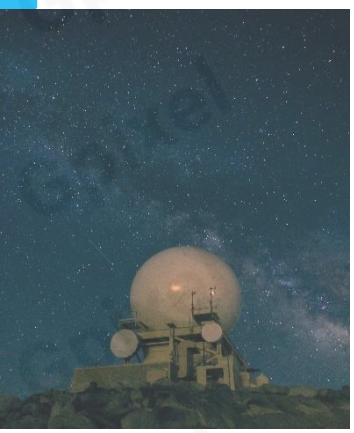
GSENSE2011 Product Flyer



2MP SCIENTIFIC CMOS IMAGE SENSOR

GSENSE2011 is a 2Mega pixel resolution scientific CMOS image sensor, capable of operating with either global or rolling shutter. Featured with six transistor (6T) pixel design on a 6.5μm pitch, the sensor has a very low readout noise of 2.1e^- in rolling shutter mode. GSENSE2011's max. frame rate is 81fps in rolling shutter mode, and 653fps in 10bit global shutter DDS mode.

Sensor has an outstanding quantum efficiency of 72% at 595nm. These features make both sensors ideal for low light imaging, 3D laser scan, scientific and medical applications.

GSENSE2011 sensor is a smaller version of GSENSE2020 sensor with change of resolution and optical format.

Key Features

- Quantum efficiency of 72% @ 595nm.
- Max. frame rate up to 81fps @RS HDR
- Max. frame rate up to 653fps @GS DDS
- Readout noise: 2.1 e^-

Applications

- Biometry and Medical
- Industrial and Machine vision
- Spectral Application
- Astronomy Application

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Sensor Specifications

Resolution	2048 x 1152	Optical format	1 “
Pixel size	6.5μm × 6.5μm	Photo-sensitive area	13.3mm × 7.5mm
Shutter type	Rolling & Global shutter	Quantum efficiency	72%@ 595nm
Full well capacity	45 ke^-	Pixel clock rate	50MHz
Dark noise	2.1 e^-	Dark current	13 $e^-/p/s$ @ 30°C
Dynamic range	86.6 dB	Frame rate	81fps @RS HDR 653fps @GS DDS
Output interface	8 pairs of LVDS	Max. Data rate	4.8Gbps
Chroma	Mono	Power consumption	＜811mW
ADC	10 / 12bit	Sensitivity:	$8.1x10^7$ e-/((W/m2)·s)@ 595nm
Supply voltage	3.3V for analog 2.0V for digital	Package	153 pins μPGA 26.1mmx23.5mm

Ordering Information

Sensor Part No.

GSENSE2011-BVC-NUY-BB1 Color, normal microlens, Grade 1	GSENSE2011-BVC-NUY-BB2 Color, normal microlens, Grade 2
GSENSE2011-BVM-NUY-BB1 Mono, normal microlens, Grade 1	GSENSE2011-BVM-NUY-BB2 Mono, normal microlens, Grade 2

EVK Part No.

EVA-2011F-XC10 (10bit DDS) / EVA-2011F-RC12 (12bit HDR)
USB interface, 3 stacked PCB boards

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