

CHEETAH

RUGGEDIZED CAMERA SERIES

Front View

Rear View

C4420 CMOS 20 MP

Camera Link®

Imperx: C4420

The CLF-C4420 camera features the Sony Pregius IMX367 Global Shutter CMOS sensor with a native resolution of 4432 x 4436 in a 4/3" optical format delivering up to 28 frames per second with Camera Link® Full Power over Camera Link (PoCL®) output. The Sony Pregius image sensor delivers outstanding sensitivity and excellent image quality. Imperx puts you in control by providing full access to raw data without corrections. Using the simple intuitive graphical user interface, you can quickly apply image corrections, if desired. The C4420's flexibility, image quality, and speed make it suitable for a broad range of diverse and demanding applications, but "one size doesn't fit all," and Imperx can help optimize the camera to your exact requirements.

Specifications

Feature	Description	Feature	Description
Output Interface	Camera Link® Base, Medium, Full w/PoCL®	Strobe Output	2 strobes, programmable position and duration
Resolution	4432 (H) x 4436 (V)	Pulse Generator	Yes, programmable
Sensor	Sony Pregius IMX367 CMOS Color/Mono	Data Correction	4 LUTs pre-programmed with Gamma 0.45; Bad pixel correction (static, dynamic), Flat field correction
Sensor Format	15.3 mm (H) x 15.3 mm (V), 4/3" optical format	Lens Mount	F-Mount (default)
Pixel Size	3.45 microns square	Canon EF Mount	Optional, Active or Passive
Shutter	Global shutter (GS)	Supply Voltage Range	12 VDC (6 V – 30 V), 1.5 A inrush @ 12 V
Sensor Digitization	8, 10, 12-bit	Camera Current	Typical: 350 mA @ 12 V
Frame Rate	28 fps (8-bit), 22 fps (10-bit), 19 fps (12-bit)	Power Consumption	Typical: 4.2 W
Dynamic Range	71 dB	PoCL Capable	Yes, in Medium/Full mode
Output Bit Depth	8, 10, 12-bit	Size - Width/Height/Length	60.0 mm (W) x 60.0 mm (H) x 57 mm (L)
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps	Weight	340 g
Digital Gain	1x (0 dB) to 4x (12 dB) with a precision of 0.001x	Vibration, Shock	20G/100G
Black Level Offset	Manual (0 – 255), Auto	Environmental	-30 °C to +75 °C Operating, -40 °C to +85 °C Storage
White Balance	Manual, Auto, Off	Humidity	10% to 90% non-condensing
Shutter Speed	30 µs to 16.0 s	MTBF	TBD
Exposure Control	Off, Manual, External, Auto	Military Standard	MIL-STD-810G
Regions of Interest (ROI)	2 ROI	Regulatory	FCC Part 15 Class A, CE, RoHS, UKCA
Binning	1x2, 2x1, 2x2 (Mono cameras only)		
Sub-sampling	1x2, 2x1, 2x2		
Trigger Inputs	External, Pulse generator, Software, Computer		
Trigger Options	Edge, Pulse width, Trigger filter, Trigger delay, Debounce		
Trigger Modes	Free run, Standard, Fast		
External Inputs/Outputs	2 IN (OPTO, LVTTTL) / 2 OUT (OPTO, TTL)		

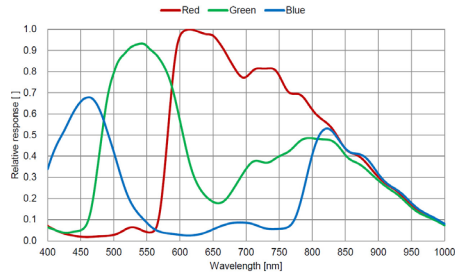
Imperx: C4420 Applications

The CLF-C4420 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

Aerospace • Satellites • Surveillance • Ball Grid Array • Printed Circuit Board Inspection • Motion Analysis • Broadcast Television • Telepresence • Unmanned Aerial Vehicles • Machine Vision • Intelligent Traffic Systems • Aerial Imaging • Open Road Tolling Systems • Situational Awareness

