GL0816 Product Flyer

5UM 8K LINE SCAN CMOS IMAGE SENSOR

Designed for high speed industrial inspection, GL0816 is a line scan CMOS image sensor consists of 16 lines of 8322 pixels with 5μm pixel size and 5μm inter-line spacing. It supports dual line, 4-line readout and max 8 lines with 2-stage on-chip TDI. The maximum line rate of GL0816 is 200kHz. GL0816 is manufactured with Mono or RGBW 4-band CFA with low color crosstalk to enable accurate image reproduction.

Key Features
- Resolution: 8322 (H) x 16 (V)
- 5μm square pixels
- Global shutter
- 16 lines with 5μm inter-line spacing
- 10/11bit ADC depth
- Channel multiplexing

Applications
- Industrial Inspection
- Printing Inspection
- Label Inspection
- Film Inspection
- PCB Inspection

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Sensor Specifications

<table>
<thead>
<tr>
<th>Active pixels</th>
<th>8322 (H) x 16 (V)</th>
<th>Shutter type</th>
<th>Global shutter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel size</td>
<td>5μm x 5μm</td>
<td>Photo-sensitive area</td>
<td>41.61mm x 0.08mm</td>
</tr>
<tr>
<td>Input clock rate</td>
<td>80MHz@10bit</td>
<td>Max Line rate</td>
<td>200KHz @2-line 11bit</td>
</tr>
<tr>
<td></td>
<td>66.67MHz@11bit</td>
<td></td>
<td>100KHz @4-line 10bit</td>
</tr>
<tr>
<td>Full well capacity</td>
<td>17ke- @2-line 11bit</td>
<td>Temporal noise</td>
<td>13e- @2 11bit</td>
</tr>
<tr>
<td></td>
<td>15ke- @4-line 10bit</td>
<td></td>
<td>17e- @4-line 10bit</td>
</tr>
<tr>
<td>Dynamic range</td>
<td>62dB @2-line 11bit</td>
<td>Peak QE (Mono)</td>
<td>&gt;70% @600nm</td>
</tr>
<tr>
<td></td>
<td>58.9dB@4-line 10bit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply voltage</td>
<td>3.3V for analog</td>
<td>Output format</td>
<td>66 pairs of LVDS</td>
</tr>
<tr>
<td></td>
<td>2.0V for digital/LVDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.2V for ADC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power consumption</td>
<td>&lt;4 W</td>
<td>Chroma</td>
<td>Mono or RGBW</td>
</tr>
</tbody>
</table>

Ordering Information

Sensor Part No.

- GL0816-BVM-NUT-BU1 Monochromatic, with microlenses, Grade 1
- GL0816-BVM-NUT-BUE Monochromatic, with microlenses, Grade E
- GL0816-BVC-NUT-BU1 RGBW CFA, with microlenses, Grade 1
- GL0816-BVC-NUT-BUE RGBW CFA, with microlenses, Grade E

EVK Part No.

- EVA-0816-2T11, USB interface, PCB boards

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