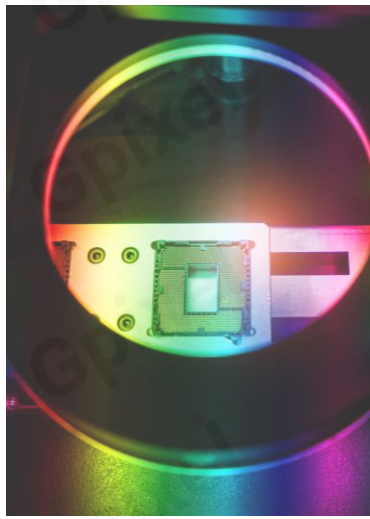


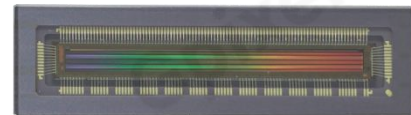
GL0402 Product Flyer



4K LINEAR CMOS IMAGE SENSOR

GL0402 is a 4096 x 2 resolution, 7 μ m square pixel, global shutter linear image sensor that supports a maximum line rate of 200kHz in single line mode and 100kHz in dual line mode. **GL0402** offers a read noise of less than 5.2e⁻ and 10ke⁻ FWC, providing a 65.6dB intra-scene dynamic range. In pixel low gain setting, FWC increases to 27.5ke⁻. The monochromatic version of **GL0402** supports 1x2 and 2x2 binning to further increase sensitivity, which is described in a separate application note.

GL0402 uses an external clock and all required timing is generated by the on-chip sequencer, reducing the amount of external components needed. Output channel multiplexing enables flexibility in FPGA selection. **GL0402** enables a cost-effective camera solution for demanding inspection applications.



Key Features

- 7 μ m square pixels
- Electronic Global Shutter
- External Triggering
- Static pixel gain selection
- Horizontal image flipping
- 1x2 and 2x2 Binning

Applications

- Machine Vision
- Railway Inspection
- Optical Coherence Tomography
- Logistic

Sensor Specifications

Resolution	4096 × 2	Photosensitive length	28.672mm
Pixel size	7 μ m × 7 μ m	Quantum efficiency	75% @ 570nm
Data rate	10.944Gbps	Output channel	12 x sub-LVDS
Chroma	Mono & Color	Power consumption	2.2W
Package	76-pin CLCC	Max. Line rate	200kHz

Operation Modes

Operation mode	Single-line mode	Dual-line mode
Line rate	200kHz	100kHz
Readout noise	11.5e-@LG, 5.2e-@HG	21e-@LG, 6.8e-@HG
FWC	25ke-@LG, 10ke-@LG,	20ke-@LG, 9.2ke-@LG
Dynamic range	66.7dB@LG, 65.6dB@LG	59.5dB@LG, 62.6dB@LG

Ordering Information

Sensor Part No.

GL0402-BVM-NCN-AU1
Monochrome, no microlens, Grade 1.

GL0402-BVM-NCN-AUE
Monochrome, no microlens, Grade E.

GL0402-BVC-NCN-AU1
Bayer Color, no microlens, Grade 1.

GL0402-BVC-NCN-AUE
Bayer Color, no microlens, Grade E.

EVK Part No.

EVA-0402-1C12, USB interface,
PCB boards

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