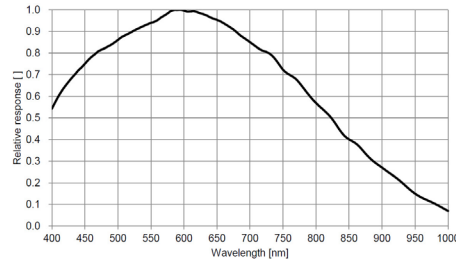
Absolute Quantum Efficiency

Color Spectral Response



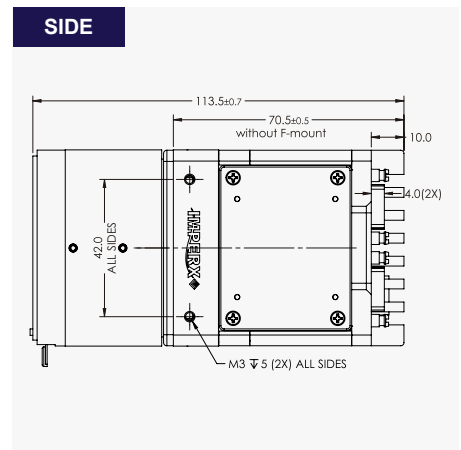
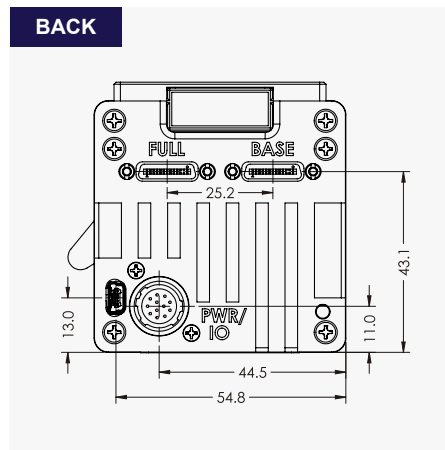
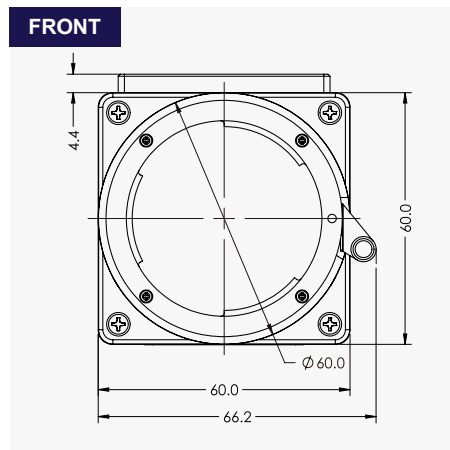
Sony IMX367

Mono Spectral Response



Sony IMX367

Dimensions



Ordering Information

Output Interface
Camera Link® Full (CLF) w/PoCL®
Sensor Types available
Monochrome
Bayer Color

Lens Mounts
F-Mount (Default)
M42 (Optional)
Canon EF Mount (Optional)
Accessories (Sold separately)
PS12V14A-Power Supply w/ 1 input and 1 output

Software/Drivers/Interface



Hirose Connectors

Power and I/O Interface

A top-down diagram of a circular connector with 12 pins arranged in two concentric rings. The pins are numbered 1 through 12 in a clockwise direction starting from the top. Pins 1, 3, 5, 7, 9, and 11 are in the inner ring, while pins 2, 4, 6, 8, 10, and 12 are in the outer ring.

1. 12 VDC Return	7. OUT1 (TTL)
2. +12 VDC Power	8. IN1 (OPTO)
3. Reserved	9. IN2 (LVTTTL)
4. Reserved	10. IN1 RTN
5. OUT2 RTN (OPTO)	11. IN2 RTN
6. OUT1 RTN	12. OUT2 (OPTO)

Connector: Hirose HR10A-10R-12PB(71)

Rev: cl_c4420_r5_2021

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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