CHEETAH

RUGGEDIZED CAMERA SERIES

C2420Z
CMOS 5 MP
Camera Link®

Imperx: *C2420Z*

The C2420Z 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 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 C2420Z'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
Interfaces available	Camera Link® Base, Medium, Full w/PoCL
Resolution	2464 (H) x 2056 (V)
Sensor	Sony Pregius IMX-250MZR CMOS Mono
Sensor Format	8.4mm (H) x 7.1mm (V), 2/3" optical format
Pixel Size	3.45 microns square
Shutter	Global shutter (GS)
Digitization	8, 10, 12 bit
Frame Rate	97 (8-bit), 79 (10-bit), 35 (12-bit)
Pixel Clock Rate	37.125MHz
Dynamic Range	71dB
Output Bit Depth	8, 10, 12 bit
Analog/Digital Gain	Manual, auto; 0-48 dB, 480 steps
White Balance	Manual, Auto, Off
Shutter Speed	1 µs/step, 14 µs to 16.0 sec.
Exposure Control	Off, internal, external, auto
Regions of Interest (ROI)	2 ROI
Binning	1x2, 2x1, 2x2
Sub-sampling	1x2, 2x1, 2x2
Trigger Inputs	External, pulse generator, software, computer
Trigger Options	Edge, debounce
Trigger Modes	Free run, Standard, Fast
External Inputs/Outputs	2 IN (OPTO, LVTTL) / 2 OUT (OPTO, TTL)

Feature	Description
Strobe Output	2 strobes, programmable position and duration
Pulse Generator	Yes, programmable
Data Correction	4 LUTS; 1 LUT pre-programmed with Gamma 0.45; Bad pixel correction (static, dynamic)
Lens Mount	C-Mount (default)
Polarization Angles	0, 45, 90, and 135 degrees
Supply Voltage Range	12VDC (5V – 30V), 1.5 A inrush
Camera Current	Typical: 200mA/12V
PoCL	PoCL capable in medium/full mode
Size - Width/Height/Length	37mm (W), 37mm (H), 48.6mm (L)
Weight	91.8g
Vibration, Shock	TBD
Environmental	-30° C to +75° C
Humidity	10% to 90% non-condensing
MTBF	TBD
Military Standard	MIL-STD-810F
Regulatory	FCC Part 15, CE, RoHS

IMPERX
Industrial Cameras & Imaging Systems

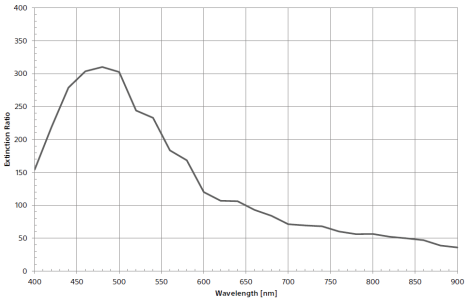
Imperx: *C2420Z Applications*

The CLF C2420Z 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

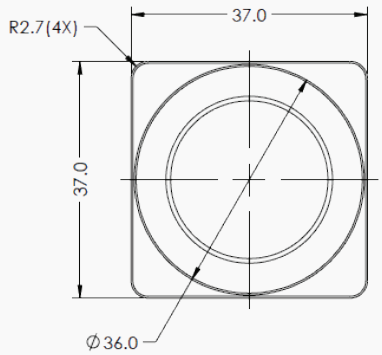
Absolute Quantum Efficiency

Mono Spectral Response — Sony IMX250MZR

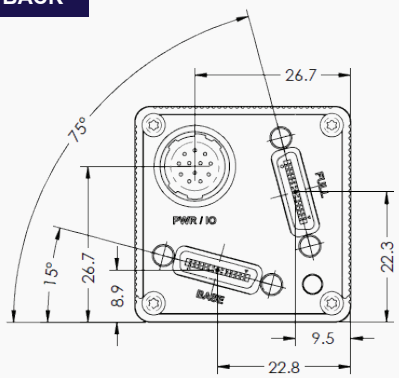


Dimensions

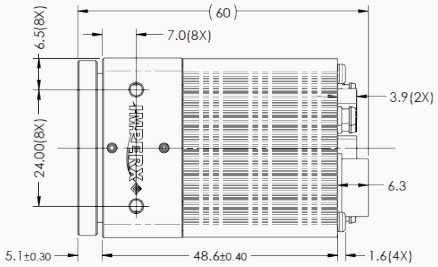
FRONT



BACK



SIDE



Ordering Information

Interface Available

Camera Link® Full (CLF)

Sensor Types available

Monochrome

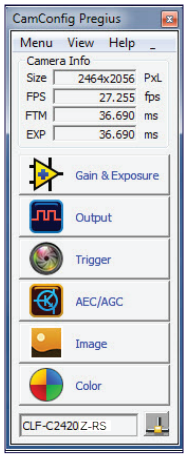
Lens Mounts

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

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

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