

IMPERX

TIGER

INTELLIGENT CAMERA SERIES

T8810 / T8820 CCD 47 MP Camera Link®



Imperx: T8810 / T8820 is an advanced progressive scan, fully programmable CCD camera

The Tiger T8810 / T8820 camera meets application requirements for high quality images with powerful features and flexibility. The cameras feature the ON Semiconductor KAI-47051 CCD image sensor providing an image resolution of 8856 x 5280. At full resolution, the T8810 delivers up to 3.3 frames per second while the T8820 delivers up to 6.7 frames per second. The camera's 12-bit internal data image processing engine is based on a high-speed, high-density FPGA, enabling a broad standard feature set and easy implementation of demanding imaging applications. The cameras are fully field upgradable and available in both Industrial and Ruggedized versions with built-in forced air-cooling.

Specifications

Feature	Description	Feature	Description
Output Interface	Camera Link® Medium w/PoCL® (T8810), Camera Link® Full w/PoCL® (T8820)	Data Correction	Bad pixel correction, four 12-bit LUTs, 2 FFC, Black level, Vertical smear correction (Ruggedized)
Resolution	8856 (H) x 5280 (V), 8880 (H) x 5300 (V) max	Minimum Illuminations	1 Lux, F/1.4
Sensor	ON Semiconductor KAI-47051 Color/Mono/ Sparse CFA	Lens Mount	M72 medium format
Sensor Format	CCD, 57 mm diagonal	Supply Voltage Range	12 V DC (8 V – 30 V), 2.5 A inrush
Pixel Size	5.5 microns square	Power Consumption	14 W (typ.)
Frame Rate	3.3 fps (T8810), 6.7 fps (T8820)	Size - Width/Height/ Length	88 mm (W) x 88 mm (H) x 59 mm (L) Without bezel
Dynamic Range	66 dB	Weight	535 g
Output Bit Depth	8-bit or 10-bit (T8810 & T8820); 12-bit (T8810 only)	Vibration, Shock (Ruggedized)	100G (20-200 Hz) XYZ/ 1000G
Noise	10 e- RMS	Vibration, Shock (Industrial)	20G (20-200 Hz) XYZ / 200G
Analog Gain Control	Manual, Auto (Ruggedized); 0 dB – 36 dB (Ruggedized), 0 dB – 24 dB (Industrial)	Environmental (Ruggedized)	-40 °C to +85 °C Operating, -50 °C to +90 °C Storage
Black Level Control	0 to 255, 256 steps, Manual, 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	Auto, Once, Manual		
Shutter Speed	1/100,000 to 1/3.3 s; in 1 µs steps		
Exposure Control	Auto (Ruggedized), External, Internal		
Long Integration	Up to 16 seconds		
Regions of Interest (ROI)	2 ROIs (Ruggedized) or 1 ROI (Industrial), 2x2 to 8856 x 5280, X&Y offset		
Binning H/V	1x, 2x, 4x (Independent for H & V)		
Trigger Inputs	External, Pulse generator, Software, Computer		
Trigger Options	Edge, Pulse width, Trigger filter, Trigger delay, Debounce		
Trigger Modes	Standard, Fast, Double (PIV)		
External Inputs/Outputs	2 IN (OPTO, LVTTTL) / 2 OUT (OPTO, TTL)		
Strobe Output	2 strobes, programmable polarity, position and duration		
Pulse Generator	Yes, programmable		

Imperx: T8810 / T8820 Applications

The T8810 / T8820 camera incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range

Flat Panel Inspection • Aerial Mapping • Satellites • Persistent Surveillance • Film Scanning • Metrology

