

TIGER

INTELLIGENT CAMERA SERIES

T2040 CCD 4 MP Camera Link®



Imperx: T2040

The Tiger T2040 CCD camera is an advanced, ruggedized, and economical digital camera providing 2048 x 2048 resolution and frame rates up to 34 frames per second. The camera features programmable image resolution, frame rates, gain, offset, external triggering, strobe output, transfer function correction, temperature monitoring, and user programmable and uploadable LUT. The camera is fully field upgradable. Optional active forced air cooling available.

Specifications

Feature	Description	Feature	Description
Interfaces available	Camera Link Medium, CoaXPress	Data Corrections	Bad pixel correction, 12-bit LUTs, 2 FFC, black level, vertical smear
Resolution	2048 x 2048, 2072 x 2072 max	Minimum Illuminations	1 Lux, F/ 1.4
Sensor	ON Semiconductor KAI-04070 color/mono/ Sparse CFA	Lens Mount	F-Mount (Default), C-Mount, M42, EOS Canon
Sensor Format	CCD, 4/3"	Supply Input Range	12VDC (6V - 30V), 1.5 A inrush
Pixel Size	7.4 µm	Power Consumption	7.5 W (typ)
Frame Rate	34 fps	Size (WxHxL)	69.5mm x 69.5mm x 51.5mm
Dynamic Range	70 dB	Weight	450g
Bit Depth	8, 10, 12 bit	Vibration, Shock (Ruggedized)	100G (20-200Hz) XYZ/ 1000G
Noise	12 electrons rms	Vibration, Shock (Industrial)	20G (20-200Hz) XYZ / 200G
Analog Gain Control	Manual, Auto: 0-36dB	Environmental (Ruggedized)	-40°C to +85°C Operating, -50°C to +90°C Storage
Black Level Control	Manual, 1024 steps, Auto	Environmental (Industrial)	-10°C to +60°C Operating, -50°C to +90°C Storage
Digital Gain	1x to 4x, 0.001x steps	Humidity	10% to 90% non-condensing
Digital Offset	-512 to +511	MTBF	TBD
White Balance	Manual, auto, off	Regulatory	FCC Part 15 Class A, CE, RoHS
Shutter Speed	1/100,000 to 1/5 sec (nom) in 1 µs steps		
Exposure Control	Manual, Auto, External		
Long Integration	Up to 16 seconds		
Regions of Interest (ROI)	2 ROIs, any line to any line, any pixel to any pixel		
Binning H/V	1x, 2x, 4x (Independent for H & V)		
Trigger Inputs	External, pulse generator, software, computer		
Trigger Options	Edge, pulse width, trigger delay, debounce		
Trigger Modes	Standard, double, fast		
External Inputs/Outputs	2 IN (OPTO, LVTTTL) / 2 OUT (OPTO, TTL)		
Strobe Output	2 strobes, programmable position and duration		
Pulse Generator	Yes, programmable		

Imperx: T2040 Applications

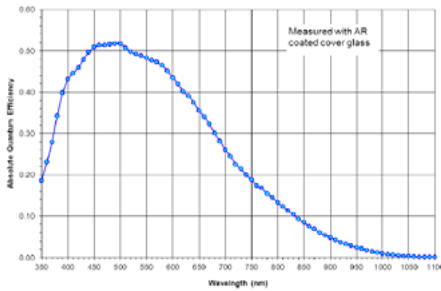
The T2040 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

Aerospace • Satellites • Surveillance • Military and Non-Military Ground Vehicles • Ball Grid Array • Printed Circuit Board Inspection • Motion Analysis • Broadcast Television • Telepresence • Unmanned Aerial Vehicles • Machine Vision • Reconnaissance • Intelligent Traffic Systems • Aerial Imaging • Open Road Tolling Systems • Situational Awareness • Scientific • Particle Velocity

