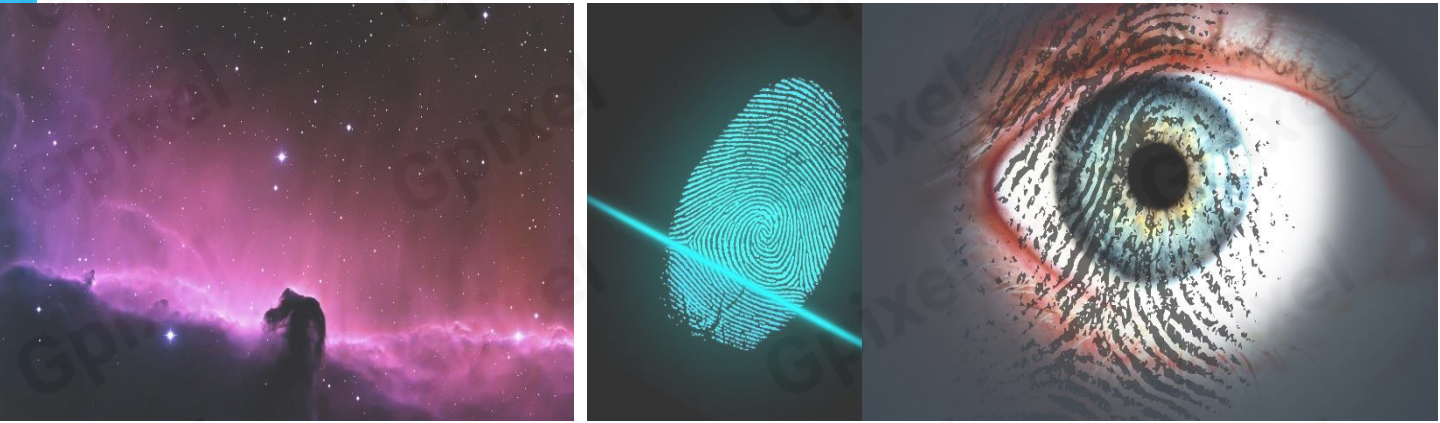
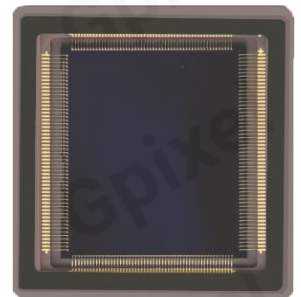


# GSENSE2020 Product Flyer



## 4MP SCIENTIFIC CMOS IMAGE SENSOR

**GSENSE2020** is a 4 Mega pixel resolution scientific CMOS image sensor. Featured with six transistor (6T) pixel design on a  $6.5\mu\text{m}$  pitch, the sensor has a low readout noise of  $2.1 e^-$  in rolling shutter HDR mode. **GSENSE2020**'s max. frame rate is 47fps in rolling HDR mode. Housed in a 153-pin  $\mu$ PGA package, **GSENSE2020** features  $2e^-$  readout noise, 87dB intra-scene dynamic range, and frame rate up to 370fps. With optimized microlens array, **GSENSE2020** has an outstanding quantum efficiency of 72% at 595nm. These features make both sensors ideal for low light imaging, high-end security and surveillance, 3D laser scan, scientific and medical applications.



### Key Features

- $6.5\mu\text{m}$  Square Pixels
- Quantum efficiency of 72% @ 595nm.
- Max. frame rate up to 47fps @RS HDR mode
- Max. frame rate up to 370fps @GS DDS mode
- Readout noise:  $2.1 e^-$
- On-chip PLL

### Applications

- Biometry and Medical
- Industrial and Machine vision
- Security, Traffic and Surveillance
- Spectral Application
- Astronomy Application

## Sensor Specifications

Resolution	2048 x 2048	Optical format	1.2 "
Pixel size	6.5 $\mu$ m x 6.5 $\mu$ m	Photo-sensitive area	13.3mm x 13.3mm
Shutter type	Rolling & Global shutter	Quantum efficiency	72%@ 595nm
Full well capacity	45 ke <sup>-</sup>	Pixel clock rate	50MHz
Dark noise	<2.1e <sup>-</sup>	Dark current	13e <sup>-</sup> /p/s @ 30°C
Dynamic range	86.6dB	Frame rate	47fps @RS HDR mode 370fps @GS DDS mode
Output interface	8 pairs of LVDS	Max. Data rate	4.8Gbps
Chroma	Mono	Power consumption	811mW
Supply voltage	3.3V for analog 2.0V for digital	Package	153 pins $\mu$ PGA 26.1mmx29.5mm

## Ordering Information

### Sensor Part No.

**GSENSE2020-BVC-NUY-BB1**  
Color, normal microlens, Grade 1

**GSENSE2020-BVC-NUY-BB2**  
Color, normal microlens, Grade 2

**GSENSE2020-BVM-NUY-BB1**  
Mono, normal microlens, Grade 1

**GSENSE2020-BVM-NUY-BB2**  
Mono, normal microlens, Grade 2

### EVK Part No.

**EVA-2020F-XC10 (10bit) / EVA-2020F-RC12 (12bit)**  
USB interface, 3 stacked PCB boards

## Contact Gpixel HQ

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