

GMAX3405

5 MP GLOBAL SHUTTER IMAGE SENSOR

GMAX3405 is a 2/3" optical format CMOS image sensor with 2448 x 2048 effective pixels with frame rates up to 164/100 fps in 10/12 bit mode with sub LVDS interface and 73 fps over the 4 alternative MIPI D-PHY channels. Based on a high-performance 3.4 μm charge domain global shutter pixel, GMAX3405 achieves a max full well capacity of 8.5 ke⁻ and min dark noise of 1.6 e⁻, delivering max 66.9 dB linear dynamic range.

GMAX3405 is configurable through I²C or SPI, and supports features such as multislope HDR and short exposure time modes making it an ideal solution for an easy integration into cost-sensitive applications in machine vision, industrial bar code reading, logistics, and traffic.



Key Features and Benefits

- ▶ 5 MP Resolution
- ▶ Charge Domain Electronic Global Shutter
- ▶ High Speed and Good PLS and Angular Response
- ▶ NIR Enhance
- ▶ Multi-Slope HDR
- ▶ Ultra-Short Exposure Time (1us)
- ▶ One Time Programmable(OTP) Memory

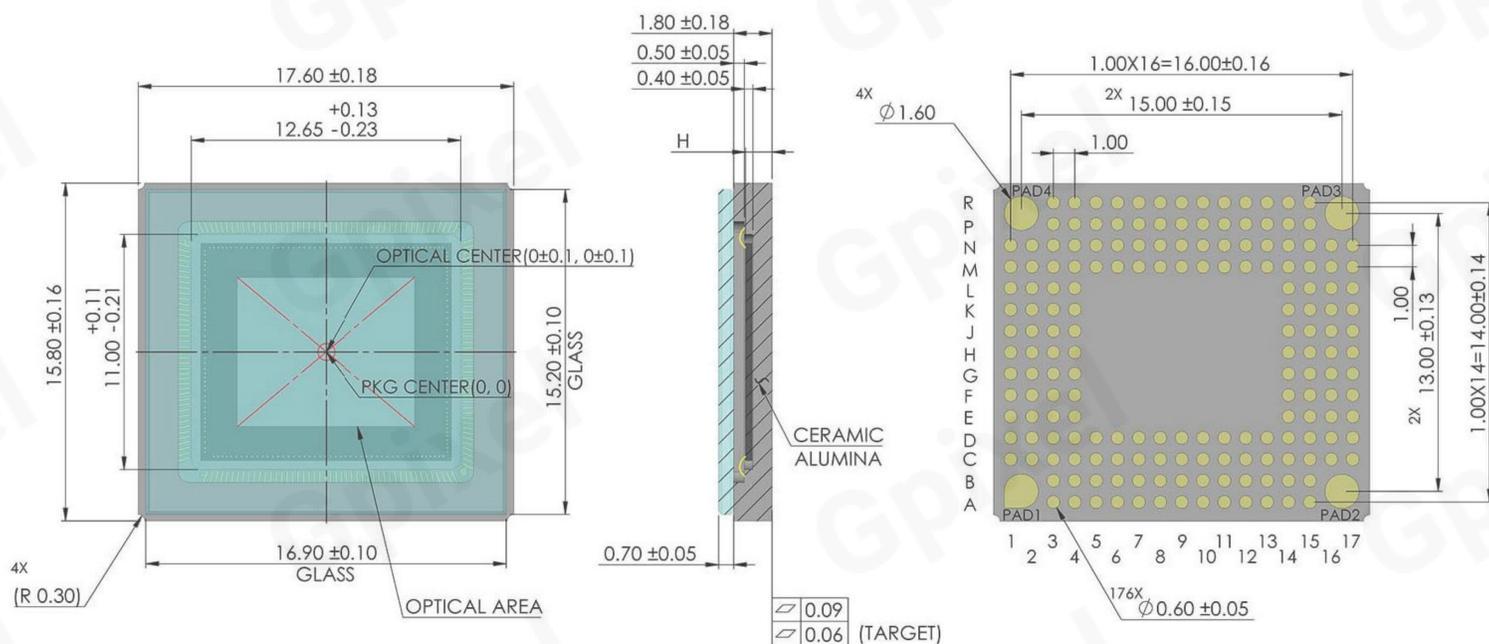
Application

- ▶ Machine Vision
- ▶ Logistics Bar Code Readers
- ▶ Intelligent Traffic System (ITS)

Specifications

Nr of Active Pixels	2448(H) x 2048(V)	Optical Format	2/3"
Pixel Size	3.4 μm x 3.4 μm	Photosensitive Area	8.3 mm x 7.0 mm
Shutter Type	Global Shutter	Parasitic Light Sensitivity	- 88 dB
Peak QE	75% (540 nm)	Angular Response	> 15° (80% Response)
Full Well Capacity	8.7 ke ⁻ (12 bit,PGA gain 1.0x) 8.4 ke ⁻ (10 bit,PGA gain 1.0x)	Temporal Noise	1.6 e ⁻ (12 bit,PGA gain 16.8x) 3.0 e ⁻ (10 bit,PGA gain 2.0x)
Max. SNR	39.3 dB	Dynamic Range	66.9 dB
Dark Current	4.4 e ⁻ /pixel/s (33.9 °C)	ADC	10/12 bit
Max Frame Rate	264 fps	Output Format	12 ch Sub-LVDS 4 lanes MIPI
Power Consumption	< 1.0 W	Max. Data Rate	14.4 Gbps
Supply Voltage	3.6 V (pixel), 3.3 V (analog) 1.8 V – 3.3 V (IO) 1.2 V (digital)	Channel Multiplexing	12/10/8/6/4/2/1 (Sub-LVDS) 4 (MIPI)
Chroma	Mono & RGB Color	Package	176 pins LGA (17.6 mm x 15.8 mm)

Package Drawing



Contact Gpixel

GPIXEL CHINA CHANGCHUN (HQ)

Office Buildings 1 and 5, Phase I, Optoelectronic Information Industrial Park, No. 7691 Ziyou Road, Changchun, Jilin, China.
Phone: +86-431-85077785

GPIXEL EUROPE

Gpixel NV
Copernicuslaan 60, 2018 Antwerpen, Belgium
Phone: +32-33034442

GPIXEL JAPAN

Gpixel Japan Co., Ltd.
TOC Osaki Building 18th Floor, 1-6-1 Osaki, Shinagawa-ku, Tokyo, 141-0032 Japan
Phone: +81-03-5962-1600



Disclaimer: The product information and pictures in this flyer are for reference only. For the latest information please visit www.gpixel.com.
GP-PR251121 V1.2