



# The Condor<sup>3</sup>

## RGB-618

### Applications

- Demanding machine vision
- High speed photography
- Scientific experiments
- Microscopy
- Fluorescent imaging

### Benefits

- True color pictures
- Much sharper vision around the edges
- High light sensitivity
- Pixel to Pixel co-registration of three images
- Lightweight solution

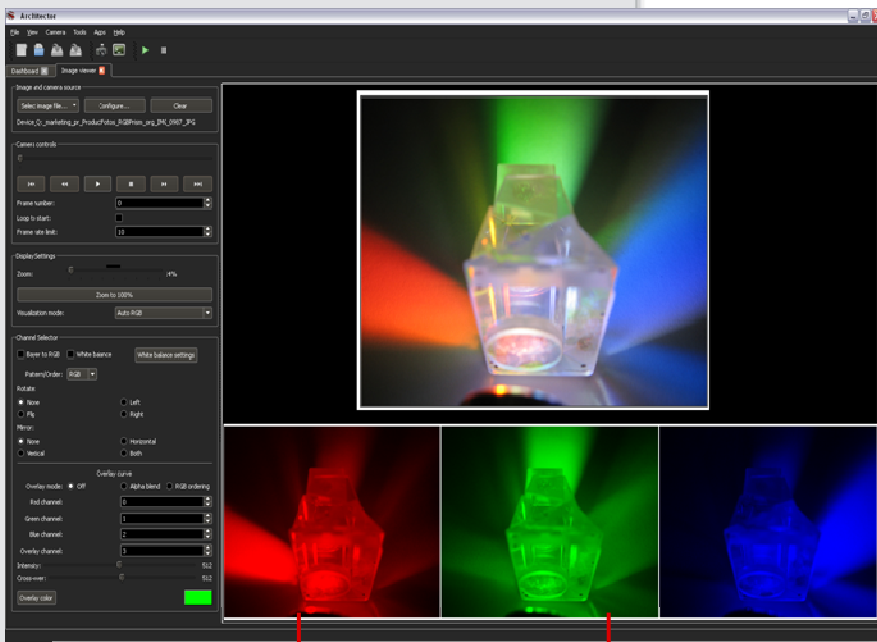


Fastest 3 Channel Multispectral Camera for perfect RGB images

The Condor<sup>3</sup> RGB camera uses advanced RGB color imaging technology ideal for demanding machine vision applications across a diverse range of industries. Dichroic coatings on the prism surface separates the incoming light into red, green and blue wavelengths which are directed to three precisely-aligned CCDs.

The Quest Innovation Condor<sup>3</sup> RGB 618 combines the best of four worlds:

1. **Perfect RGB images:** In contrast with Bayer color cameras using interpolation routines, 3-CCD results in more accurate per-pixel color values. In addition, because there is no interpolation, 3-CCD images offer more precise spatial resolution, enabling more accurate edge detection.
2. **High speed:** The three channel solution has the advantage of a high frame rate up to 120 frames per second. This makes demanding machine vision applications possible.
3. **Low price in relation to quality:** The combination of ICX618 sensors and accompanying prism result in a very affordable high quality camera.
4. **High sensitivity:** Because the Condor<sup>3</sup> prism technology does not use absorption filters, it minimizes optical energy loss. A high sensitivity is guaranteed.



The powerful and flexible Architector software for multispectral imaging analysis is specifically designed to maximize analysis performance of the Quest Condor line.

Architector software shows the whole picture and the three channels separately. Making it possible to analyze each separate color level.

