Overview

High responsivity, incredibly fast frame rates, and multiple resolutions.

The Falcon HG series of cameras is comprised of three monochrome cameras of different resolutions: a VGA version running up to 300 fps, a one-megapixel (1024 x 1024) version running at 120 fps, and a highly responsive 1.4 megapixel resolution running at 100 fps. The combination of high frame rates, superior image quality and multiple resolutions make the Falcon HG cameras well suited for applications in electronics inspection, semiconductor inspection, industrial metrology (gauging) and other machine vision applications.

By using CMOS technology these cameras consume low amounts of power and are compliant with the power over Camera Link (PoCL) standard. PoCL eliminates the need for a separate power cable and simplifies cable and system integration.

Fully programmable, the Falcon HG cameras incorporate exposure control, gain and offset adjustment, and flat-field correction to optimize system performance. Delivered in a robust, compact body, this camera should be your definitive choice for area-based systems.

Key Features

- High responsivity
- Fast frame rates
- Global shutter and reset
- Exposure control
- Concurrent integration and readout
- Faster frame rates through vertical windowing
- Power over Camera Link
- Mini-Camera Link
- 10 meter transmission @ 80 MHz

Specifications

- Resolution
  - VGA300 — 640 (H) x 480 (V)
  - 1M120 — 1024 (H) x 1024 (V)
  - 1.4M100 — 1400 (H) x 1024 (V)
- Data Rate
  - 2 x 80 MHz
- Max. Line/Frame Rate
  - VGA300 — 300 fps
  - 1M120 — 120 fps
  - 1.4M100 — 100 fps
- Pixel Size
  - 7.4 μm
- Data Format
  - 8 or 10 bit — (VGA300 and 1M120: 8 bits only. 1.4M100: up to 10 bits)
- Output
  - Base mini-Camera Link. PoCL compatible
- Lens Mount
  - C-mount
- Responsivity
  - 30 DN/(nJ/cm²) @ 1x gain
- Dynamic Range
  - 50 dB
- Nominal Gain Range
  - 4x digital
- Size
  - 44 x 44 x 44 mm
- Mass
  - < 175 g
- Operating Temp
  - 0 °C to 50 °C
- Power Supply
  - 12V to 15V DC
- Power Dissipation
  - <3 W
- Power Supply
  - CE and RoHS
- Control and Data
  - SDR26 mini-Camera Link
- Power
  - Hirose 6 pin circular, or PoCL (shared with control)
- Example Part Number
  - FA-21-3HK3H-00-R
With its high responsivity and speed you can inspect more products in a shorter amount of time.

Falcon HG Series
VGA300 / 1M120 / 1.4M100 Area Scan Cameras

Spectral Responsivity at Nominal Gain

<table>
<thead>
<tr>
<th>Wavelength [nm]</th>
<th>Responsivity [DN/(nJ/cm²)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>1</td>
</tr>
<tr>
<td>400</td>
<td>2</td>
</tr>
<tr>
<td>500</td>
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<tr>
<td>1100</td>
<td>9</td>
</tr>
<tr>
<td>1200</td>
<td>10</td>
</tr>
</tbody>
</table>

Units: mm.

M4 x 0.7 x 5.0 x 5.0 [Bx]
1/4-20 UNC X 6.0
25.00 [4X]
22.00 ± 0.15
TO CENTER OF SENSOR
17.526 ± 0.150
CCD IMAGING PLANE

44.0
8.0 [4X]

1-32 UN X 14.0
22.00 ± 0.15
TO CENTER OF SENSOR

12V-13V DC
CONTROL & DATA 1

1.32 UN X 14.0
22.00 ± 0.15
TO CENTER OF SENSOR

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