

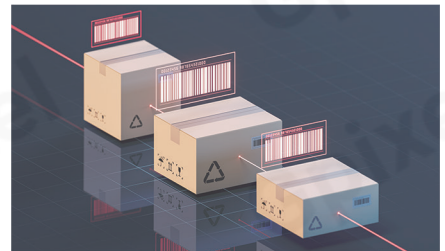
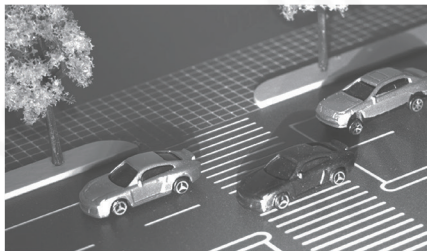
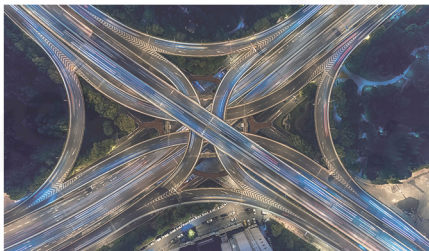


GMAX Series

LARGE PIXEL GLOBAL SHUTTER IMAGE SENSORS

GMAX HIGH SENSITIVITY

The GMAX High Sensitivity family consists of CMOS image sensors ranging from 1.6 MP to 12.7 MP with a pixel size $\geq 3.4 \mu\text{m}$ yielding up to 70 dB of dynamic range. All sensors include Red Fox NIR enhancement technology, which increases the quantum efficiency to an industry-leading 15% at 940 nm. Optical formats range from 1/3" to 4/3", ideal for c-mount based systems. The high FWC, dynamic range, and low fixed pattern noise of these sensors make them prime candidates for medical imaging, inspection, automation, and robotics. Pin-compatible [GMAX3413](#) and [GMAX3809](#) have $\geq 2:1$ aspect ratios, making them ideal sensors for intelligent traffic systems. [GMAX4002](#), [GMAX3405](#), and [GMAX3412](#) include industry-standard sLVDS and MIPI interfaces, allowing cost-effective integration into embedded and non-FPGA based systems



Product Family Features

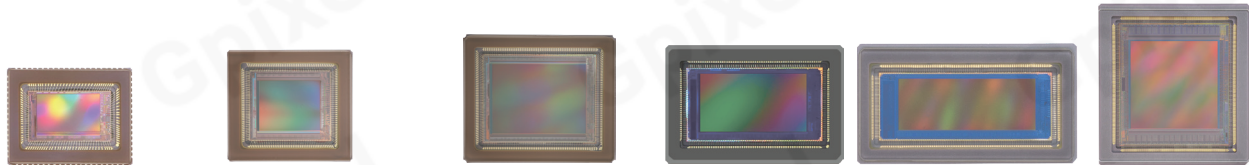
- ✓ Large pixel size for high full well capacity / SNR
- ✓ Multislope HDR (GMAX3405, GMAX3412)
- ✓ Industry standard sub LVDS outputs with channel multiplexing
- ✓ MIPI interface (GMAX4002, GMAX3405, GMAX3412)

Applications

- ✓ Medical Imaging
- ✓ Automation & Inspection
- ✓ Traffic & Transportation

Gpixel

Sensor Specifications



GMAX4002 2.5MP
GMAX4002W 1.6MP

GMAX3405 5MP

GMAX3412 12MP

GMAX3809 8.8MP

GMAX3413 12.7MP

GMAX4416 16.8MP

Pixel	4.0 μm GS	3.4 μm GS	3.4 μm GS	3.8 μm GS	3.4 μm GS	4.4 μm GS
Opt. Format	4002: 1/1.7" 4002W: 1/3"	2/3"	1.1"	1.1"	4/3"	4/3"
Resolution	4002: 2048 x 1200 4002W: 1312 x 1200	2446 x 2048	4096 x 3072	4096 x 2160	5900 x 2160	4096 x 4096
Chroma	NIROpt RGB	NIROpt RGB	NIROpt RGB	NIROpt RGB	NIROpt RGB	NIROpt RGB
FWC _{max}	11.6 ke ⁻	8.7 ke ⁻	9.0 ke ⁻	11.2 ke ⁻	8.6 ke ⁻	15.0 ke ⁻
Noise _{min}	2.6 e ⁻	1.6 e ⁻	3.7 e ⁻	3.3 e ⁻	2.3 e ⁻	3.0 e ⁻
DR _{max}	68.0 dB	67.6 dB	67.9 dB	70.7 dB	71.4 dB	73.9 dB
QE _{max}	74% @ 550 nm	75% @ 540 nm	75% @ 540 nm	75% @ 540 nm	75% @ 540 nm	70.5% @ 550 nm
Frame Rate @Bitmode	sLVDS: 344 fps MIPI: 166 fps	sLVDS: 164 fps MIPI: 73 fps	sLVDS: 128 fps MIPI: 30 fps	54 fps	62 fps	80 fps 42 fps @ HDR
Power	<0.5 W	<0.8 W	<1.5 W	<1.0 W	<1.2 W	<1.2 W
Interface	8 ch sLVDS @ 1.2G 4 ch MIPI @ 1.2G	12 ch sLVDS @ 800M 4 ch MIPI @ 1.2G	16 ch sLVDS @ 1.2G 4 ch MIPI @ 1.2G	8 ch sLVDS @ 960M	8 ch sLVDS @ 960M	32 ch sLVDS @ 600M
Package	16.6 x 12.9 mm ² 74p LCC	17.6 x 15.8 mm ² 176p LGA	22.9 x 19.4 mm ² 176p LGA	27.1 x 17.9 mm ² 163p LGA	32.7 x 17.9 mm ² 163p LGA	31.7 x 30.4 mm ² 152p μPGA
Availability	ES & EVK	DS & EVK	ES & EVK	EVK & MP	ES & EVK	ES & EVK

Pin Compatible

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