

CHEETAH

RUGGEDIZED CAMERA SERIES

C2420Y/Z CMOS 5 MP with Polarization Filters Camera Link®



Imperx: C2420Y/Z

The C2420Y/Z camera features the Sony Pregius IMX-250MZR micro-polarized CMOS sensor with a native resolution of 2464 x 2056 in a 2/3" optical format delivering up to 97 frames per second with a Camera Link® Full, PoCL output. The sensor is available in monochrome (Z) or color (Y) versions and has a unique 2x2 pixel sub-array where each pixel within the sub-array blocks a different polarization filter angle (0, 45, 90 or 135 degrees). This allows the user to obtain images with four different polarization angles in each image capture. The camera allows the user to select and view images from each polarization angle or save raw image files with all four polarization angles. The C2420Y/Z's flexibility, outstanding sensitivity, and speed make it suitable for a broad range of applications from reducing glare off glass, water, and painted surfaces to materials science or 3d image reconstruction.

Specifications

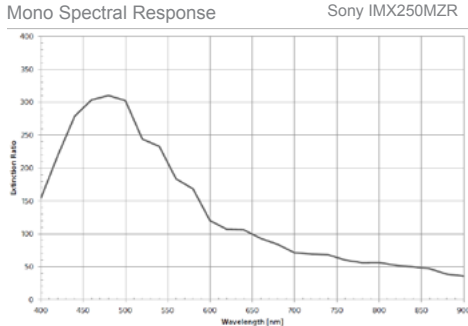
Feature	Description	Feature	Description
Interfaces available	Camera Link® Base, Medium, Full w/PoCL	Strobe Output	2 strobes, programmable position and duration
Resolution	2464 (H) x 2056 (V) 1232 (H) x 1028 (V) per polarization angle	Pulse Generator	Yes, programmable
Sensor	Sony Pregius IMX-250M CMOS color (Y) or monochrome (Z)	Data Correction	4 LUTS; 1 LUT pre-programmed with Gamma 0.45; Bad pixel correction (static, dynamic)
Sensor Format	8.4mm (H) x 7.1mm (V), 2/3" optical format	Lens Mount	C-Mount (default)
Pixel Size	3.45 microns square	Polarization Angles	0, 45, 90, and 135 degrees
Shutter	Global shutter (GS)	Supply Voltage Range	12VDC (5V – 30V), 1.5 A inrush
Digitization	8, 10, 12 bit	Camera Current	Typical: 200mA/12V
Frame Rate	97 (8-bit), 79 (10-bit), 35 (12-bit)	PoCL	PoCL capable in medium/full mode
Pixel Clock Rate	37.125MHz	Size - Width/Height/Length	37mm (W), 37mm (H), 48.6mm (L)
Dynamic Range	71dB	Weight	91.8g
Output Bit Depth	8, 10, 12 bit	Vibration, Shock	TBD
Analog/Digital Gain	Manual, auto; 0-48 dB, 480 steps	Environmental	-30° C to +75° C
White Balance	Manual, Auto, Off	Humidity	10% to 90% non-condensing
Shutter Speed	1 µs/step, 14 µs to 16.0 sec.	MTBF	TBD
Exposure Control	Off, internal, external, auto	Military Standard	MIL-STD-810F
Regions of Interest (ROI)	2 ROI	Regulatory	FCC Part 15, CE, RoHS
Trigger Inputs	External, pulse generator, software, computer		
Trigger Options	Edge, debounce		
Trigger Modes	Free run, Standard, Fast		
External Inputs/Outputs	2 IN (OPTO, LVTTTL) / 2 OUT (OPTO, TTL)		

Imperx: C2420Y/Z Applications

The CLF C2420Y/Z incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

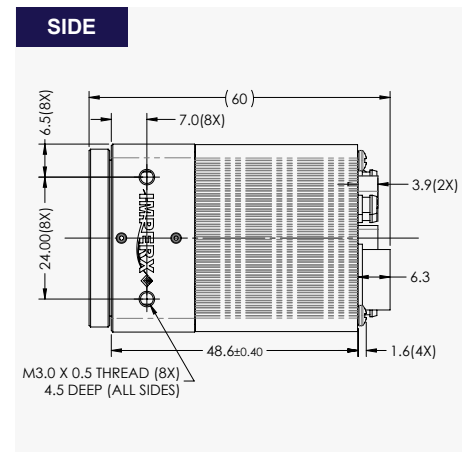
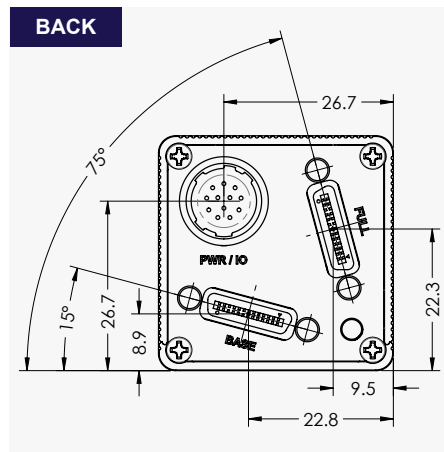
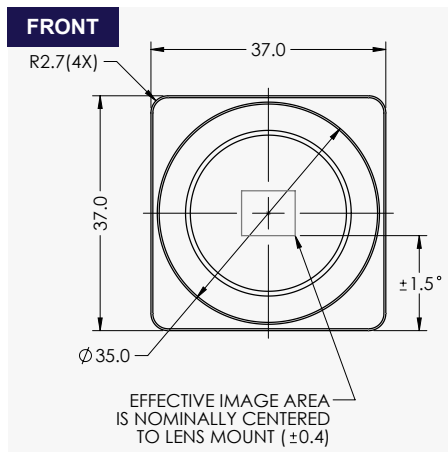
Aerospace • Satellites • Surveillance • Ball Grid Array • Printed Circuit Board Inspection • Motion Analysis • Broadcast Television • Telepresence • Unmanned Aerial Vehicles • Machine Vision • Intelligent Traffic Systems • Aerial Imaging • Open Road Tolling Systems • Situational Awareness

Absolute Quantum Efficiency



Sony IMX250MYR Color Spectral curve is TBD

Dimensions

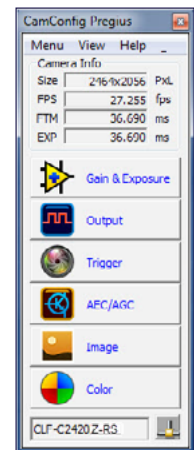


Ordering Information

Interface Available
Camera Link® Full (CLF)
Sensor Types available
C2420Z = Monochrome
C2420Y = Color

Lens Mounts
C-Mount (Default)
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</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	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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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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