



## The Condor<sup>5</sup> VNN-285

### Applications

- UAV applications
- Food selection
- Oil spill detection
- Medical imaging

### Benefits

- Improved linear dynamic range due to larger pixel by use of  $\frac{3}{8}$ " sensors
- Higher resolution per channel
- Pixel to Pixel co registration of five images
- Easy stitching & fast processing of images
- Light weight solution



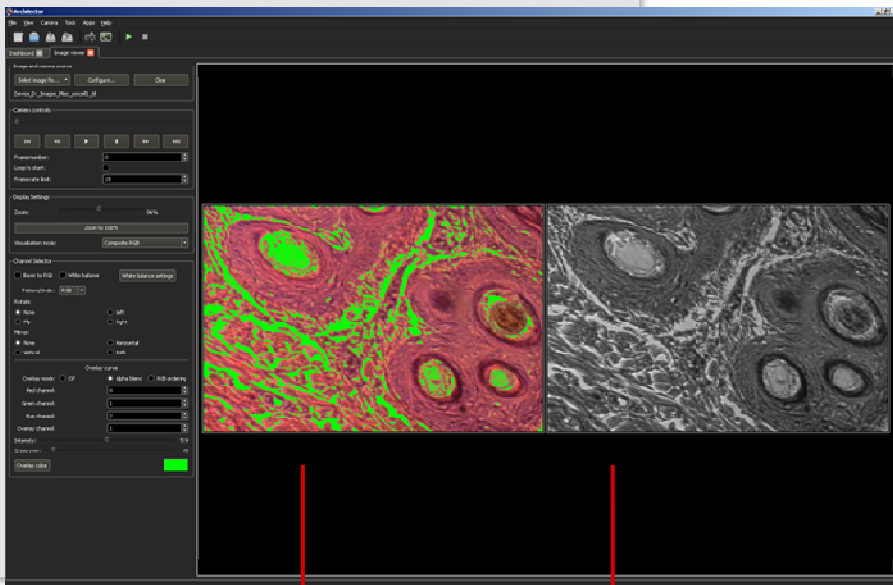
World's first 5 Channel Multispectral Imager with scientific low noise CCD sensor

The multispectral cameras built by Quest Innovations, equipped with the right narrow band filters, provide unique information from the selected spectral regions. Important success factors of the Quest Condor Cameras are the large pixels and high resolution capabilities. Because of the large sensors used in combination with perfect co-registration of the images, perfect image quality is obtained.

The simultaneous acquisition of five images makes it easier to stitch sequences of images to a large mosaic. It also keeps the precise image size of the five simultaneous images that are taken.

Because of the single lens optics, there is no need to process these simultaneously taken images for shift and deformation artefacts, increasing the post processing speed tremendously as well as improving the scientific data quality.

The ability to measure all five channels simultaneously through a single lens optics, with individually controlled sensor settings like gain and exposure, with smart triggering capabilities allows you to get the right information from your objects of interest.



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

Example in the Architector software showing co-registered RGB and near infrared images with an infrared-derived overlay.

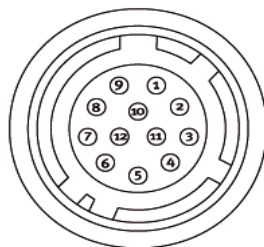
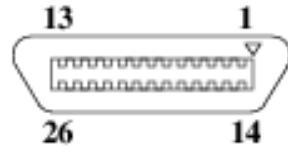
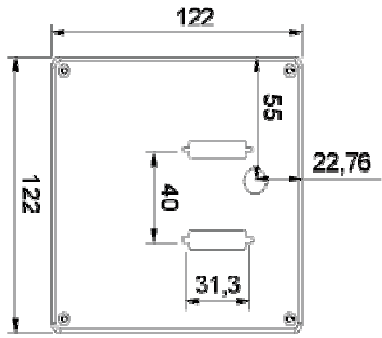
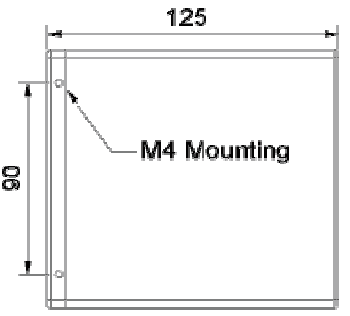
#### Visitor address

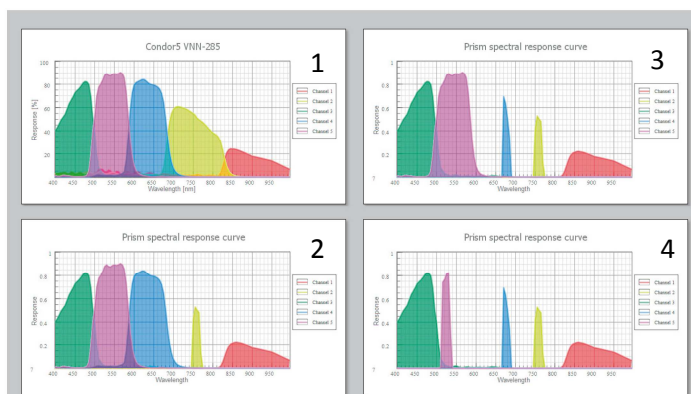
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## Features

- Individual sensor settings or combined
- Smart Multi sensor trigger capabilities
- Wavelengths: 400 – 1000 nm

Specifications		Connector	Dimensions																																																																																													
Sensor	ICX 285	<p>DC-In / Trigger</p>  <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> <p>Camera Link Interface 26 pin MDR connector 3M 10226-1A10JL</p>  <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	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	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		 <p>Back view. All dimensions in mm</p>  <p>Side view. All dimensions in mm</p>
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Active area	2/3" sensor 10.2 mm(H) x8.3 mm (V)																																																																																															
Pixel size	6.45µm																																																																																															
Pixel clock	20 MHz																																																																																															
Active pixels	1360 x 1024																																																																																															
Frame rate	15 Fps full resolution																																																																																															
Channels	Channel 1: 400 – 500 nm Channel 2: 500 – 590 nm Channel 3: 590 – 670 nm Channel 4: 670 – 850 nm Channel 5: 850 –1000 nm																																																																																															
Alignment accuracy	Better than 1/4 <sup>th</sup> of a pixel																																																																																															
Dynamic range	>56 dB																																																																																															
Bit depths	8 bit 5 channel, 12 bit 5 channel																																																																																															
Gain	0 to 36 dB analog gain.																																																																																															
Video output	Camera Link Base																																																																																															
Trigger modes	Internal and external source (on Camera Link 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 CameraLink 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 *)Selectable per channel	Gain*, exposure*, lookup tables*, region of interest, image bit depth, trigger source																																																																																															
Weight	1485 grams excluding lens																																																																																															
Dimensions	122 x 122 x 125 mm																																																																																															
Lens mount options	Hasselblad-Mount or M42 custom lens																																																																																															
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	≥ 59 mm in air																																																																																															
Power	18-24V DC +/-10%, 12W																																																																																															
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 2 and 3
4. Optional narrow band filter in channel 2, 3 and 4

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