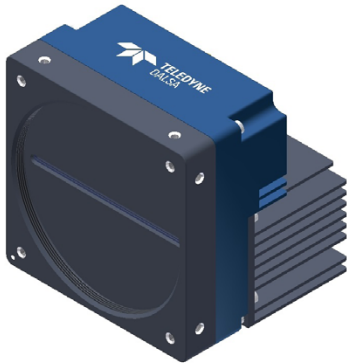


## Piranha XL Color 16K

Multiline CMOS TDI Camera



## Multiline CMOS Color TDI camera delivering breakthrough performance

Teledyne DALSA presents our latest multiline CMOS color camera, delivering an unprecedented combination of speed and responsivity with low noise and in color. Each color uses four rows, resulting in an unprecedentedly responsive tri-color operation with no color interpolation.

The camera uses the Camera Link HS interface based on Teledyne DALSA's field-proven HS Link technology. It delivers very high data throughput with long transmission distances and reliability. The camera, combined with the XTium Camera Link HS frame grabber, offers a complete solution for the next generation Automatic Optical Inspection.

### Key Features

- Trilinear color TDI sensor
- True exposure control
- Up to 70 kHz of three line RGB data
- High full well maximizing signal-to-noise
- High dynamic range using a look-up table (LUT)
- Bidirectional scanning
- Smart lens shading correction
- Parallax correction for applications using angled cameras
- CX4 active optical cable compatibility

### Programmability

- Responsivity adjustable by color
- Sub-pixel spatial correction for precise encoder timing alignment
- White balancing
- Multiple areas of interest (AOI) for data reduction
- Multiple regions of interest (ROI) for easy calibration
- Lens and shading correction
- Test pattern and diagnostics

### Typical Applications

- Flat panel display inspection
- Film and web inspection
- Printed circuit board inspection
- High throughput and high resolution applications
- Print inspection

### Specifications

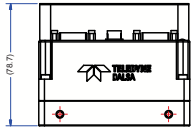
Resolution	16,352 x 12 pixels (4 rows per color)
Max Line Rate	210 kHz, allowing for 3 lines of 16k pixel RGB data @ 70 kHz per line
Pixel Size	5 $\mu\text{m}$ x 5 $\mu\text{m}$
Data Format	8 or 10* bit, selectable
Output	Camera Link HS (1 or 2 cables)
Lens Mount	M90 x 1 mm
Peak Responsivity	21 nJ/cm <sup>2</sup> @ 460 nm, 8 bit, 1x gain 22 nJ/cm <sup>2</sup> @ 525 nm, 8 bit, 1x gain 25 nJ/cm <sup>2</sup> @ 625 nm, 8 bit, 1x gain
NEE	20 pJ/cm <sup>2</sup> @ 460 nm 18 pJ/cm <sup>2</sup> @ 525 nm 12 pJ/cm <sup>2</sup> @ 625 nm
Nominal Gain Range	1x to 5x
Antiblooming	> 100x
Size	97 (W) x 97 (H) x 85.2 (D) mm (40 kHz model) 97 (W) x 140.21 (H) x 78.7 (D) mm (70 kHz model)
Mass	790 g (40 kHz model) 1080 g (70 kHz model)
Operating Temp	0 to 60 °C (front plate)
Power	Hirose 6-pin, +12 V to + 24 V DC
Power Dissipation	29 W, max (40 kHz model) 36 W, max (70 kHz model)
Control & Data	Camera Link HS
Regulatory Compliance	CE and RoHS
Part Number	PX-HC-16K04T-00-R (40 kHz model) PX-HC-16K07T-00-R (70 kHz model)

\*10 bit data support with Xtium PX8 will be available at a future date.

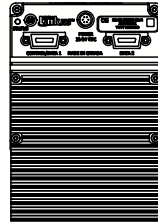
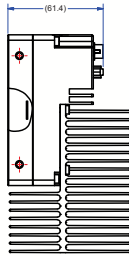
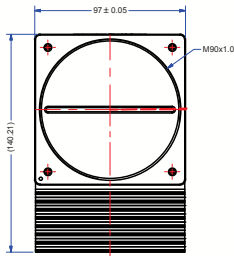
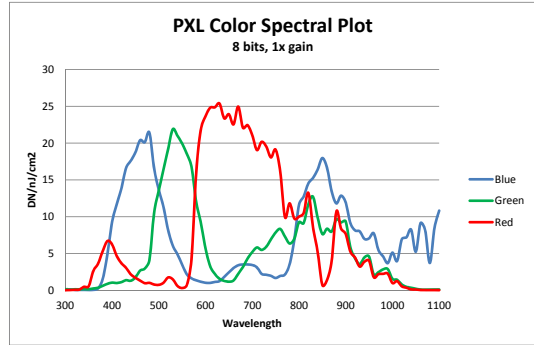
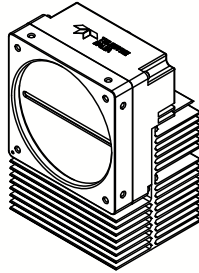


# Preliminary

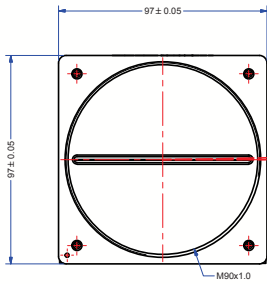
## Piranha XL Color 16K Multiline CMOS TDI Camera



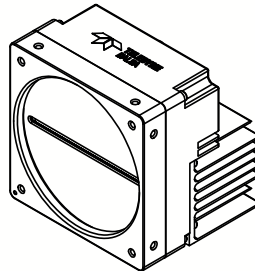
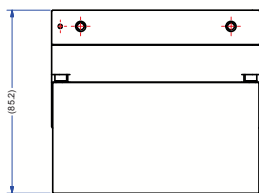
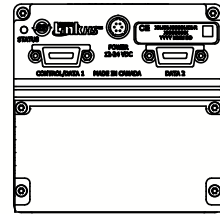
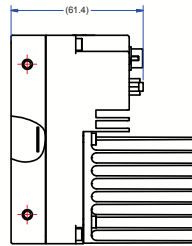
PX-HC-16K07T-00-R



NOTES:  
1. UNITS: MILLIMETERS.  
2. IMAGE AREA IS ALIGNED TO DATUMS  $\square$  &  $\square$



PX-HC-16K04T-00-R



NOTES:  
1. UNITS: MILLIMETERS.  
2. IMAGE AREA IS ALIGNED TO DATUMS  $\square$  &  $\square$

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