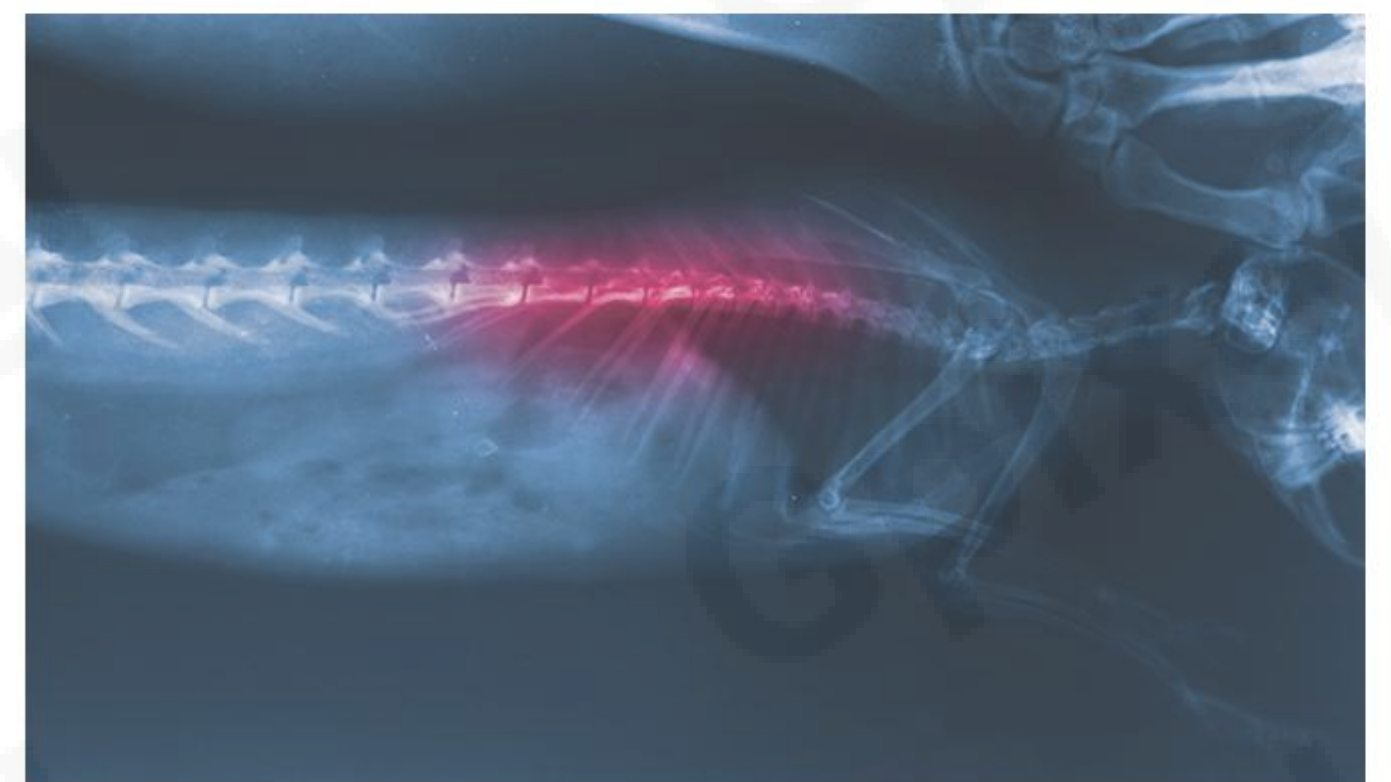


# GSENSE Series

## SCIENTIFIC CMOS IMAGE SENSORS

### GSENSE

The GSENSE series is a world leading scientific CMOS image sensor family, designed with correlated multiple sampling for extreme low noise, true HDR for high dynamic range and optional backside illumination technology for quantum efficiency of up to 97%. Primary applications include scientific imaging, medical imaging, spectroscopy, fluorescence imaging, astronomy, high energy physics, and high-end surveillance.



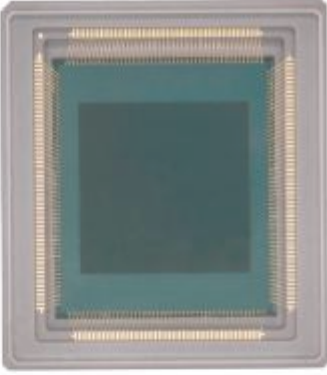
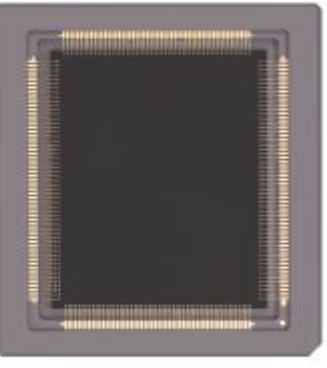
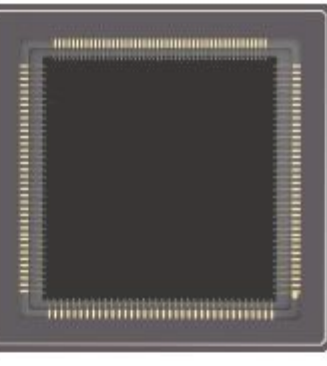
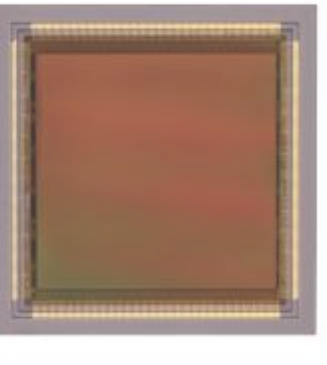
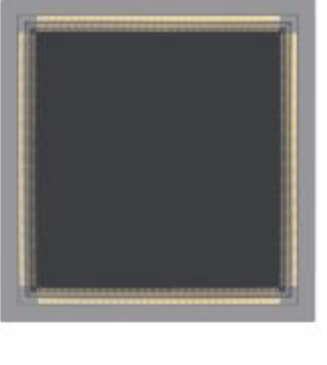
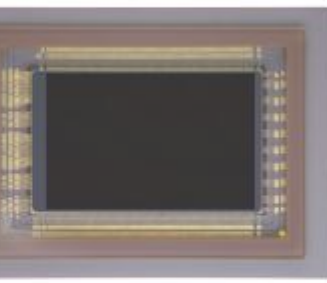
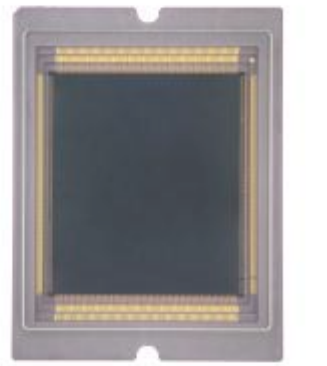
#### Product Family Features

