Imperx: C6410

The POE-C6410 camera features the Sony Pregius IMX342 Global Shutter CMOS sensor with a native resolution of 6464 x 4852 in an APS-C optical format delivering up to 3.7 frames per second with GigE Vision® Power over Ethernet (PoE) output. The Sony Pregius image sensor delivers outstanding sensitivity and excellent image quality. Imperx puts you in control by providing full access to raw data without corrections. Using the simple intuitive graphical user interface, you can quickly apply image corrections, if desired. The C6410’s flexibility, image quality, and speed make it suitable for a broad range of diverse and demanding applications, but “one size doesn’t fit all,” and Imperx can help optimize the camera to your exact requirements.

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Interface</td>
<td>GigE Vision® with Power over Ethernet (PoE)</td>
</tr>
<tr>
<td>Resolution</td>
<td>6464 (H) x 4852 (V)</td>
</tr>
<tr>
<td>Sensor</td>
<td>Sony Pregius IMX342 CMOS Color/Mono</td>
</tr>
<tr>
<td>Sensor Format</td>
<td>22.3 mm (H) x 16.6 mm (V), 27.9 mm diagonal, APS-C optical format</td>
</tr>
<tr>
<td>Pixel Size</td>
<td>3.45 microns square</td>
</tr>
<tr>
<td>Shutter</td>
<td>Global shutter (GS)</td>
</tr>
<tr>
<td>Sensor Digitization</td>
<td>12-bit</td>
</tr>
<tr>
<td>Frame Rate</td>
<td>3.7 fps (8-bit), 1.8 fps (10-bit/12-bit unpacked), 2.5 fps (10-bit/12-bit packed)</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>71 dB</td>
</tr>
<tr>
<td>Output Bit Depth</td>
<td>8, 10, 12-bit</td>
</tr>
<tr>
<td>Analog/Digital Gain</td>
<td>Manual, Auto; 0 dB – 48 dB, 480 steps</td>
</tr>
<tr>
<td>Digital Gain</td>
<td>1x (0 dB) to 4x (12 dB) with a precision of 0.001x</td>
</tr>
<tr>
<td>Black Level Offset</td>
<td>Manual (0 – 255), Auto</td>
</tr>
<tr>
<td>White Balance</td>
<td>Manual, Auto, Off</td>
</tr>
<tr>
<td>Shutter Speed</td>
<td>1 μs/step, 30 μs to 16.0 s</td>
</tr>
<tr>
<td>Exposure Control</td>
<td>Off, Manual, External, Auto</td>
</tr>
<tr>
<td>Regions of Interest (ROI)</td>
<td>2 ROI</td>
</tr>
<tr>
<td>Trigger Inputs</td>
<td>External, Pulse generator, Software</td>
</tr>
<tr>
<td>Trigger Options</td>
<td>Edge, Pulse width, Trigger filter, Trigger delay, Debounce</td>
</tr>
<tr>
<td>Trigger Modes</td>
<td>Free run, Standard, Fast</td>
</tr>
<tr>
<td>External Inputs/Outputs</td>
<td>2 IN (OPTO, LV TTL) / 2 OUT (OPTO, TTL)</td>
</tr>
<tr>
<td>Strobe Output</td>
<td>2 strobes, programmable position and duration</td>
</tr>
<tr>
<td>Pulse Generator</td>
<td>Yes, programmable</td>
</tr>
<tr>
<td>Data Corrections</td>
<td>2 LUTs pre-programmed with Gamma 0.45, 2 LUTs pre-programmed with Negative LUT</td>
</tr>
<tr>
<td>Lens Mount</td>
<td>F-Mount (Default)</td>
</tr>
<tr>
<td>Canon EF Mount</td>
<td>Optional, Active or Passive</td>
</tr>
<tr>
<td>Supply Voltage Range</td>
<td>12 VDC (6 V – 30 V), 1.5 A inrush @ 12 V PoE (IEEE 802.3af / IEEE 802.3at)</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>Typical: 3.8 W (EST) Typical: 5.4 W @ 12 V; PoE: 6.5 W – without enabled Canon controller, Max: 7.8 W; PoE (Max): 7 W – with enabled Canon controller</td>
</tr>
<tr>
<td>Camera Current</td>
<td>Typical: 450 mA @ 12 V</td>
</tr>
<tr>
<td>Size - Width/Height/Length</td>
<td>60 mm (W) x 60 mm (H) x 59.5 mm (L)</td>
</tr>
<tr>
<td>Weight</td>
<td>475.7 g</td>
</tr>
<tr>
<td>Vibration, Shock</td>
<td>20G/100G</td>
</tr>
<tr>
<td>Environmental</td>
<td>-30 °C to +75 °C Operating (-40 °C to +85 °C tested) -40 °C to +85 °C Storage</td>
</tr>
<tr>
<td>Humidity</td>
<td>10% to 90% non-condensing</td>
</tr>
<tr>
<td>MTBF</td>
<td>TBD</td>
</tr>
<tr>
<td>Military Standard</td>
<td>MIL-STD-810G</td>
</tr>
<tr>
<td>Regulatory</td>
<td>FCC Part 15 Class A, CE, China RoHS</td>
</tr>
</tbody>
</table>
**Imperx: C6410 Applications**

The POE-C6410 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

Aerospace ● Satellites ● Surveillance ● Ball Grid Array ● Printed Circuit Board Inspection ● Motion Analysis ● Broadcast Television ● Telepresence ● Unmanned Aerial Vehicles ● Machine Vision ● Intelligent Traffic Systems ● Aerial Imaging ● Open Road Tolling Systems ● Situational Awareness

**Absolute Quantum Efficiency**

![Color Spectral Response](image1)  ![Mono Spectral Response](image2)

**Dimensions**

![Front View](image3)  ![Back View](image4)  ![Top View](image5)

**Ordering Information**

**Output Interface**

GigE Vision® with Power over Ethernet (PoE®)

**Sensor Types available**

Monochrome  Bayer Color

**Lens Mounts**

F-Mount (Default)  M42 (Optional)  Canon EF Mount (Optional)

**Accessories (Sold separately)**

PS12V04A-Power Supply w/ 1 input and 1 output

**Hirose Connectors**

**Power and I/O Interface**

1. 12 VDC Return  7. OUT1 (TTL)
2. +12 VDC Power  8. IN1 (OPTO)
3. Reserved  9. IN2 (LV TTL)
4. Reserved  10. IN1 RTN
5. OUT2 RTN (OPTO)  11. IN2 RTN
6. OUT1 RTN  12. OUT2 (OPTO)

Connector: Hirose HR10A-10R-12PB(71)

**Gen<1>Cam Compliant Camera Configurator**

![Configurator](image6)

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