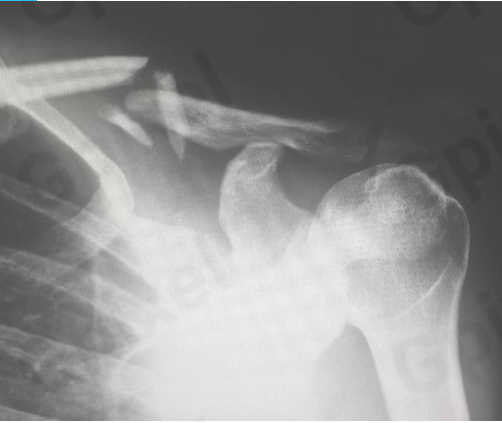


# GSENSE4040BSI Product Flyer



## 16.8MP BSI SCIENTIFIC CMOS IMAGE SENSOR

GSENSE4040BSI is a 16.8 Megapixel resolution CMOS image sensor. Featured with five transistor (5T) HDR pixel design on a  $9\mu\text{m}$  pixel pitch the sensor can achieve  $2.3e^-$  readout noise with  $39.2ke^-$  FWC simultaneously by dual-gain HDR readout mode.

By 18 pairs of LVDS data output channels at working at 600Mbps GSENSE4040BSI provides a maximum frame rate of 24fps (HDR mode).

GSENSE4040BSI sensor is pin-compatible with GSENSE4040FSI sensor this feature can much save camera RD resource for development and design time.



### Key Features

- $9\mu\text{m}$  Square Pixels
- Read noise  $2.3e^-$
- Maximum frame rate of 24 fps @HDR
- 18x pairs of LVDS data output channels
- Power consumption :  $<1.4W$

### Applications

- Astronomy imaging
- Medical imaging
- X-ray imaging

## Sensor Specifications

Resolution	4096 x 4096	Photo-sensitive area	36.864mm × 36.864mm
Pixel size	9μm × 9μm	Operation temperature	-40°C ~50°C
Shutter type	Rolling shutter	Quantum efficiency	90% @ 600nm
Full well capacity	39.2 ke <sup>-</sup>	Pixel clock rate	50M Hz
Dark noise	2.3 e <sup>-</sup>	Dark current	0.04 e <sup>-</sup> /p/s @ -40°C
Dynamic range	84.6 dB	Frame rate	24 fps
Data output interface	18 pairs of LVDS	Max. Data rate	10.8G bps
Chroma	Mono	Power consumption	<1.4 W
Supply voltage	3.3V for analog 1.8V for digital	Package	140 pins PGA 51.5mmx53mm

## Ordering Information

### Sensor Part No.

GSENSE4040BSI-ABM-NPN-AR0  
Mono, no micro-lens, Removable glass, Grade 0

GSENSE4040BSI-ABM-NPN-BB0  
Mono, no micro-lens, sealed glass, Grade 0

GSENSE4040BSI-ABM-NPN-AR1  
Mono, no micro-lens, Removable glass, Grade 1

GSENSE4040BSI-ABM-NPN-BB1  
Mono, no micro-lens, Sealed glass, Grade 1

GSENSE4040BSI-ABM-NPN-AR2  
Mono, no micro-lens, Removable glass, Grade 2

GSENSE4040BSI-ABM-NPN-BB2  
Mono, no micro-lens, Sealed glass, Grade 2

### EVK Part No.

EVA-4040B-RT12, camera link, single stacked PCB board

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