Prosilica GE

4000

• 11 Megapixel camera
• ON Semi KAI-11002 sensor
• Galvanically isolated I/O
• Various lens mount options

11 Megapixel ON Semi KAI-11002 CCD camera, 5 frames per second

Prosilica GE4000 is a very high-resolution CCD camera with Gigabit Ethernet output (GigE Vision®). This camera features the high-quality 35 mm optical format ON Semiconductor KAI-11002 CCD image sensor that provides exceptionally high resolution, sensitivity, and dynamic range. At full resolution, this camera has a frame rate of 5 frames per second. With a smaller region of interest higher frame rates are possible. By default monochrome models ship with no optical filter and color models ship with an IRC30 IR cut filter.

Specifications

<table>
<thead>
<tr>
<th>Prosilica GE</th>
<th>4000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
<td>IEEE 802.3 1000baseT</td>
</tr>
<tr>
<td>Resolution</td>
<td>4008 (H) × 2672 (V)</td>
</tr>
<tr>
<td>Sensor</td>
<td>ON Semi KAI-11002</td>
</tr>
<tr>
<td>Sensor type</td>
<td>CCD Progressive</td>
</tr>
<tr>
<td>Sensor size</td>
<td>Type 35 mm</td>
</tr>
<tr>
<td>Pixel size</td>
<td>9 µm × 9 µm</td>
</tr>
<tr>
<td>Lens mount (default)</td>
<td>F-Mount</td>
</tr>
<tr>
<td>Max. frame rate at full resolution</td>
<td>5 fps</td>
</tr>
<tr>
<td>ADC</td>
<td>12 Bit</td>
</tr>
<tr>
<td>Image buffer (RAM)</td>
<td>32 MByte</td>
</tr>
</tbody>
</table>

Output

| Bit depth   | 8/12 Bit |
| Monochrome pixel formats | Mono8, Mono12, Mono12Packed |
## Prosilica GE4000

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw pixel formats</td>
<td>BayerGR8, BayerGR12, BayerGR12Packed</td>
</tr>
<tr>
<td>General purpose inputs/outputs (GPIOs)</td>
<td>1 input, 3 outputs (with galvanic isolation)</td>
</tr>
<tr>
<td>TTL I/Os</td>
<td>1 input, 3 outputs (with galvanic isolation)</td>
</tr>
<tr>
<td>RS232</td>
<td>1</td>
</tr>
</tbody>
</table>

### Operating conditions/dimensions

- **Operating temperature**: 0 °C to +50 °C ambient (without condensation)
- **Power requirements (DC)**: 5 to 24 VDC
- **Power consumption**: 6 W at 12 VDC
- **Mass**: 402 g
- **Body dimensions (L × W × H in mm)**: 110 × 66 × 66 (including connectors)
- **Regulations**: 2011/65/EU, including amendment 2015/863/EU (RoHS)

### Quantum efficiency

![Quantum efficiency graph](image)

### Features

**Prosilica GE4000 features include:**

- Defect masking for columns
- Region of interest (ROI), DSP subregion (selectable ROI for auto features)
- Binning (Sum)
- Auto gain (manual gain control: 0 to 34 dB)
- Auto exposure (manual exposure controls: 140 µs to 68.7 s)
- Auto white balance
- StreamBytesPerSecond (bandwidth control)
- Stream hold
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Global shutter (digital shutter)
- Recorder and Multiframe acquisition modes
- Event channel
- Image chunk data
- Storable user sets
Technical drawing

*Nominal value Add 0.3 mm for color cameras.
Applications

Prosilica GE4000 is ideal for a wide range of applications including:

- LCD panel inspection
- Semiconductor wafer inspection
- Solar panel inspection
- Aerial photography
- 3D metrology
- General machine vision
- Public security
- Surveillance
- Traffic imaging (Intelligent Traffic Systems)
- Embedded systems
- OEM applications