- ✓ sCMOS
- ✓ FSI and BSI options
- ✓ HDR dual gain combination to 90 dB
- ✓ Low noise
- ✓ On-chip temperature sensor
- ✓ On-chip SPI sensor
- ✓ Electrical black pixels for offset correction
- ✓ Pixel micro lenses for high QE
- ✓ Removable glass versions

#### Applications

- ✓ Medical Imaging
- ✓ Scientific Imaging
- ✓ Spectroscopy
- ✓ Fluorescence imaging
- ✓ 3D laser profiling
- ✓ Astronomy



| CMOS Image Sensors |                                                                                     | Resolution  | Pixel Size (μm²) | Optical Format | Shutter Type | Dark Current (e <sup>-</sup> /s/pixel) | Peak QE      | FWC Max (ke <sup>-</sup> ) | Temporal Noise Min (e <sup>-</sup> ) | DR Max (dB) | ADC (bit) | Max Frame Rate(fps) |
|--------------------|-------------------------------------------------------------------------------------|-------------|------------------|----------------|--------------|----------------------------------------|--------------|----------------------------|--------------------------------------|-------------|-----------|---------------------|
| GSENSE6504BSI      |    | 2048 x 2048 | 6.5 x 6.5        | 1.2" 18.8 mm   | Rolling      | 0.004 (-30°C)                          | 95% (450 nm) | 13.4                       | 0.5                                  | 83.4        | 12        | 300                 |
| GSENSE2020BSI      |    | 2048 x 2048 | 6.5 x 6.5        | 1.2" 18.8 mm   | Rolling      | 0.07 (-30°C)                           | 95% (560 nm) | 55                         | 1.2                                  | 90.5        | 12/11     | 74                  |
| GSENSE400BSI       |    | 2048 x 2048 | 11.0 x 11.0      | 2" 31.9 mm     | Rolling      | 0.27 (-40°C)                           | 95% (570 nm) | 91                         | 1.6                                  | 95          | 12        | 48                  |
| GSENSE4040         |  | 4096 x 4096 | 9.0 x 9.0        | 3.3" 52.1 mm   | Rolling      | 12.2 (25°C)                            | 74% (600 nm) | 74.2                       | 3.7                                  | 86          | 12        | 24                  |
| GSENSE4040BSI      |  | 4096 x 4096 | 9.0 x 9.0        | 3.3" 52.1 mm   | Rolling      | 0.04 (-40°C)                           | 90% (600 nm) | 39.2                       | 2.3                                  | 84.6        | 12        | 24                  |
| GSENSE6060         |  | 6144 x 6144 | 10.0 x 10.0      | 5.4" 86.9 mm   | Rolling      | 0.01 (-70°C)                           | 72% (550 nm) | 133                        | 4.1                                  | 89          | 14/12     | 44                  |
| GSENSE6060BSI      |  | 6144 x 6144 | 10.0 x 10.0      | 5.4" 86.9 mm   | Rolling      | 0.04 (-40°C)                           | 95% (580 nm) | 95                         | 3                                    | 90          | 14/12     | 26                  |
| GSENSE3243BSI      |  | 8192 x 5232 | 3.2 x 3.2        | 1.2" 31.1 mm   | Rolling      | 7.8 (40°C)                             | 80% (550 nm) | 85                         | 2                                    | 83          | 14        | 100                 |
| GSENSE6510BSI      |  | 3200 x 3200 | 6.5 x 6.5        | 1.9" 29.4 mm   | Rolling      | 0.2 ( -10°C)                           | 95% (610 nm) | 21                         | 0.7                                  | 78.8        | 12/11/8   | 500                 |
| GSENSE1517BSI      |  | 4116 x 4100 | 15.0 x 15.0      | 5.45" 87.1 mm  | Rolling      | 0.008 (-70°C)                          | 92% (450 nm) | 70                         | 1.2                                  | 95.3        | 16        | 4                   |
| GSENSE1081BSI      |  | 8900 x 9120 | 10.0 x 10.0      | 7.96" 127.4 mm | Rolling      | 0.00373 (-70°C)                        | 97% (610 nm) | 90.7                       | 5.4                                  | 84.5        | 16/15     | 0.9                 |

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