#### Visitor address

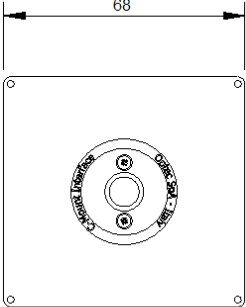
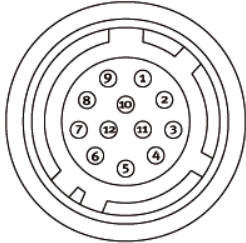
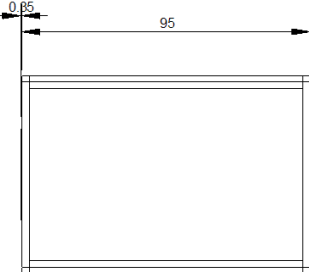
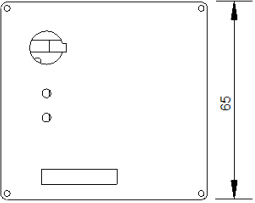

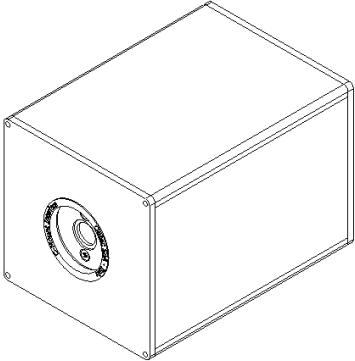
Quest Innovations BV  
Industrieweg 41  
1775 PW Middenmeer  
The Netherlands

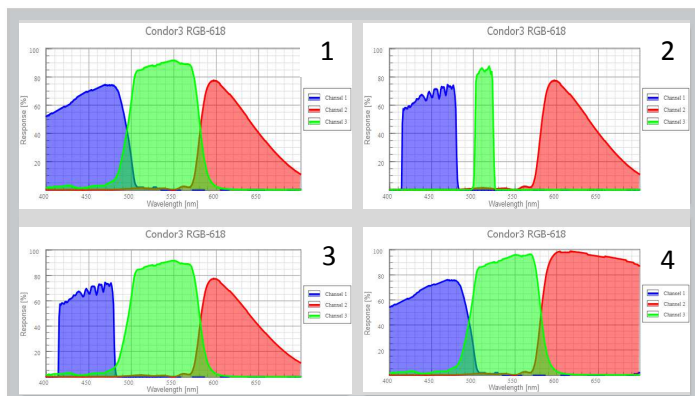
Tel: +31 (0)227 604046  
Fax: +31 (0)227 604053  
info@quest-innovations.com  
www.quest-innovations.com

