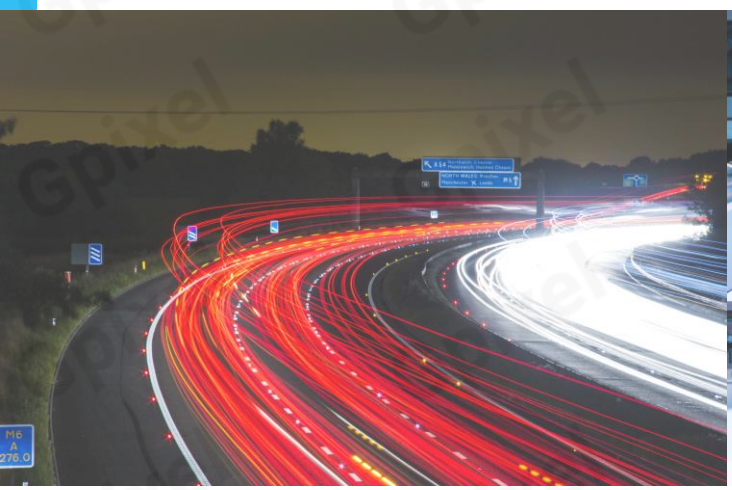
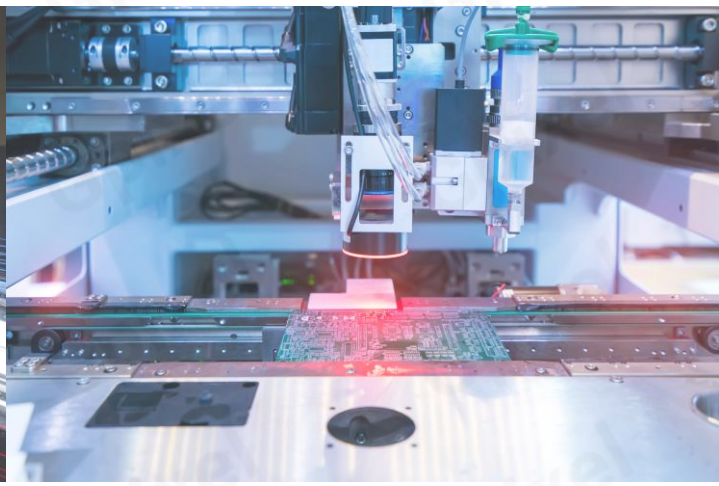
GMAX3809 Product Flyer





3.8UM 9MP GLOBAL SHUTTER IMAGE SENSOR

GMAX3809 fits 4096(H) x 2160(V) (9 MP) resolution into a 1.1" image format with low noise, charge domain Global Shutter pixels running at 65 fps at 12-bit ADC resolution per pixel. GMAX3809's 3.8 μm pixel achieves a full well capacity of 11.5 ke- and noise of 3.6 e-, delivering over 70 dB linear dynamic range. Similar to other GMAX products, the advanced pixel technology brings a Parasitic Light Sensitivity of -92 dB and excellent angular response (> 15° @ 80% response). 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.

GMAX3809 is configurable through SPI or I²C and supports on-chip color offset calibration, LED flicker mitigation, multiple region HDR and OTP functions. GMAX3809 is housed in a 163-pin ceramic LGA package with outer dimensions of 27.1 mm x 17.9 mm and an LGA pad pattern optimized for reliable solder connections. The sensor assembly includes a double side AR coated cover glass lid.

Key Features

- Configure through SPI or I²C
- On-chip color offset calibration
- LED flicker mitigation
- Multiple region HDR
- One Time Programmable(OTP) Memory

Applications

- Intelligent Traffic System (ITS)
- Machine Vision

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Gpixel

Sensor Specifications

Resolution	4096 x 2160	Optical format	1.1" (17.6mm)
Pixel size	3.8 um × 3.8 um	Photo-sensitive area	15.6 mm × 8.2 mm
Shutter type	Global shutter	Quantum efficiency	> 60.8%@ 550 nm > 30% @ 850 nm
Full well capacity	11.5 ke^- (x 1 Gain)	Shutter efficiency	1/40000
Dark noise	3.6 e^-	Angular response	> 15 ° (80% response)
Dynamic range	70.1 dB	Frame rate	65 fps
Output interface	8 pairs of sub-LVDS	Channel multiplexing	8/4
ADC	12 bit	Max. Data rate	7.68 Gbps
Chroma	Mono & Color	Power consumption	<1 W
Power supply	3.3V / 1.8V / 1.2V	Package	163 pins LGA

Ordering Information

Sensor Part No.

GMAX3809-BVC-NLT-BUD
Bayer RGB, with microlens, ceramic 163 pins LGA, Sealed D 263® T eco glass with AR coating. 50 fps @ 12 bit 8 x LVDS,
Demo Grade

EVK Part No.

EVA-GMAX3809, USB interface, 3 stacked PCB boards

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