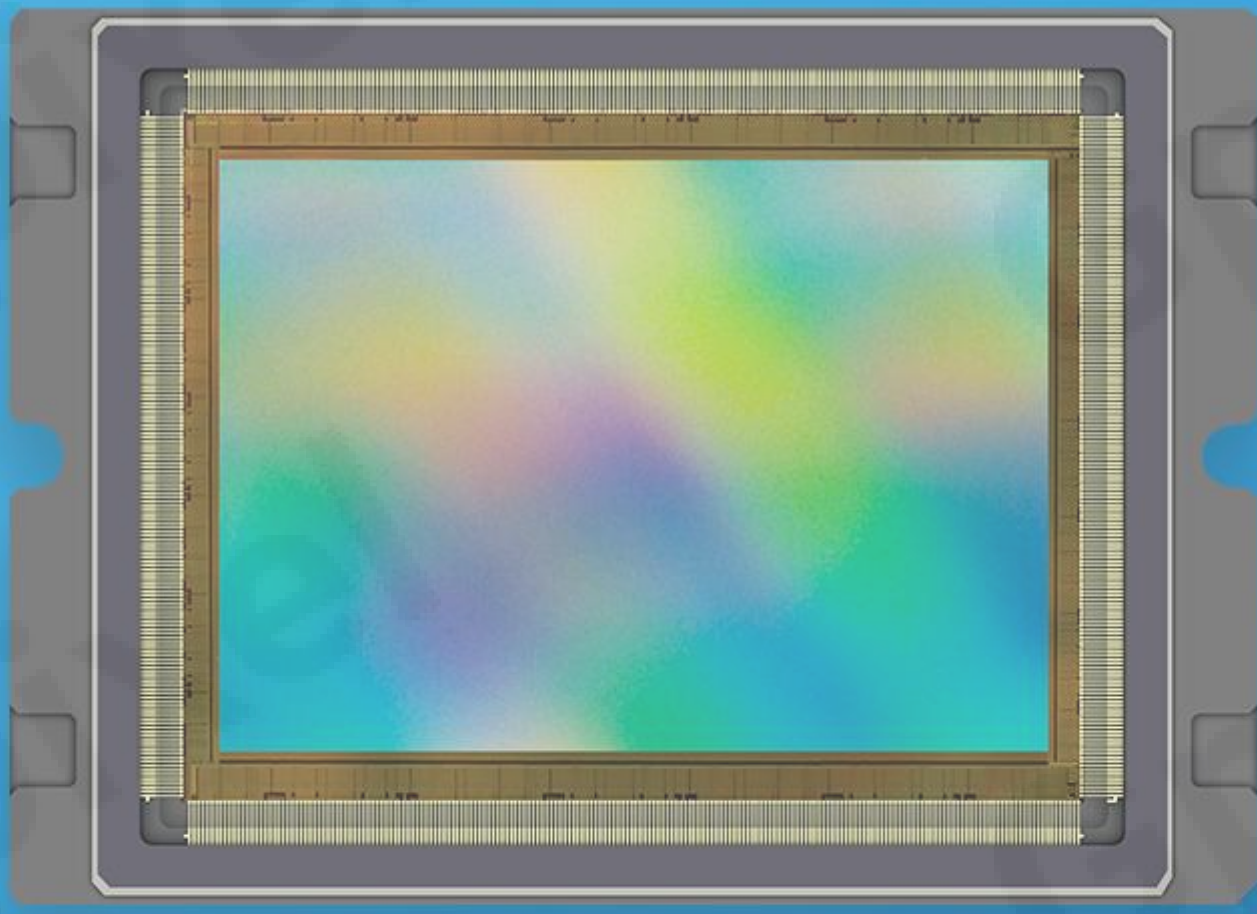


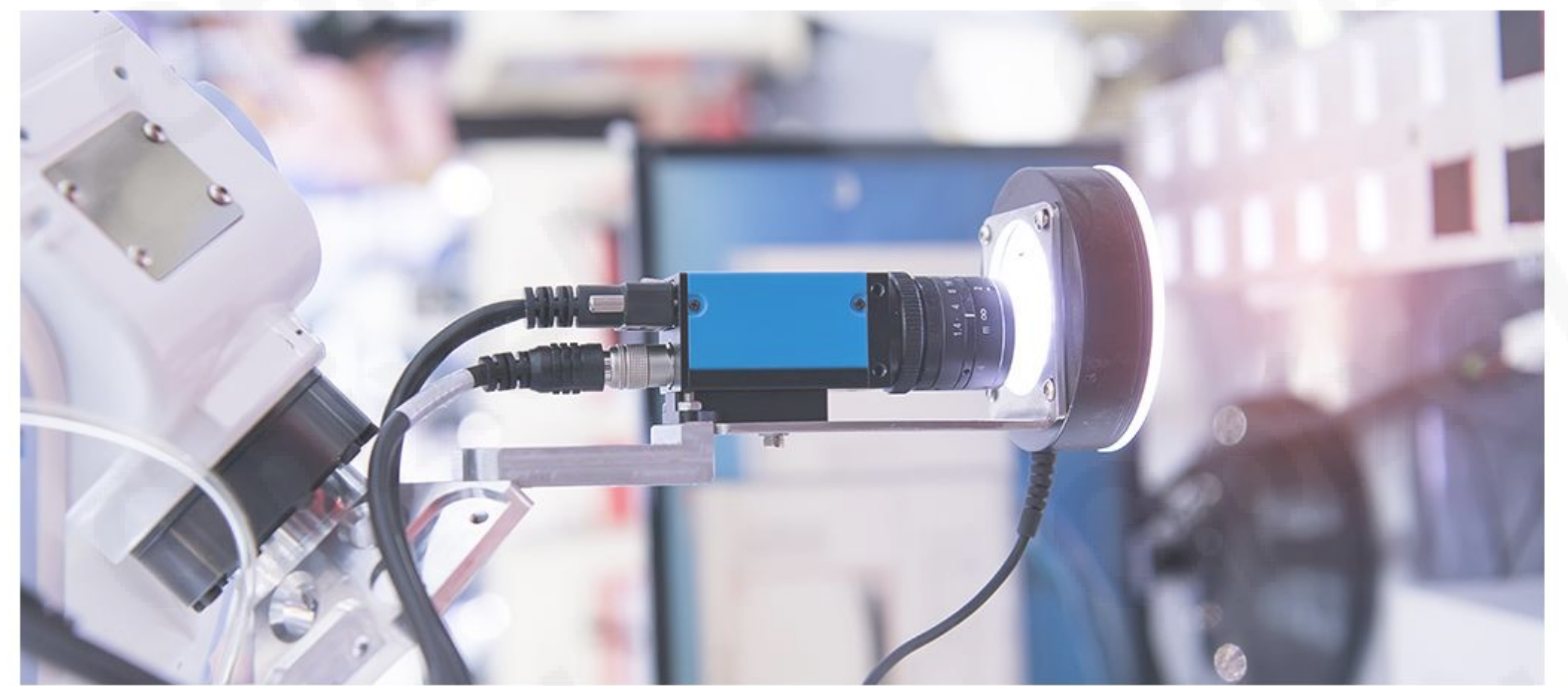


GMAX4651

51MP GLOBAL SHUTTER IMAGE SENSOR

GMAX4651 is a 51 Megapixel (8424 x 6032) full frame (35 mm) global shutter image sensor designed using the latest 4.6 μm charge domain global shutter pixel. Using the advanced 65 nm CIS process, it provides 18 ke^- FWC, 7.6 e^- median dark noise and more than 65.5 dB intra-scene dynamic range. With the light pipe technology, sensor achieves $> 67\%$ QE (510 nm) and 1/40,000 shutter efficiency.

GMAX4651 delivers 30 fps in single gain operation mode running at 864 Mbps. GMAX4651 is assembled with 238 pins PGA ceramic package and the optical center is fully aligned with the package mechanical center. The unique features make it an ideal solution for demanding imaging applications like machine vision, 8K broadcasting and high-end industrial inspections.



Key features and Benefits

- ▶ 4.6 μm Global Shutter pixel
