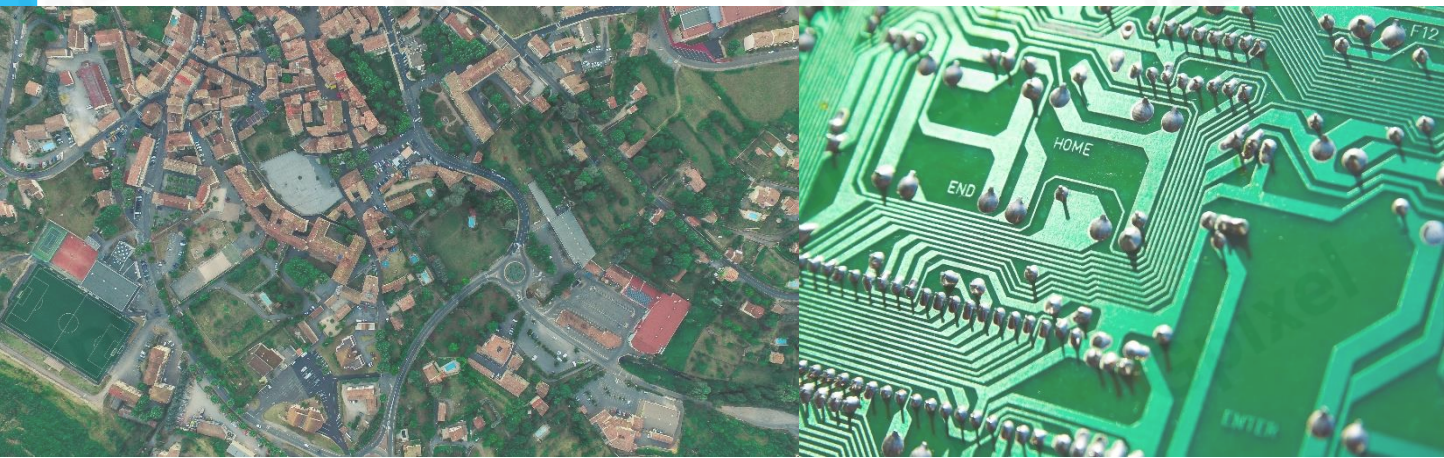


GMAX32103 Product Flyer



103MP GLOBAL SHUTTER IMAGE SENSOR

GMAX32103 is a 103 Megapixel (11276 x 9200) medium-sized (46.6mm) ultra-high resolution, global shutter image sensor designed with the latest 3.2 μm 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 @ 500nm and more than 1/15,000 shutter efficiency.

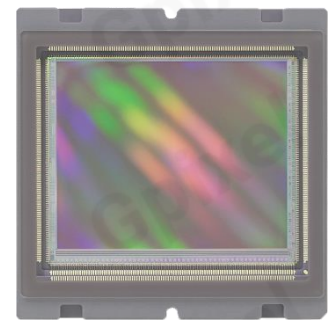
The full speed version sensor consists of 52 pairs sub-LVDS channels running at 960 Mbps which delivers a 24 fps in 12-bit operation at full resolution. The unique features make it an ideal solution for demanding imaging high end applications such as high-resolution inspection, aerial imaging and many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

Key Features

- 3.2 μm Global Shutter pixel
- High resolution up to 103MP
- High data throughput up to 960Mbps
- On chip sequencer and SPI control
- High speed and Good PLS

Applications

- High Resolution Industrial Inspection
- Flat panel display inspection
- Aerial mapping



Sensor Specifications

Resolution	103 MP - 11276(H) x 9200(V)	Optical format	2.9"
Pixel size	3.2 μm x 3.2 μm	Photosensitive area	36.1 mm x 29.4 mm
Shutter type	Global shutter	Parasitic Light Sensitivity	< - 83.5 dB (angular dependence)
Peak QE	66.9% @ 500 nm	Angular response	> 15° (80% response)
Full well capacity	9.0k e- @ PGA gain x1.4	Temporal noise	2.8 e- @ PGA gain x5.2
Max. SNR	39.5 dB @ PGA gain x1.4	Dynamic Range	66.4 dB @ PGA gain x1.4
Dark Current	1.4 e-/pixel/s @ 30 °C	ADC	12 bit
Maximum frame rate	24 fps	Output format	52 pairs of Sub-LVDS
Power consumption	<2.5 W	Max. Data rate	49.92 Gbps
Supply voltage	3.3 V /1.3 V for analog 1.8 V - 3.3 V for IO 1.2 V for digital	Channel multiplexing	52/26/18/14/10/8/6
Chroma	Bayer RGB, Mono	Package	209 pins μ PGA 49.5 mm x 42.3 mm

Ordering Information

Sensor Part No.	Description
GMAX32103-BVM-NUT-BU1	Monochrome, Normal speed, 24 fps @ 12bit 52 x Sub-LVDS, Grade 1
GMAX32103-BVM-NUT-BU2	Monochrome, Normal speed, 24 fps @ 12bit 52 x Sub-LVDS, Grade 2
GMAX32103-BVM-NUT-BU3	Monochrome, Normal speed, 24 fps @ 12bit 52 x Sub-LVDS, Grade 3
GMAX32103-BVC-NUT-BU1	Bayer RGB, Normal speed, 24 fps @ 12bit 52 x Sub-LVDS, Grade 1
GMAX32103-BVC-NUT-BU2	Bayer RGB, Normal speed, 24 fps @ 12bit 52 x Sub-LVDS, Grade 2
GMAX32103-BVC-NUT-BU3	Bayer RGB, Normal speed, 24 fps @ 12bit 52 x Sub-LVDS, Grade 3