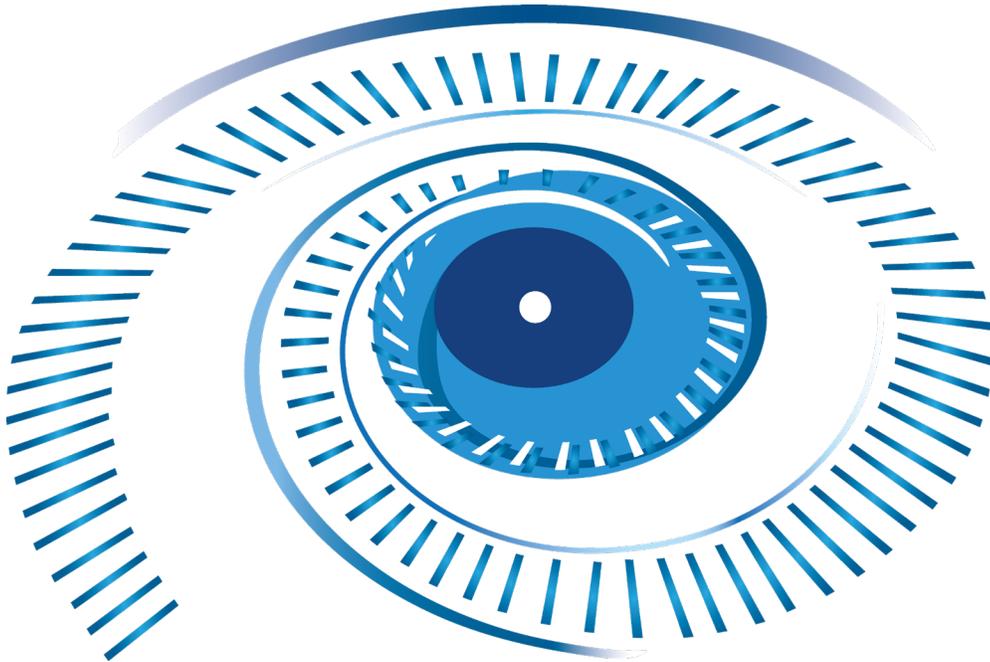


# PRELIMINARY

# KINETIX

High Speed, Back-Illuminated sCMOS

**TELEDYNE**  
PHOTOMETRICS  
Everywhereyoulook™



## 10 Megapixel Back-Illuminated sCMOS



- ▶ 400 Frames Per Second
- ▶ 29mm Field Of View
- ▶ 6.5 x 6.5µm Pixels
- ▶ 1.2e<sup>-</sup> Read Noise (CMS)
- ▶ >95% peak QE

**TELEDYNE IMAGING**  
Everywhereyoulook™

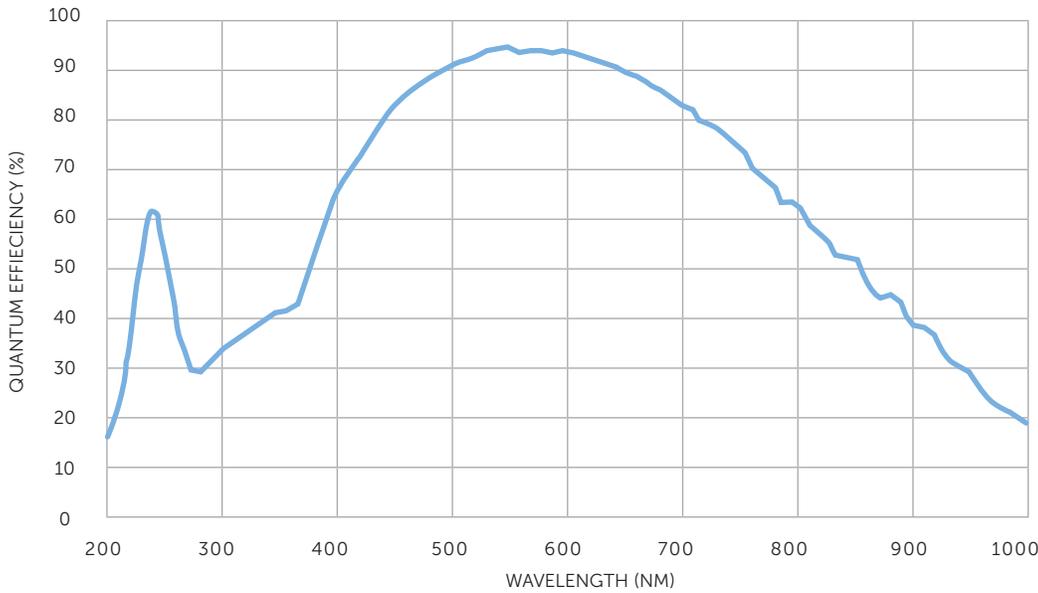
Specifications	Camera Performance
Sensor	Teledyne Photometrics Kinetix Sensor
Active Array Size	3200 x 3200 (10.24 Megapixel)
Pixel Area	6.5 $\mu$ m x 6.5 $\mu$ m (42.25 $\mu$ m <sup>2</sup> )
Sensor Area	20.8mm x 20.8mm 29.4mm diagonal
Peak QE%	>95%
Readout Mode	Rolling Shutter Effective Global Shutter Programmable Scan Mode
Binning	2x2 (on FPGA)
Linearity	>99%
Cooling Options	Air Cooled Liquid Cooled