Absolute Quantum Efficiency

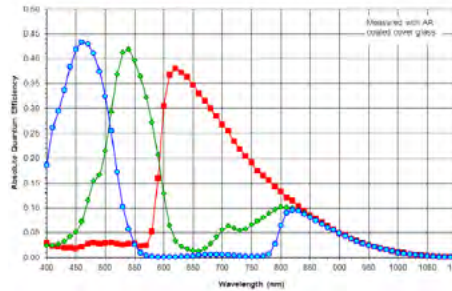
Monochrome with Microlens

KAI-04070



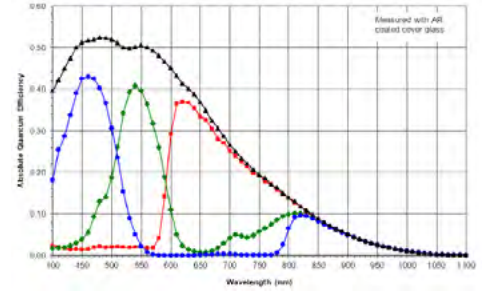
Color (Bayer RGB) with Microlens

KAI-04070



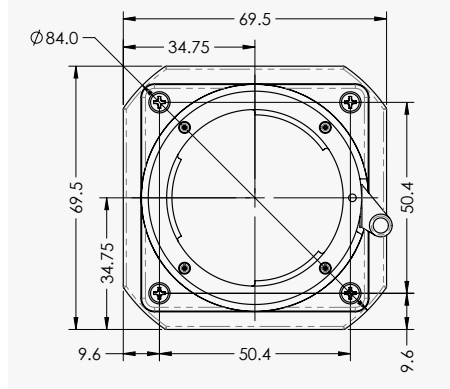
Color (TRUESENSE Sparse CFA) with Microlens

KAI-04070

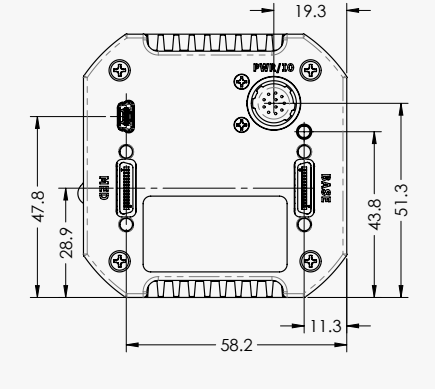


Dimensions

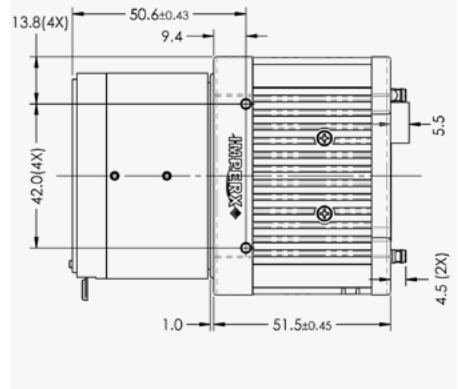
FRONT



BACK



SIDE



Ordering Information

Interface Available

Camera Link Medium (CLM)
CoaXPress (CXP)

Sensor Types available

Monochrome
Bayer Color
Sparse CFA

Lens Mounts

F-Mount (default) M42
C-Mount EF Canon

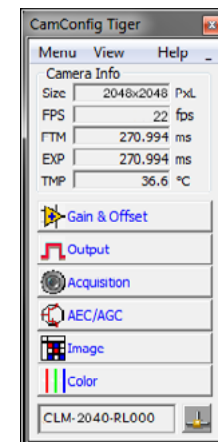
Ordering

Ruggedized Industrial

Accessories (Sold separately)

PS12v04A-Power Supply w/ 1 input and 1 output

Camera Link GUI



Hirose Connectors

Power and I/O Interface



- | | |
|------------------|--------------------|
| 1. 12V DC Return | 7. OUT1 TTL Signal |
| 2. +12V DC | 8. IN1 OPTO + |
| 3. Reserved | 9. IN2 TTL Signal |
| 4. Reserved | 10. IN1 OPTO - |
| 5. OUT2 OPTO - | 11. IN2 TTL Gnd |
| 6. OUT1 TTL Gnd | 12. OUT2 OPTO + |

Connector: Hirose HR 10A-10R-12PB(71)
* Not Connected for CXP

Quality Management System ISO 9001:2015 Registered
Environmental Management System ISO 14001:2015 Registered
DDTC Registered (Directorate of Defense Trade Controls, US Department of State)



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