Absolute Quantum Efficiency

Color (Bayer RGB) with Microlens

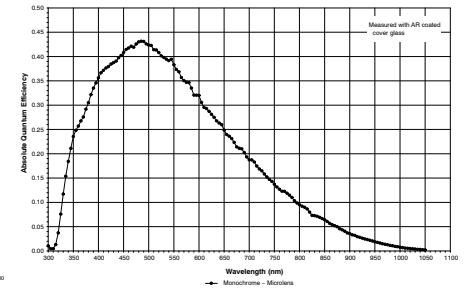
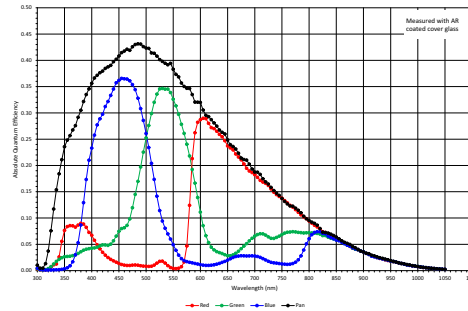
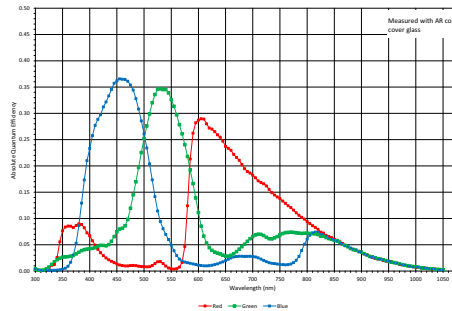
KAI-47051

Color (Sparse CFA) with Microlens

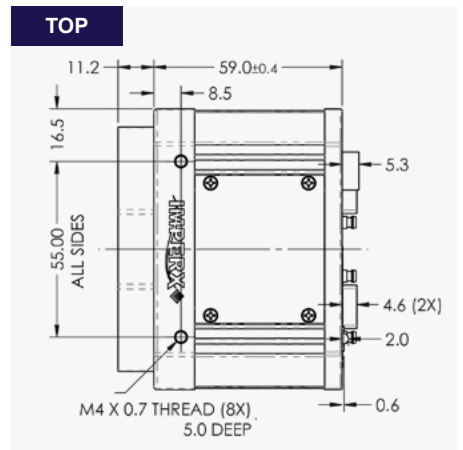
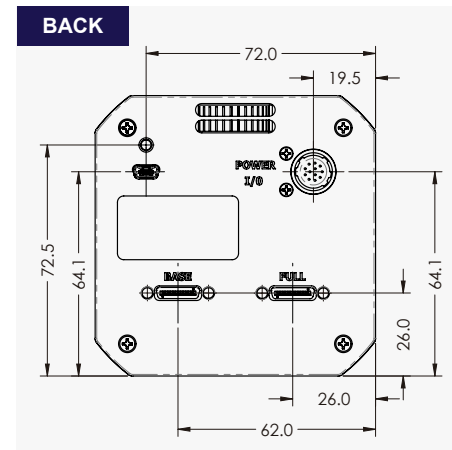
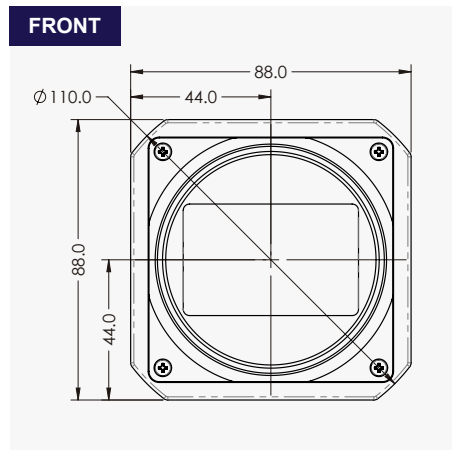
KAI-47051

Monochrome with Microlens

KAI-47051



Dimensions

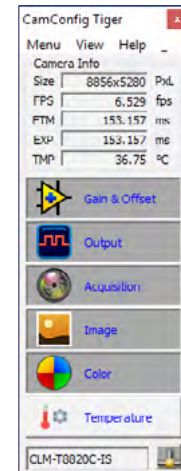


Ordering Information

Output Interface
Camera Link® Medium w/PoCL® (CLM) (T8810)
Camera Link® Full w/PoCL® (CLF) (T8820)
Sensor Types available
Monochrome
Bayer Color
Sparse CFA

Lens Mounts
M72
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
<ul style="list-style-type: none"> 1. 12V DC Return 2. +12V DC 3. Reserved 4. Reserved 5. OUT2 OPTO - 6. OUT1 TTL Gnd 7. OUT1 TTL Signal 8. IN1 OPTO + 9. IN2 TTL Signal 10. IN1 OPTO - 11. IN2 TTL Gnd 12. OUT2 OPTO +

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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)



IMPERX 6421 Congress Ave., Boca Raton, FL 33487, USA
 Tel: +1-561-989-0006. Email: sales@imperx.com

WWW.IMPERX.COM

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