

# Piranha ES ES-82-04Kx0

Enhanced Sensitivity Line Scan Cameras



Piranha ES ES-82-04Kx0

## Key Features

- 110 kHz line rate
- 4096 pixels x 16 TDI stages
- 320 / 640 megapixels/second
- Responsivity up to 3940 DN/(nJ/cm<sup>2</sup>) 0 dB, 12 bit
- 15 second calibration time
- Bidirectional
- Antiblooming
- Configurable Medium or Full Camera Link

## Programmability

- Stage selectability up to 16 stages
- Selectable area mode of operation for ease of alignment
- Up to four sets of flat field correction coefficients
- Mirroring and forward/reverse control
- Flat field corrections

## Typical Applications

- Solar cell inspection
- Flat panel display inspection
- Postal sorting (flats)
- High performance document scanning
- Low light applications
- Large web applications
- High speed scanning

## Overview

# 4k resolution, 15x greater responsivity than traditional line scan cameras, 110 kHz line rate

The Piranha ES camera family represents DALSA's latest generation of enhanced sensitivity, TDI based cameras. With a maximum line rate of 110 kHz and throughput up to 640 MHz, the Piranha ES ES-82-04Kx0 provides the fastest speed available in a TDI camera. Camera alignment is also made easier with the selectable area mode of operation. Camera configuration is extremely flexible and the number of Camera Link taps, throughput, and line rate are all software controllable. The camera is capable of bidirectionality with up to 16 stages of selectability, while preventing overexposure with antiblooming.

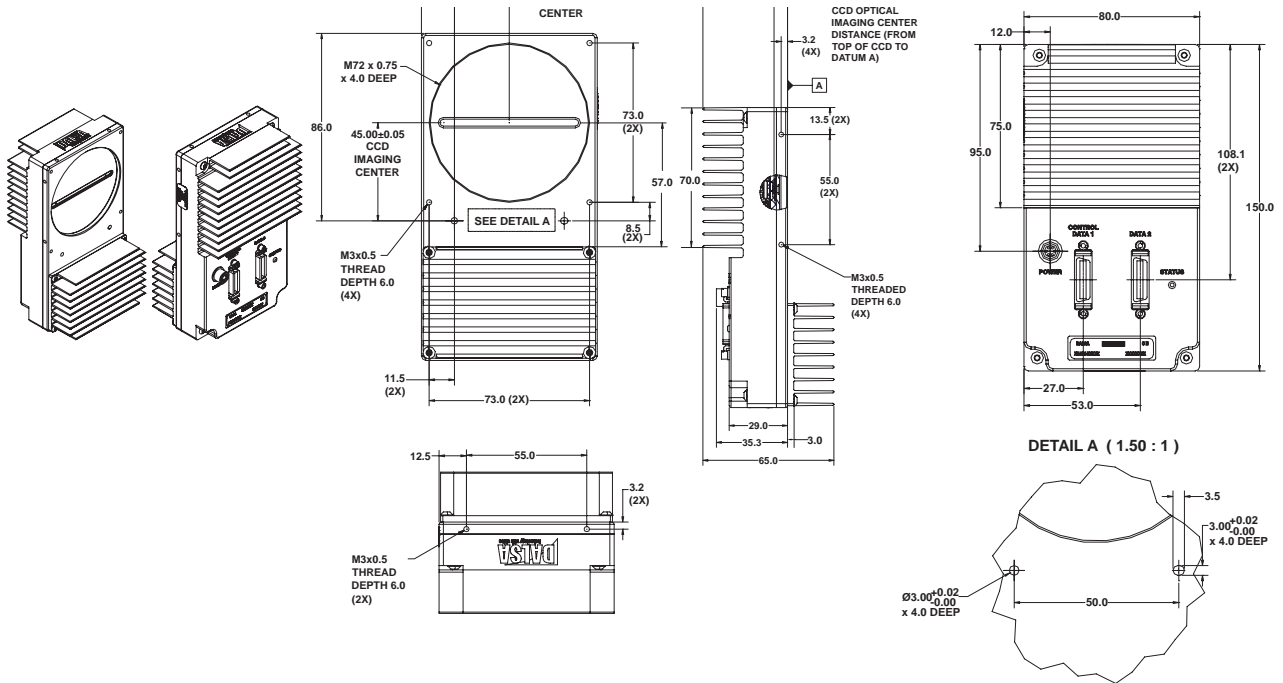
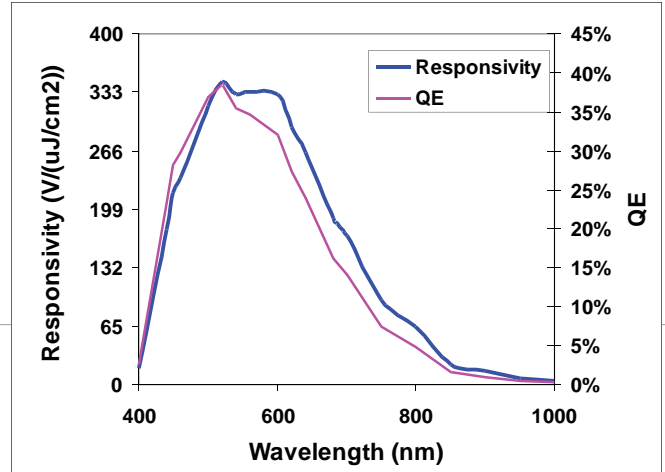
## Specifications

Resolution	4096 x 16 TDI
Data Rate	320 / 640 megapixels/second
Max. Line/Frame Rate	110 kHz
Pixel Size	14 $\mu$ m
Data Format	8, 12 bit
Output	Med, Full Camera Link
Lens Mount	M72 x 0.75
Responsivity	3940 DN/(nJ/cm <sup>2</sup> ) broadband, 12 bit, 0 dB
Dynamic Range	56 dB
Nominal Gain Range	$\pm$ 10 dB
Size	150 mm x 80 mm x 65 mm
Mass	<800 g
Operating Temp	0 °C to 50 °C
Power Supply	12 V to 15 V
Power Dissipation	<20 W
Regulatory Compliance	RoHS and CE (pending)
Control	MDR26 Camera Link
Data	Shared with Control
Power	Hirose HR10 6 pin
Example Part Number	ES-82-04Kx0

# Piranha ES ES-82-04Kx0

Enhanced Sensitivity Line Scan Cameras

These Enhanced Sensitivity Line Scan cameras use TDI technology to maximize photon capture at these high line rates. With a line rate of 110 KHz and 4k resolution, these cameras inspect and detect with unrivalled precision and speed.



unit: mm

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