution and 100 fps imaging rates, make the CIS2521 an imaging device ideally suited for a variety of low light-level camera applications including: security/surveillance, industrial, prosumer videocam, and medical.

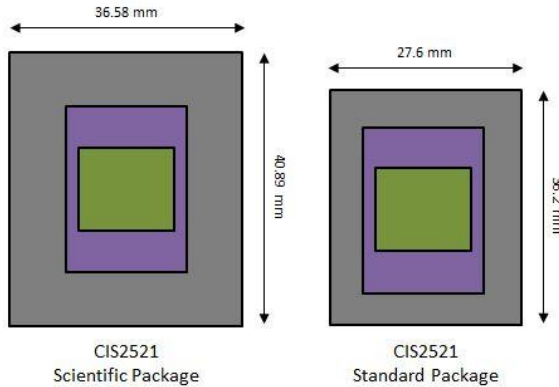


BLOCK DIAGRAM



FEATURES

- **Superior Low Light Image Quality**
- **> 83.5 dB Intra Scene Dynamic Range**
- **100 FPS at 5.5MP**
- **Rolling and Global Shutter**

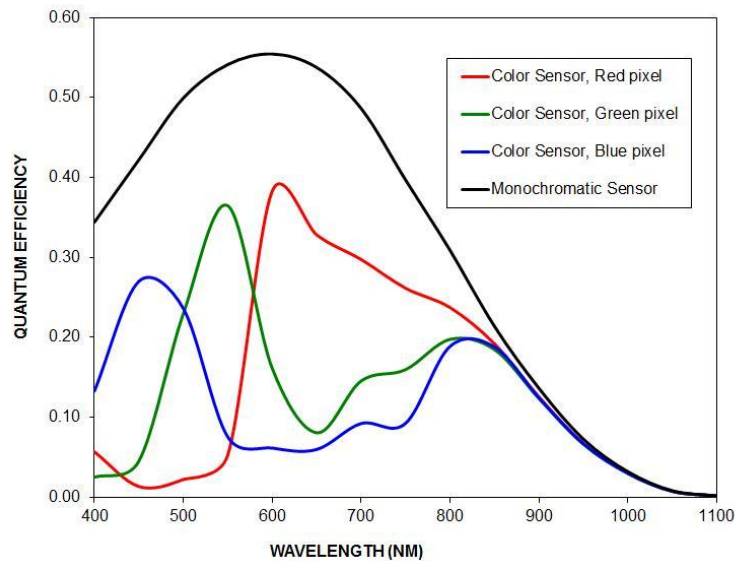


SPECIFICATIONS

Optical format	4/3"
Active array size	2560 (H) x 2160 (V)
Pixel size	6.5 μm x 6.5 μm
Active area	16.6 mm x 14.0 mm
Chroma	RGB or monochrome
Shutter type	Rolling shutter, Global Shutter
Maximum frame rate	100 fps (RS), 50 fps (GS)
ADC resolution	22 bits (2 x 11-bit)
Read noise ¹	< 2 e ⁻ RMS (RS), < 5 e ⁻ RMS (GS)
Dynamic range	> 83.5 dB
Peak QE	> 55%
Full well capacity	> 30,000 e ⁻
Dark current ²	< 35 e ⁻ /pixel/sec
Power consumption	< 2W at 100 fps
I/O interface	Digital: 1.8V LVCMOS and 1.8V HSTL
Supply voltages	-0.4V, 1.8V, 3.0V, 3.3V
Operating temp	- 40 to +55 °C
Package type	168-pin CLCC

¹Median value, high gain output (30x), ²At 20°C

QUANTUM EFFICIENCY



FOR MORE INFORMATION, CONTACT:

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This product is designed, manufactured, and distributed utilizing the ISO 9001:2008 Business Management System.

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