Industry’s First 32k TDI Camera with Improved Detectability

Based on Teledyne DALSA’s industry leading CMOS TDI technology, the new Linea HS family offers advanced and unique TDI products. The Linea HS 32k camera is capable of capturing 32,768 pixel data using patent-pending pixel offset technology. This enables users to significantly improve subpixel defect detectability while using existing optical lenses and maintaining high sensitivity. The camera comes with high-speed fiber optic interface that delivers up to 8.4 GByte/sec data in a single cable and long cable length.

Patent Pending Pixel Offset Technology
The 32k camera uses two 16k/5 µm TDI arrays with ½ pixel offset. Two 16k/5 µm image data are captured and then reconstructed to achieve a super resolution image of 32k/2.5 µm in real time. This significantly enhances detectability for subpixel defects. One advantage of the pixel offset technology is that existing 16k/5 µm lenses can be used without sacrifice in responsivity and MTF with a smaller physical pixel size.

Specifications

- Resolution: 32,768 x 64 pixels
- Line rate: 150 kHz maximum*
- Pixel Size: 5 x 5 µm / 2.5 x 2.5 µm
- Bit depth: 8 bit
- Output: Monochrome
- Lens Mounts: M90 x 1
- Responsivity: see graph
- Nominal Gain Range: 1x to 10x
- Size: 97 x 140.5 x 78.6 mm
- Mass: 1200 g
- Operating Temp: 0 to +60 °C (frontplate)
- Power Supply: +12 to +24 VDC
- Power Dissipation: 28 W
- Data and Control: Camera Link HS CX4
- GPIO: Hirose 12-pin
- Regulatory Compliance: CE, FCC, RoHS

* Due to bandwidth limitation of the FG, max. line rate is 100 kHz

Camera Models

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Resolution</th>
<th>Max. Line Rate</th>
<th>Pixel Size</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>HL-HM-32k155-00-R</td>
<td>32,768 x 64 pixels</td>
<td>150 kHz*</td>
<td>5 x 5 µm</td>
<td>Mono</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.5 x 2.5 µm</td>
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