

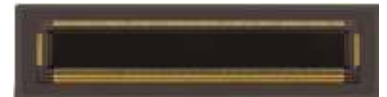
# GLT5009BSI Product Flyer



## 9072 X 256 STAGES BSI CMOS TDI IMAGE SENSOR

GLT5009BSI is a Backside illuminated (BSI), Time delay integration (TDI), charge domain CMOS image sensor with 5 $\mu$ m pixels and 9072 effective resolutions. The sensor has two photosensitive bands, 256 stages and 32 stages respectively, which is designed to meet the needs of high speed and low light applications by maximizing sensitivity from the ultraviolet to the near infrared with state-of-art BSI scientific CMOS technology.

GLT5009BSI Sensor integrates an on-chip sequencer, supports 10bit dual band HDR mode. It also supports channel multiplexing and selectable 2 scan directions (Forward and Reverse). It is assembled in a 269-pin  $\mu$ PGA package for reliability and good heat dissipation.



### Key Features

- 2 photosensitive bands: P1 band and P2 band
- P1 band: 9072 pixels x 256 stages
- P2 band: 9072 pixels x 32 stages
- Max. line frequency: 608kHz @ 10bit
- Pixel size: 5 $\mu$ m x 5 $\mu$ m
- Charge domain BSI TDI

### Applications

- FPD Inspection
- PCB Inspection
- Wafer Inspection
- Fluorescence Imaging
- Digital Pathology

## Sensor Specifications

Active pixels	P1: 072x256Effective 9288x256Readable P2: 9072x32 ffective 9288x32Readable	Photo-sensitive area	P1: 45.36mmx1.28mm P2: 5.36mmx0.16mm
Pixel size	5um x 5um	optical black columns	100(left) + 100(right)
Input clock rate	35 – 70 MHz Default is 36 MHz	Line frequency	608 kHz @ 10bit 300 kHz @ 12bit
Full well capacity	15.8ke <sup>-</sup> @ 10bit 19.2 ke <sup>-</sup> @ 12bit	Temporal noise	11.4 e <sup>-</sup> @ 10bit 7.2 e <sup>-</sup> @ 12bit
dynamic range	63.6 dB @ 10bit 68.7 dB @ 12bit	Charge transfer	≥ 0.99993
Dark Current	4 ke <sup>-</sup> /s/pixel	PRNU	0.6%@128 stage
Max. data rate	74.304Gbps	Supply voltage	5V for analog 1.8V for digital /ADC
Output format	84 x Sub-LVDS 2 x Sub-LVDS@OB 3 x Sub-LVDS@DDR	Channel Multiplexing	84/42/21/12/6/3
Power consumption	<5.5W @300kHz	Chroma	Mono

## Ordering Information

### Sensor Part No.

GLT5009BSI-BBM-NUN- AR1  
Monochromatic

GLT5009BSI-BBM-NUN- BR1  
Monochromatic

GLT5009BSI-BBM-NUN- BRE  
Monochromatic

GLT5009BSI-BBM-NUN- BU1  
Monochromatic

GLT5009BSI-BBM-NUN- BUE  
Monochromatic

### EVK Part No.

EVA-5009B-CTC, USB interface,  
PCB boards

## Contact

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