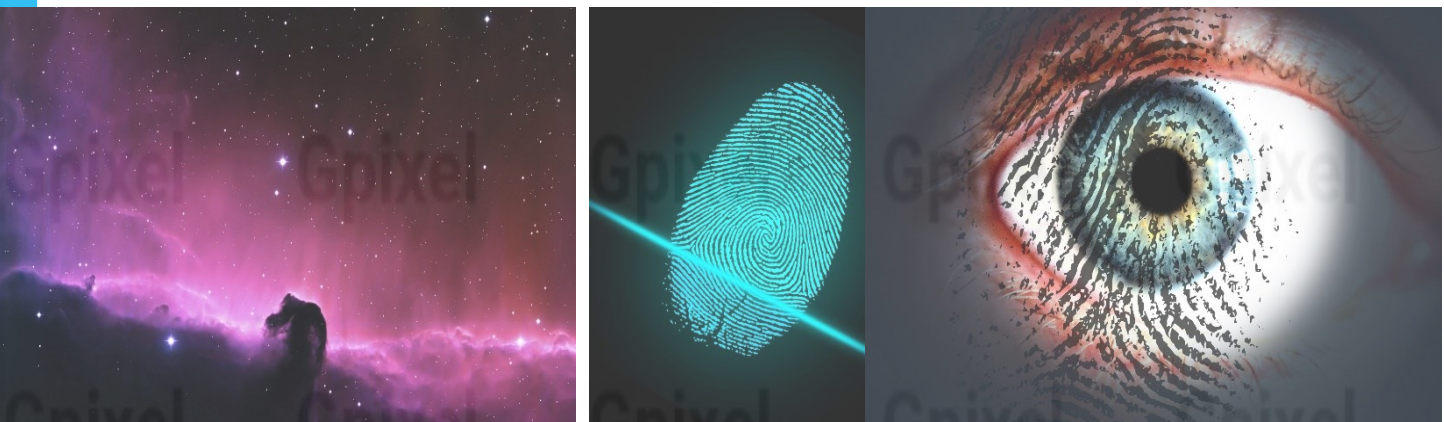


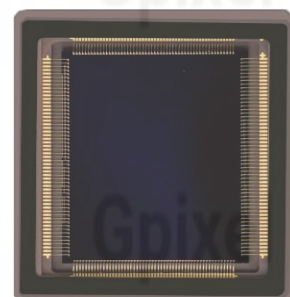
GSENSE2020 Product Flyer



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 μ 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 μ 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 μ 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	6.5μm × 6.5μm	Photo-sensitive area	13.3mm × 13.3mm
Shutter type	Rolling & Global shutter	Quantum efficiency	72%@ 595nm
Full well capacity	45 ke ⁻	Pixel clock rate	50MHz
Dark noise	<2.1e ⁻	Dark current	13e ⁻ /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 μPGA 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

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