- ▶ High data throughput up to 21 Gbps
- ▶ High speed and Good PLS
- ▶ 35mm Full Frame of optical format
- ▶ Optical center = package mechanical center

Applications

- ▶ Machine Vision
- ▶ Automation & Inspection

Specifications

Nr of Active Pixels	8424(H) x 6032(V)	Optical Format	35 mm(全画幅)
Pixel Size	4.6 μm x 4.6 μm	Photosensitive Area	38.8 mm x 27.8 mm
Shutter Type	Global Shutter	Parasitic Light Sensitivity	< -92 dB
Peak QE	67.1% (510 nm)	Angular Response	> 15° (80% Response)
Full Well Capacity	18 ke ⁻ (PGA gain 3.5x)	Temporal Noise	7.6 e ⁻ (PGA gain 5x)
Max. SNR	42.5 dB (PGA gain 3.5x)	Dynamic Range	65.5 dB (PGA gain 3.5x)
Dark Current	6 e ⁻ /pixel/s (45°C)	ADC	12 bit
Max Frame Rate	30 fps	Output Format	24 ch Sub-LVDS
Power Consumption	< 2.8 W	Max. Data Rate	20.74 Gbps
Supply Voltage	3.3 V/1.3 V (analog) 1.8 V-3.3 V (IO) 1.3 V (digital)	Channel Multiplexing	24/14/8/6/4
Chroma	Mono & RGB Color	Package	238 pins PGA (58.6 mm x 42.0 mm)

Package Drawing

