Imperx: C3210

The P67-C3210 provides the same robust camera design as the POE-C3210 with an IP67 enclosure. This camera features the Sony Pregius IMX428 Global Shutter CMOS sensor with a native resolution of 3216 x 2208 in a 1.1” optical format delivering up to 16 frames per second with GigE Vision®, Power over Ethernet (PoE)® output. Imperx puts you in control by providing the user the ability to set the camera up very easily. The Cheetah is designed to provide the optimal image quality for simple imaging applications to the most demanding of applications. Using the simple Gen<e>Cam™ compliant user interface, you can easily apply image corrections to enhance recognition or quality. By combining the powerful Imperx camera control with an IP67 rated housing to protect the camera from dust, water and other contaminants the camera can be utilized in harsh environments.

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>3216 (H) x 2208 (V)</td>
</tr>
<tr>
<td>Sensor</td>
<td>Sony Pregius IMX428 CMOS Color/Mono</td>
</tr>
<tr>
<td>Sensor Format</td>
<td>14.5 mm (H) x 9.9 mm (V), 1.1” optical format, 17.6 mm diagonal</td>
</tr>
<tr>
<td>Pixel Size</td>
<td>4.5 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>16 fps (8-bit), 8 fps (10-bit/12-bit unpacked), 10 fps (10-bit/12-bit packed)</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>up to 77 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, Once, Off</td>
</tr>
<tr>
<td>Shutter Speed</td>
<td>5 μs to 16.0 s, 1 μs/step</td>
</tr>
<tr>
<td>Exposure Control</td>
<td>Off, Manual, Auto, External</td>
</tr>
<tr>
<td>Regions of Interest (ROI)</td>
<td>2 ROI</td>
</tr>
<tr>
<td>Binning</td>
<td>1x2, 2x1, 2x2 (Mono cameras only)</td>
</tr>
<tr>
<td>Sub-sampling</td>
<td>1x2, 2x1, 2x2</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>1 IN (OPTO) / 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>C-Mount (default)</td>
</tr>
<tr>
<td>Supply Voltage Range</td>
<td>12 V DC (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: 4.32 W @ 12 V; PoE: 5.95 W</td>
</tr>
<tr>
<td>Camera Current</td>
<td>Typical: 360 mA @ 12 V</td>
</tr>
<tr>
<td>Size - Width/Height/Length</td>
<td>48.5 mm (W) x 42.0 mm (H) x 61 mm (L) (without connectors and a lens tube)</td>
</tr>
<tr>
<td>Lens Tube Dimensions</td>
<td>44 mm Lens tube:</td>
</tr>
<tr>
<td></td>
<td>-Inner diameter 44 mm</td>
</tr>
<tr>
<td></td>
<td>-Outer diameter 50 mm</td>
</tr>
<tr>
<td></td>
<td>-Length varies (see IP67 lens tubes spec sheet)</td>
</tr>
<tr>
<td>Weight</td>
<td>196 g (without a lens tube)</td>
</tr>
<tr>
<td>Vibration, Shock</td>
<td>20G (20 – 200 Hz XYZ) / 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, RoHS</td>
</tr>
</tbody>
</table>
Imperx: C3210 Applications

The P67-C3210 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

Mono Spectral Response

Gen\tl\Cam Compliant

Camera Configurator

Dimensions

Output Interface

GigE Vision® with Power over Ethernet (PoE)® in IP67 enclosure (P67)

Sensor Types available

Monochrome

Bayer Color

Lens Color

C-Mount

Ordering Information

Please specify the camera model code and select an IP67 lens tube (see IP67 lens tubes spec sheet).

Power and I/O Interface

1. Reserved
2. +12V DC
3. IN1 (OPTO)
4. IN1/OUT1 RETURN
5. OUT2 RETURN
6. OUT1 (OPTO)
7. +12V DC RETURN
8. OUT2 (TTL)

1000BASE-T Ethernet Interface

Cable Wires:

1. TDO+
2. TDO-
3. TDI+
4. TCK1-
5. TDI-
6. TDO-
7. TDI-
8. TDO-

Connector: BULGIN PXMBNI12RPM08APCM12

Connector: MACOM MMT361A315

Accessories (Sold separately)

CBL-IOO8-0001 – Cable, 8 pin I/O, BULGIN CONN to Pigtail, 2 m
CBL-XRJ45-0002 – Cable, RAJ45 to 8 position M12/Xcode (IP67 METZ CONN), 2 m
CBL-XRJ45-0003 – Cable, RAJ45 to 8 position M12/Xcode (IP67 METZ CONN), 3 m
CBL-XRJ45-0005 – Cable, RAJ45 to 8 position M12/Xcode (IP67 METZ CONN), 5 m
CBL-XRJ45-0010 – Cable, RAJ45 to 8 position M12/Xcode (IP67 METZ CONN), 10 m
CBL-XRJ45-0015 – Cable, RAJ45 to 8 position M12/Xcode (IP67 METZ CONN), 15 m
CBL-XRJ45-0020 – Cable, RAJ45 to 8 position M12/Xcode (IP67 METZ CONN), 20 m

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