## Features

- High frame rate
- 3CCD Color imaging
- C Mount lens



Specifications		Connector	Dimensions																																																					
Sensor	ICX 618	DC-In / Trigger																																																						
Active area	1/4" sensor	 <p>Hirosé HR10A-10P-12S</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Function</th> </tr> </thead> <tbody> <tr><td>1</td><td>GND</td><td>GROUND</td></tr> <tr><td>2</td><td>Vin</td><td>+15-24V</td></tr> <tr><td>3</td><td>DNC</td><td>Do not connect</td></tr> <tr><td>4</td><td>DNC</td><td>Do not connect</td></tr> <tr><td>5</td><td>DNC</td><td>Do not connect</td></tr> <tr><td>6</td><td>DNC</td><td>Do not connect</td></tr> <tr><td>7</td><td>Trigger in</td><td>Input trigger</td></tr> <tr><td>8</td><td>Trigger out</td><td>Output trigger</td></tr> <tr><td>9</td><td>DNC</td><td>Do not connect</td></tr> <tr><td>10</td><td>DNC</td><td>Do not connect</td></tr> <tr><td>11</td><td>DNC</td><td>Do not connect</td></tr> <tr><td>12</td><td>DNC</td><td>Do not connect</td></tr> </tbody> </table>		Pin	Signal	Function	1	GND	GROUND	2	Vin	+15-24V	3	DNC	Do not connect	4	DNC	Do not connect	5	DNC	Do not connect	6	DNC	Do not connect	7	Trigger in	Input trigger	8	Trigger out	Output trigger	9	DNC	Do not connect	10	DNC	Do not connect	11	DNC	Do not connect	12	DNC	Do not connect														
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Pixel size	5.6µm																																																							
Pixel clock	50 MHz																																																							
Active pixels	640(H) x 494(V)	Camera Link Interface																																																						
Frame rate	120 Fps full resolution	 <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Function</th> </tr> </thead> <tbody> <tr><td>1</td><td>14</td><td>GND</td></tr> <tr><td>2</td><td>15</td><td>X0-/X0+</td><td>CL Data</td></tr> <tr><td>3</td><td>16</td><td>X1-/X1+</td><td>CL Data</td></tr> <tr><td>4</td><td>17</td><td>X2-/X2+</td><td>CL Data</td></tr> <tr><td>5</td><td>18</td><td>Xclk-/Xclk+</td><td>CL Clk</td></tr> <tr><td>6</td><td>19</td><td>X3-/X3+</td><td>CL Data</td></tr> <tr><td>7</td><td>20</td><td>Ser TC+/Ser TC-</td><td>Serial in</td></tr> <tr><td>8</td><td>21</td><td>Ser TFG-/Ser TFG+</td><td>Serial out</td></tr> <tr><td>9</td><td>22</td><td>CC1-/CC1+</td><td></td></tr> <tr><td>10</td><td>23</td><td>CC2-/CC2-</td><td>Not Used</td></tr> <tr><td>11</td><td>24</td><td>CC3-/CC3+</td><td>Not Used</td></tr> <tr><td>12</td><td>25</td><td>CC4-/CC4-</td><td>Not Used</td></tr> <tr><td>13</td><td>26</td><td>GND</td><td></td></tr> </tbody> </table>		Pin	Signal	Function	1	14	GND	2	15	X0-/X0+	CL Data	3	16	X1-/X1+	CL Data	4	17	X2-/X2+	CL Data	5	18	Xclk-/Xclk+	CL Clk	6	19	X3-/X3+	CL Data	7	20	Ser TC+/Ser TC-	Serial in	8	21	Ser TFG-/Ser TFG+	Serial out	9	22	CC1-/CC1+		10	23	CC2-/CC2-	Not Used	11	24	CC3-/CC3+	Not Used	12	25	CC4-/CC4-	Not Used	13	26	GND
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Channels	Channel 1: 400 – 500 nm Channel 2: 500 – 590 nm Channel 3: 590 – 670 nm																																																							
Alignment accuracy	Mechanically better than 1/4 <sup>th</sup> of a pixel																																																							
Dynamic range	>56 dB																																																							
Bit depths	8 bit 3 channel, 12 bit 3 channel																																																							
Gain	0 to 36 dB analog gain																																																							
Video output	Camera Link Base / GigE Vision																																																							
Trigger modes	Internal and external source (on CameraLink and Hirosé connectors)																																																							
Synchronization	All Sensors clock synchronized. Smart trigger unit for advanced trigger schemes																																																							
Electronic shutter	Synchronized exposure with channel independent duration. (1 µs to 1s)																																																							
Control interface	All commands through Camera Link serial interface																																																							
Lookup tables	Lookup tables available in 8bit mode, full access to table entries. Table data programmed in flash memory (on request)																																																							
External control capability	Gain*, exposure*, lookup tables*, *)Selectable per channel																																																							
Weight	350 grams excluding lens																																																							
Dimensions	68 x 95 x 65 mm																																																							
Lens mount options	C-mount																																																							
Operating temperature	-20 - +50 °C																																																							
Regulations	CE (EN 61000-6-2 EN 61000-6-3), FCC Part 15 class B, RoHS/WEE																																																							
Back focal length	≥ 17.52 mm in air																																																							
Power	18-24V DC +/-10%, 6W																																																							
Humidity	20-90% Non condensing																																																							



## Examples

1. Original prism dichroic coating
2. Optional narrow band filter in channel 2
3. Optional narrow band filter in channel 1
4. Without NIR cut off filter in channel 3

Coatings can be customized on user requirements  
 Filters can be customized on user requirements