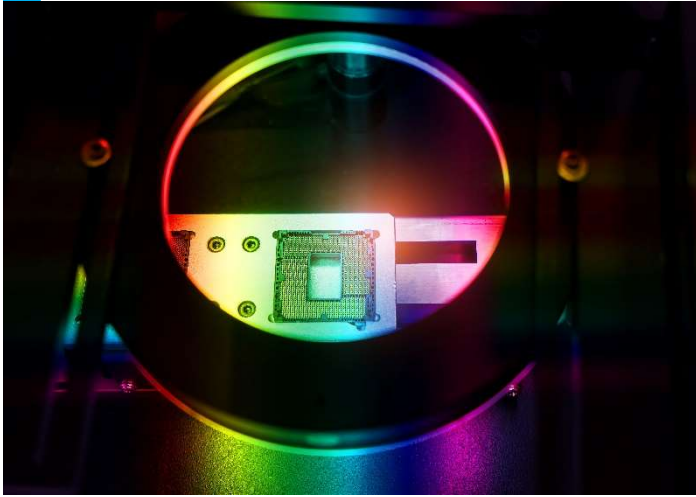


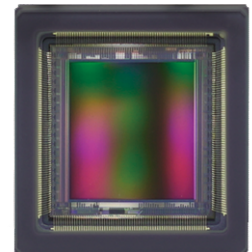
# GMAX2518 Product Flyer



## 18MP GLOBAL SHUTTER IMAGE SENSOR

GMAX2518 has an optical format of 1" and features 18 MegaPixel (4508 × 4096) Global Shutter pixels based on the proven GMAX 2.5 um architecture, operating with true correlated double sampling (CDS) for low read noise and high dynamic range. In addition, the dual light pipe technology provides excellent PLS and angular response, with 32pair of sub-LVDS each run at 960MHz, the sensor output with maximum 30.72 Gbps data, achieving maximum frame rate of 150 fps in 10-bit output and 64 fps in 12-bit output.

The sensor integrates an on-chip sequencer, programmable through SPI, and is designed to be fully pin compatible with GMAX0505, GMAX2509 and GMAX2505 to significantly shorten time to market for camera manufactures. GMAX2518 will be assembled in a 19.5 x 20.8 mm 226-pins LGA ceramic package, which is mechanically compatible to fit into an industry standard 29 mm x 29 mm camera housing.



### Key Features

- 2.5 um Global Shutter pixel
- > 64% peak QE, < -80dB shutter efficiency
- High data throughput up to 30.72 Gbps
- Mechanically compatible with industry standard camera
- High speed and Good PLS
- Frame rate up to 139fps @10-bit & 64fps @12-bit

### Applications

- High Resolution Industrial Inspection
- Machine Vision
- Intelligent Traffic System (ITS)

## Sensor Specifications

Resolution	4508 x 4096	Optical format	1"
Pixel size	2.5 $\mu$ m × 2.5 $\mu$ m	Photo-sensitive area	11.27mm × 10.24mm
Shutter type	Global shutter	Quantum efficiency	> 65%
Full well capacity	8 ke <sup>-</sup>	Shutter efficiency	1/10000
Dark noise	1.6 e <sup>-</sup>	Dark current	6.5e <sup>-</sup> /p/s @ 45°C
Dynamic range	61.9dB @ 10bit	Frame rate	139fps @ 10bit
	66.9dB @ 12bit		64fps @ 12bit
Output interface	32 pairs of sub-LVDS	Channel multiplexing	32/16/12/8/6/4/2
ADC	10/12bit	Max. Data rate	30.72 Gbps
Chroma	Mono & Color	Power consumption	< 1.2W
I/O volatge	1.8V - 3.3V	Package	226 pins LGA
			20.79mmx19.49mm

## Ordering Information

### Sensor Part No.

GMAX2518-AVM-HLT-AU1  
High speed, 139fps, 10bit, mono, Grade 1

GMAX2518-AVM-HLT-AU2  
High speed, 139fps, 10bit, mono, Grade 2

GMAX2518-AVM-NLT-AU1  
Normal speed, 64fps, 12bit, mono, Grade 1

GMAX2518-AVM-NLT-AU2  
Normal speed, 64fps, 12bit, mono, Grade 2

GMAX2518-AVC-HLT-AU1  
High speed, 139fps, 10bit, color, Grade 1

GMAX2518-AVC-HLT-AU2  
High speed, 139fps, 10bit, color, Grade 2

GMAX2518-AVC-NLT-AU1  
Normal speed, 64fps, 12bit, color, Grade 1

GMAX2518-AVC-NLT-AU2  
Normal speed, 64fps, 12bit, color, Grade 2

### EVK Part No.

EVA-2518-HC10 (10bit) / EVA-2518-NC12 (12bit)  
USB interface, 3 stacked PCB boards

## Contact

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