

TIGER

INTELLIGENT CAMERA SERIES

T9040 CCD 50 MP CXP-3 CoaXPress®



Imperx: T9040

The Tiger T9040 CCD camera is an advanced, compact, and durable interline CCD camera providing 10440 (H) x 4800(V) resolution and frame rates up to 3.5 fps. This 50 MP camera uses the ON Semiconductor KAI-50140 image sensor with 4.5-micron pixels in a 47.0 mm x 21.6 mm image area. It includes programmable image resolution, frame rates, gain, offset, external triggering, strobe outputs, temperature monitoring, and user programmable and loadable LUTs. The camera's low-noise, excellent uniformity, and low dark current produce image quality prized in Flat Panel inspection, metrology, and surveillance applications. Optional forced air cooling is available.

Specifications

Feature	Description	Feature	Description
Output Interface	CXP-3 CoaXPress® w/PoCXP	Data Correction	Bad pixel correction, four 12-bit LUTs, 2 FFC, Black level, Vertical smear
Resolution	10440 (H) x 4800 (V), 10480 (H) x 4840 (V) max	Minimum Illuminations	1 Lux, F/ 1.4
Sensor	ON Semiconductor KAI-50140	Lens Mount	M58
Sensor Format	CCD, 51.7 mm	Supply Voltage Range	Power over CoaXPress 24V
Pixel Size	4.5 microns square	Power Consumption (Ruggedized)	10.08 W – 10.56 W (58 MHz); 8.88 W – 9.36 W (40 MHz)
Pixel Clock Rate	58 MHz (Default), 40 MHz (Optional)	Power Consumption (Industrial)	10.80 W – 11.28 W (58 MHz); 9.60 W – 10.08 W (40 MHz)
Frame Rate	3.5 fps (58 MHz), 2.5 fps (40 MHz)	Size - Width/Height/Length	69.5 mm (W) x 69.5 mm (H) x 51.5 mm (L) (Ruggedized, no fan) 69.5 mm (W) x 76.3 mm (H) x 51.5 mm (L) (Industrial, with fan)
Dynamic Range	> 60 dB	Weight	TBD
Output Bit Depth	8-bit, 10-bit, 12-bit	Vibration, Shock (Ruggedized)	100G (20-200Hz) XYZ/ 1000G
Noise	Read Noise: < 13 electrons	Vibration, Shock (Industrial)	20G (20-200Hz) XYZ / 200G
Analog Gain Control	Manual, Auto (Rug.): 0 – 30 dB (Ruggedized), 0 – 24 dB (Industrial)	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 – 4x, 0.001x steps	Humidity	10% to 90% non-condensing
Digital Offset	-512 to +511, 1 step increments	MTBF	TBD
AEC/AGC	Yes (Ruggedized)	Regulatory	FCC Part 15 Class A, CE, RoHS
White Balance	Manual, Auto, Off		
Shutter Speed	1 µs/step, 1/100,000 to 1/2.5 s (nom)		
Exposure Control	Auto (Ruggedized), External, Internal		
Long Integration	Up to 16 seconds		
Regions of Interest (ROI)	2 ROIs (Ruggedized) or 1 ROI (Industrial). Any line to any line, any pixel to any pixel		
Binning H/V	1x, 2x, 4x (Independent for H & V)		
Trigger Inputs	External (TTL/OPTO via IN1/IN2), Pulse generator, Software, Computer		
Trigger Options	Edge, Pulse width, Trigger filter, Trigger delay, Debounce		
Trigger Modes	Standard, Double, Fast		
External Inputs/Outputs	2 IN (OPTO, LVTTTL) / 2 OUT (OPTO, TTL)		
Strobe Output	2 strobes (Ruggedized) or 1 strobe (Industrial). Programmable position and duration		
Pulse Generator	Yes, programmable		

