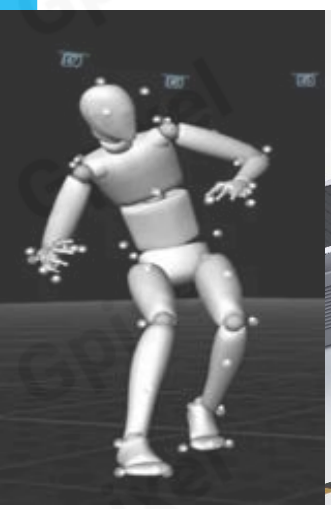
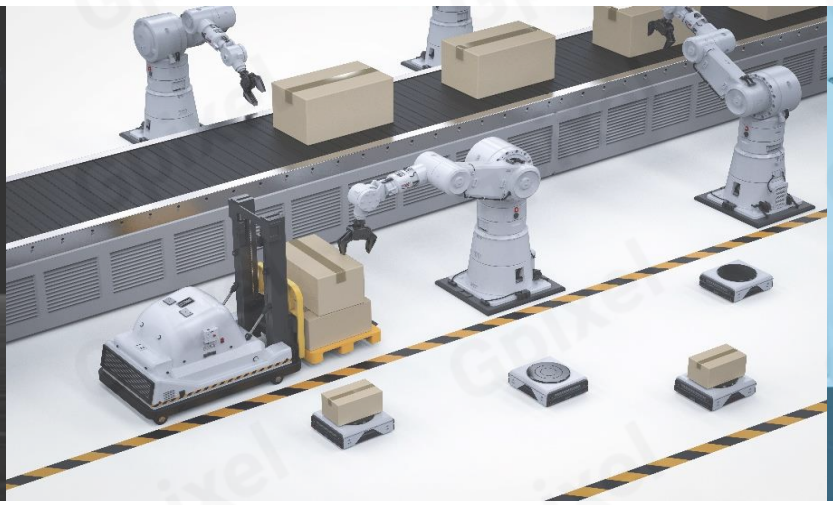
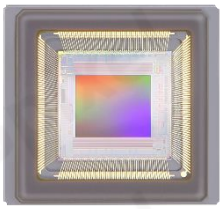
GMAX2505 Product Flyer





5MP GLOBAL SHUTTER CMOS IMAGE SENSOR

Featured with world smallest charge domain global shutter pixel, **GMAX2505** is the new member of GMAX series C mount line up after **GMAX2505**. It offers 5MP (2600 x 2160) resolution in 1/2'' optical format, operates with true CDS for low noise and high dynamic range. In addition, it has excellent PLS and angular response thanks to the light pipe technology.



GMAX2505 supports 10 bit and 12 bit output and is offered in two speed variances matching industrial standard camera interface speeds. The full speed version consists of 20 sub-LVDS data output channels each running at maximum 960MHz, offering full resolution frame rate of 290 fps at 10 bit output and a total data throughput of 19.2 Gbps. The high frame rate increases system throughput for industrial inline inspections and enables precise operation at high speed.

Key Features

- 2.5 um Global Shutter pixel
- High resolution GS in 1/2" optical format
- High data throughput up to 19.2 Gbps
- Low noise global shutter
- Good PLS and CRA

Applications

- Industrial inspection
- Machine Vision
- Motion Capture
- Automation & Robotic

Gpixel

Sensor Specifications

Resolution	5.6 MP - 2600(H) x 2160(V)	**Optical format**	1/2"
Pixel size	2.5 μm x 2.5 μm	**Photosensive area**	6.5 mm x 5.4 mm
Shutter type	Global shutter	**Parasitic Light Sensitivity**	< - 80 dB (angular dependence)
Peak QE	65.5% @ 500 nm	**Angular response**	> 13° (80% response)
Full well capacity	6.7k e- @ PGA gain x1.0	**Temporal noise**	1.8 e- @ 12-bit, PGA gain x4 3.9 e- @ 10-bit, PGA gain x2
Max. SNR	38.2 dB @ PGA gain x1.0	**Dynamic Range**	65.5 dB @ 12-bit, PGA gain x2 62.1 dB @ 10-bit, PGA gain x2
Dark Current	1.2 e-/pixel/s @30°C	**ADC**	10/12 bit
Maximum frame rate	290 fps @ 10 bit 121 fps @ 12 bit	**Output format**	20 pairs of Sub-LVDS
Power consumption	<0.6 W @ 12 bit <0.9 W @ 10 bit	**Max. Data rate**	19.20 Gbps
Supply voltage	3.3 V /1.3 V for analog 1.8 V - 3.3 V for IO 1.3 V for digital	**Channel multiplexing**	20/10/8/6/4/2
Chroma	Bayer RGB, Mono	**Package**	226 pins LGA 19.0 mm x 17.5 mm

Ordering Information

Sensor Part No.	Description
GMAX2505-BVM-HLT-AU1	Monochrome, LGA1, High speed, 290 fps @ 10bit 20 x Sub-LVDS, Grade 1
GMAX2505-BVM-NLT-AU1	Monochrome, LGA1, Normal speed, 121 fps @ 12bit 10 x Sub-LVDS, Grade 1
GMAX2505-BVC-HLT-AU1	Bayer RGB, LGA1, High speed, 290 fps @ 10bit 20 x Sub-LVDS, Grade 1
GMAX2505-BVC-NLT-AU1	Bayer RGB, LGA1, Normal speed, 121 fps @ 12bit 10 x Sub-LVDS, Grade 1
GMAX2505-BVM-HST-AU1	Monochrome, LGA2, High speed, 290 fps @ 10bit 20 x Sub-LVDS, Grade 1
GMAX2505-BVM-NST-AU1	Monochrome, LGA2, Normal speed, 121 fps @ 12bit 10 x Sub-LVDS, Grade 1
GMAX2505-BVC-HST-AU1	Bayer RGB, LGA2, High speed, 290 fps @ 10bit 20 x Sub-LVDS, Grade 1
GMAX2505-BVC-NST-AU1	Bayer RGB, LGA2, Normal speed, 121 fps @ 12bit 10 x Sub-LVDS, Grade 1

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