

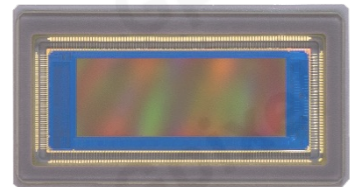
# GMAX3413 Product Flyer



## 12.7MP Wide Aspect Ratio Global Shutter CMOS Image Sensor

**GMAX3413** 12.7 MP resolution into a 4/3" image format in a wide aspect ratio offering an optimal coverage of the field of view of interest in the intended applications such as Intelligent Traffic System (ITS) and logistics and parcel sorting. Low noise global shutter technology and generous pixel size achieves a full 71.4 dB linear dynamic range accomplished by building upon existing GMAX product pixel know how, but further optimized for the envisaged applications. Gpixel's Red Fox technology is employed to deliver a NIR-enhanced QE of 30% at 850 nm for excellent performance in intelligent traffic systems.

**GMAX3413** is configurable through SPI or I2C and supports on-chip color offset calibration, LED flicker mitigation, multiple region HDR and OTP functions. **GMAX3413** is housed in a 163-pin ceramic LGA package with outer dimensions of 32.7 mm x 17.9 mm and an LGA pad pattern optimized for reliable solder connections.



### Key Features

- Low noise, large size global shutter pixel provided optimal SNR
- Wide aspect ratio
- LED flicker mitigation
- Multiple region HDR
- Vertical and horizontal ROI and image flipping
- Excellent PLS and angular response
- On-chip color offset calibration

### Applications

- Traffic & Transportation
- Logistics and parcel sorting
- Automation & Inspection

## Sensor Specifications

Resolution	5900 (H) x 2160 (V)	Optical format	4/3"
Pixel size	3.4 $\mu\text{m}$ x 3.4 $\mu\text{m}$	Photo-sensitive area	20.1 mm x 7.3 mm
Shutter type	Global Shutter	Quantum efficiency	62.7% @540nm
Full well capacity	8.6 ke <sup>-</sup>	Parasitic light sensitivity	-92 dB
Dark noise	2.3 e <sup>-</sup>	Angle response	>15°@ 80% response
Dark Current	81 e <sup>-</sup> /pixel/s @ 35°C	SNR Max	39 dB
Dynamic Range	71.4 dB	Frame rate	32 fps
Output Interface	8 ch LVDS	Channel multiplexing	16/8/4
ADC	12 bit	Max. Data rate	4.1 Gbps
Chroma	Mono & Color	Power consumption	<1.5 W
I/O voltage	3.3 V/1.3V (analog) 1.8 V-3.3 V(I/O) 1.3 V(digital)	Package	LGA 163 pins 32.7 mm x 17.9 mm

## Ordering Information

### Sensor Part No.

**GMAX3413-AVC-NLT-BUD**

Bayer RGB, with microlenses, ceramic 163 pins LGA, Sealed D 263® T eco glass with AR coating. 32 fps @ 12-bit 8 x LVDS, Demo Grade

### EVK Part No.

**EVA-3413-NF12**

Evaluation board Operation mode: 12-bit mode  
Lens holder: F-mount  
Interface: USB 3.0

## Contact Gpixel HQ

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