## Camera Modes

Specifications	Dynamic Range	Speed	Sensitivity (CMS)
Bit-Depth	16-bit	8-bit	12-bit
Frame Rate (Full Frame)	83 fps	400 fps	90 fps
Read Noise	1.8e <sup>-</sup>	2.0e <sup>-</sup>	1.2e <sup>-</sup>
Cooling	-10° C (air)	5° C (air)	-10° C (air)

Specification	Camera Interface
Digital Interface	PCI-Express Gen 3 USB 3.2 10 Gbps
Lens Interface	T-Mount F-Mount C-Mount Swappable Mounts
Mounting Points	2x 1/4" mounting points per side

Triggering Mode	Function
Input Trigger Modes	Trigger First: Sequence triggered on first rising edge
	Edge: Each frame triggered on rising edge
	SMART Streaming: Fast iteration through multiple exposure times
Output Trigger Modes	Any Row: Expose signal is high while any rows acquiring data
	Rolling Shutter: Effective Global Shutter - Expose signal is high when all rows are acquiring data
	Signal is High for set Exposure time - Readout Time
	First Row: Expose signal is high while first row is acquiring data.
Output Trigger Signals	Line Output: Expose signal provides rising edge for each row advanced by the rolling shutter readout
	Expose Out (up to four signals), Read Out, Trigger Ready



**Accessories (Included)**

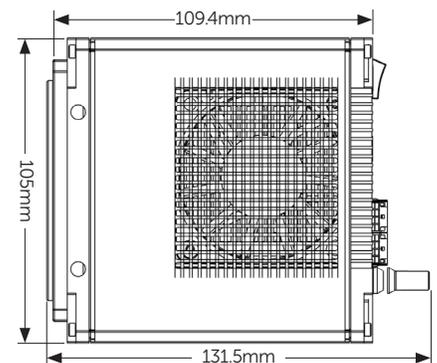
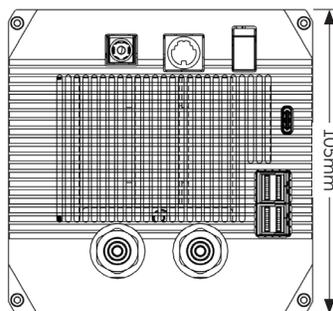
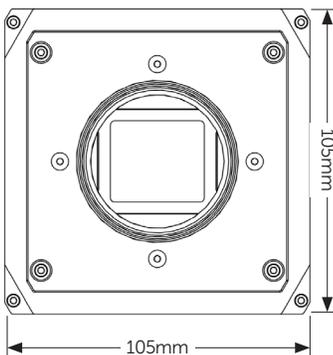
- USB 3.2 Cable
- Trigger Cable
- Power Supply
- Quickstart Guide

**Accessories (Additional)**

- PCIe Card/Cable
- Liquid Circulator
- Liquid Cooling Tubes

**Frame Rate**

Array Size	Dynamic Range		Speed		Sensitivity (CMS)	
	PCI-E	USB	PCI-E	USB	PCI-E	USB
3200 x 3200	83	43	400	87	90	58
3200 x 2048	129	67	625	135	140	90



Teledyne Photometrics is a registered trademark. Kinetix is a trademark of Teledyne Photometrics. All other brand and product names are the trademarks of their respective owners.

Specifications in this datasheet are subject to change. Refer to the Teledyne Photometrics website for most current specifications.



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