

CHEETAH

RUGGEDIZED CAMERA SERIES

C4420

CMOS 20 MP

Camera Link®



PRELIMINARY

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 (5 V – 30 V), 1.5 A inrush
Sensor Digitization	8, 10, 12-bit	Camera Current	Typical: 320 mA/12 V (EST)
Frame Rate	28 fps (8-bit), 22 fps (10-bit), 19 fps (12-bit)	Power Consumption	Typical: 3.8 W (EST)
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 59.5 mm (L)
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps	Weight	TBD
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	1 µs/step, 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
Binning	1x2, 2x1, 2x2		
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

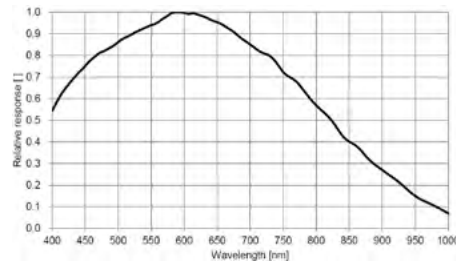
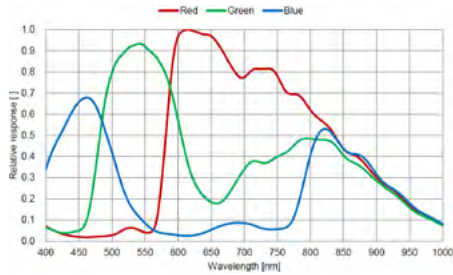
Absolute Quantum Efficiency

Color Spectral Response

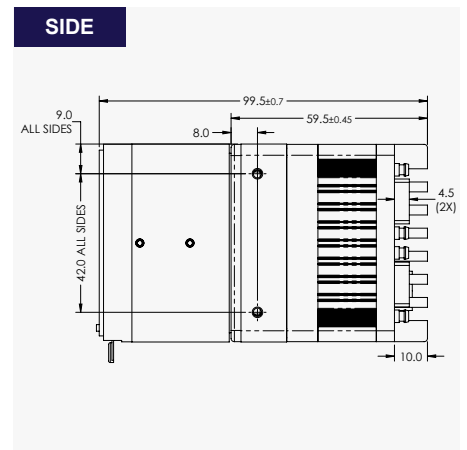
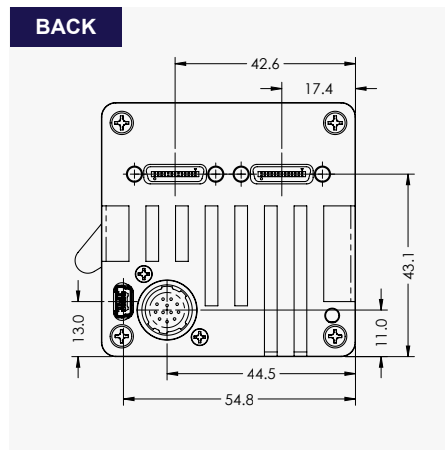
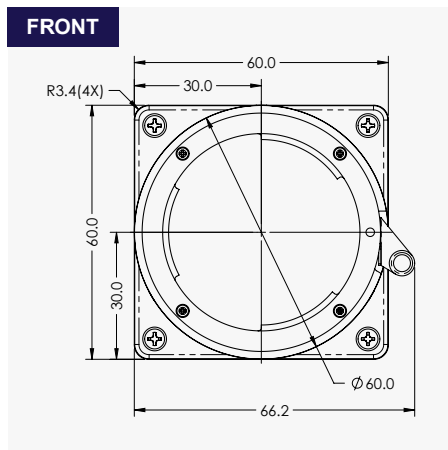
Sony IMX367

Mono Spectral Response

Sony IMX367



Dimensions (Preliminary)



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)
PS12V04A-Power Supply w/ 1 input and 1 output

Software/Drivers/Interface



Hirose Connectors

Power and I/O Interface													
	<table border="0"> <tr> <td>1. 12 VDC Return</td> <td>7. OUT1 (TTL)</td> </tr> <tr> <td>2. +12 VDC Power</td> <td>8. IN1 (OPTO)</td> </tr> <tr> <td>3. Reserved</td> <td>9. IN2 (LVTTTL)</td> </tr> <tr> <td>4. Reserved</td> <td>10. IN1 RTN</td> </tr> <tr> <td>5. OUT2 RTN (OPTO)</td> <td>11. IN2 RTN</td> </tr> <tr> <td>6. OUT1 RTN</td> <td>12. OUT2 (OPTO)</td> </tr> </table>	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)
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Connector: Hirose HR10A-10R-12PB(71)

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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)



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