

# TIGER

INTELLIGENT CAMERA SERIES

## T4940 CCD 16 MP Camera Link®



### Imperx: T4940

The Tiger T4940 CCD camera is an advanced, ruggedized, and economical digital camera providing 4896 x 3264 resolution and frame rates up to 8.8 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                | 4896 x 3264, 4920 x 3280 max                         | Minimum Illuminations         | 1 Lux, F/ 1.4   |
| Sensor                    | ON Semiconductor KAI-16050 color/mono/<br>Sparse CFA | Lens Mount                    | F-Mount (Default), M42, EOS Canon                                     |
| Sensor Format             | CCD, 32.3mm  | Supply Input Range            | 12VDC (6V - 30V), 1.5 A inrush  |
| Pixel Size                | 5.5 µm   | Power Consumption             | 7.5 W (typ)   |
| Frame Rate                | 8.8 fps  | Size (WxHxL)                  | 69.5mm x 69.5mm x 51.5mm  |
| Dynamic Range             | 64 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 µs step, 1/100,000 to 1/5 sec (nom)                |                               |   |
| 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: T4940 Applications

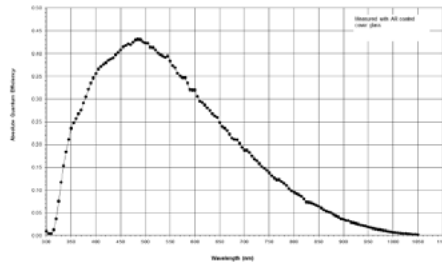
The T4940 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

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

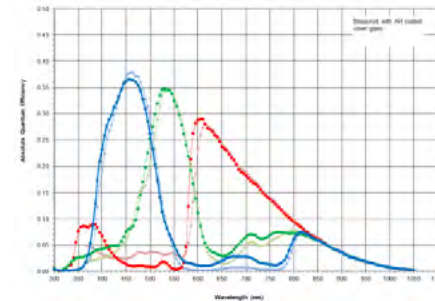
Monochrome with Microlens

KAI-16050

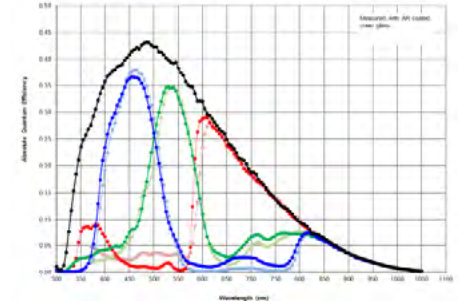


Color (Bayer RGB) with Microlens

KAI-16050

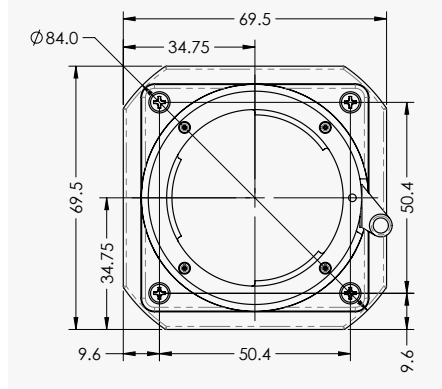


Color (TRUESENSE Sparse CFA) with Microlens KAI-16050

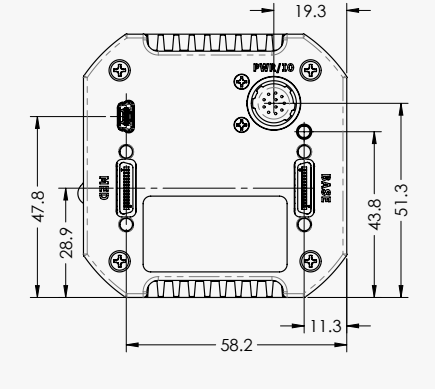


## Dimensions

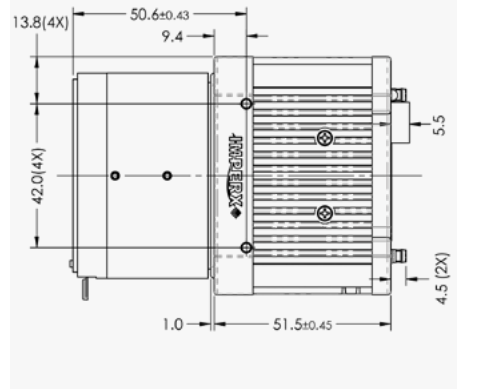
### FRONT



### 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) EF Canon  
 M42

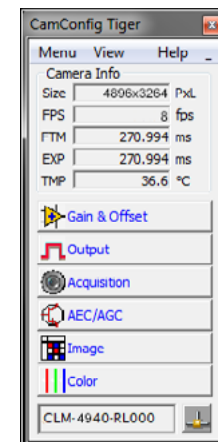
### Ordering

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

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



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