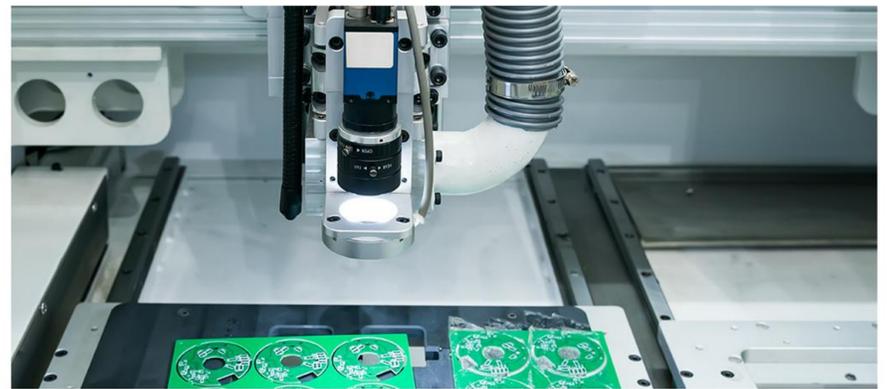


# GMAX32103

103 MP GLOBAL SHUTTER IMAGE SENSOR

**GMAX32103** is a 103 Megapixel (11276 x 9200) medium-sized (46.6 mm) ultra-high resolution, global shutter image sensor designed with the latest 3.2  $\mu\text{m}$  charge domain global shutter pixel. It achieves more than 9k  $e^-$  FWC at low gain and 2.8  $e^-$  read noise at high gain separately with 66.4 dB intra-scene dynamic range. Using advanced 65nm CIS process and light pipe technology, sensor achieves 66.9% peak QE (500 nm) and more than 1/15,000 shutter efficiency.

The full speed version sensor consists of 52 pairs sub-LVDS channels running at 960 Mbps which delivers a 24 fps in 12 bit operation at full resolution. The unique features make it an ideal solution for demanding imaging high end applications such as high-resolution inspection, aerial imaging and many more.



## Key Features and Benefits

- ▶ 3.2  $\mu\text{m}$  Global Shutter Pixel
- ▶ High Resolution up to 103 MP
- ▶ High Data Throughput up to 960 Mbps
- ▶ On Chip Sequencer and SPI Control
- ▶ High Speed and Good PLS

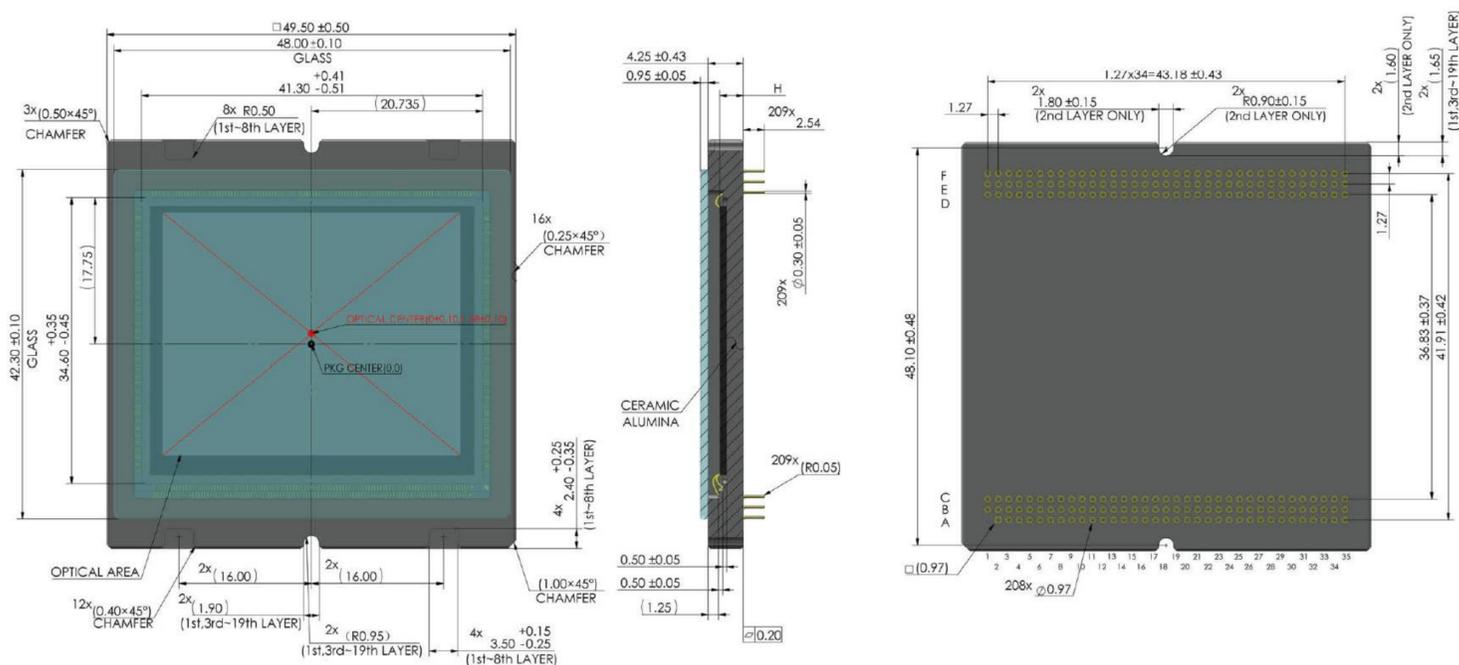
## Application

- ▶ Automation & Inspection

## Specifications

Nr of Active Pixels	11276(H) x 9200(V)	Optical Format	2.9"
Pixel Size	3.2 $\mu\text{m}$ x 3.2 $\mu\text{m}$	Photosensitive Area	36.1 mm x 29.4 mm
Shutter Type	Global Shutter	Parasitic Light Sensitivity	< -83.5 dB
Peak QE	66.9% (500 nm)	Angular Response	> 15° (80% Response)
Full Well Capacity	9 ke <sup>-</sup> (PGA gain 1.4x)	Temporal Noise	4.3 e <sup>-</sup> (PGA gain 1.4x)
Max. SNR	39.5 dB (PGA gain 1.4x)	Dynamic Range	66.4 dB (PGA gain 1.4x)
Dark Current	1.4 e <sup>-</sup> /pixel/s (30°C)	ADC	12 bit
Max Frame Rate	24 fps	Output Format	52 ch Sub-LVDS
Power Consumption	< 2.5 W	Max. Data Rate	49.92 Gbps
Supply Voltage	3.3 V/1.3 V (analog) 1.8 V – 3.3 V (IO) 1.2 V (digital)	Channel Multiplexing	52/26/18/14/10/8/6
Chroma	Mono & RGB Color	Package	209 pins $\mu$ PGA (49.5 mm x 42.3 mm)

## Package Drawing



## Contact Gpixel

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Disclaimer: The product information and pictures in this flyer are for reference only. For the latest information please visit [www.gpixel.com](http://www.gpixel.com).  
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