

Piranha4 4K and 2K

High Speed Dual Line CMOS Cameras



Key Features

- High speed: up to 140 kHz in summing mode
- Combination of various pixel sizes and resolutions
- Independent exposure control for each line
- Bi-directional
- Compact camera body

Programmability

- Multiple Regions of Interest for calibration and data reduction
- 8 or 12 bit output
- Flat field and lens shading correction
- 8 programmable coefficient sets
- GenICam or ASCII compliant interfacing

Typical Applications

- Automated optical inspection
- Transportation safety and security systems
- High performance sorting systems
- Materials grading and inspection systems
- Web inspection
- General purpose machine vision

Remarkably fast 140 kHz line rates in summing mode!

Teledyne DALSA expands its Piranha4 dual line CMOS camera family with 4K and 2K resolution models. The new Piranha4 models offer higher speeds and more responsive pixels in a choice of sizes and resolutions. Programmable features include multiple region-of-interest, high dynamic range operation, and rapid bi-directional switching, and are designed to meet today's demanding imaging applications.

Specifications

Resolution	4096 x 2 and 2048 x 2 pixels
Line Rate	Up to 140 kHz summing mode (280 kHz single exp)
Pixel Size	7 μm x 7 μm , 10 μm x 10 μm , and 14 μm x 14 μm
Data Format	8 or 12 bit, selectable
Output	Base, Medium, Full and Deca Camera Link
Lens Mount	M58 x 0.75 (4k) and M42 x 1 (2k) F-mount adapter available
Responsivity	See graph
Dynamic Range	> 60 dB
Nominal Gain Range	1x to 10x
Size	62 mm x 62 mm x 48 mm
Mass	< 340 g
Operating Temp	0 °C to 65 °C (front plate)
Power	Hirose 6-pin male
Power Dissipation	< 11 W
Control & Data	SDR-26 mini Camera Link
Regulatory Compliance	CE, FCC, and RoHS

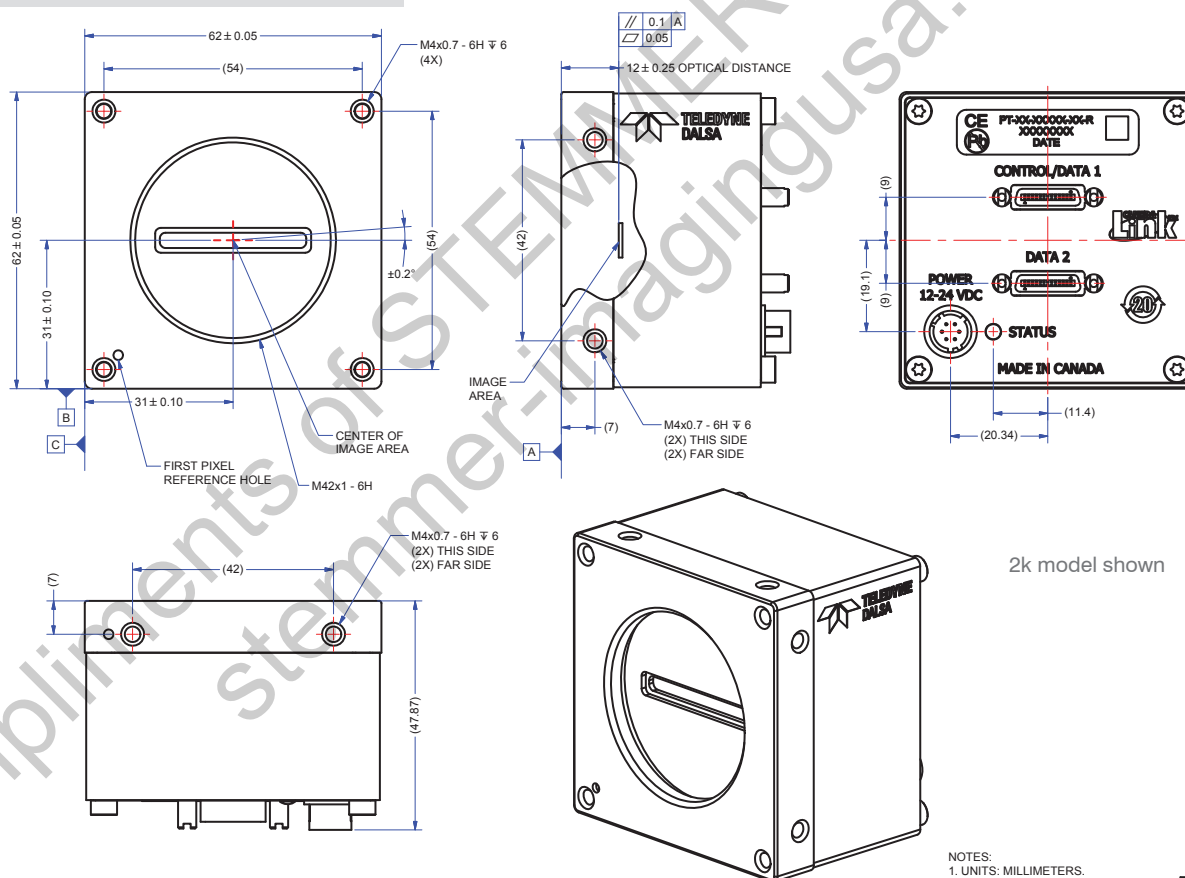
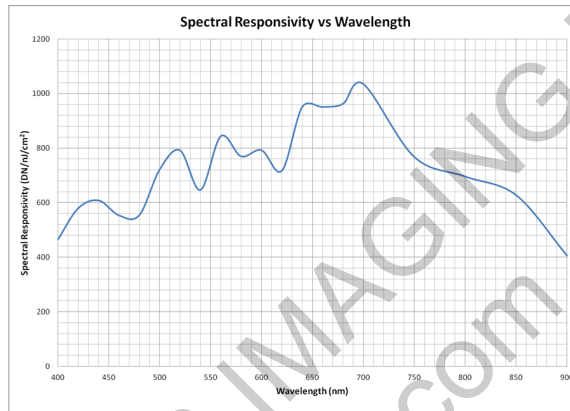
Piranha4 Dual Line Model Comparison

Part Number	Resolution	Maximum Line Rates summing (single exp)	Pixel Size
P4-CM-04K10D-00-R P4-CM-04K07D-00-R	4096 x 2 pixels 4096 x 2 pixels	100 kHz (200 kHz) 70 kHz (140 kHz)	10 μm x 10 μm 7 μm x 7 μm
P4-CM-02K14D-00-R P4-CM-02K10D-00-R	2048 x 2 pixels 2048 x 2 pixels	140 kHz (280 kHz) 100 kHz (200 kHz)	14 μm x 14 μm 10 μm x 10 μm

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Fast and responsive. The new Piranha4 cameras are the next step in the evolution of line scan cameras.



2k model shown

NOTES:
1. UNITS: MILLIMETERS.
2. IMAGE AREA IS ALIGNED TO DATUMS A, B & C.

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