CHEETAH

RUGGEDIZED CAMERA SERIES

C2020
CMOS 3.1 MP
Camera Link®

Imperx: *C2020*

The CLF-C2020 camera features the Sony Pregius IMX252 Global Shutter CMOS sensor with a native resolution of 2064 x 1544 in a 1/1.8" optical format delivering up to 148 frames per second with Camera Link® Full, 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 or remove image corrections. The C2020'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
Output Interface	Camera Link® Base, Medium, Full w/PoCL
Resolution	2064 (H) x 1544 (V)
Sensor	Sony Pregius IMX252 CMOS Color/Mono
Sensor Format	7.0 mm (H) x 5.3 mm (V), 1/1.8" diagonal
Pixel Size	3.45 microns square
Shutter	Global shutter (GS)
Sensor Digitization	8, 10, 12-bit
Frame Rate	148 fps (8-bit), 121 fps (10-bit), 54 fps (12-bit)
Dynamic Range	71 dB
Output Bit Depth	8, 10, 12-bit
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps
Digital Gain	1x (0 dB) to 4x (12 dB) with a precision of 0.001x
Black Level Offset	Manual (0 – 255), Auto
White Balance	Manual, Auto, Once, Off
Shutter Speed	1 µs/step, 14 µs to 16.0 s
Exposure Control	Off, Manual, 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, Pulse width, Trigger filter, Trigger delay, 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 pre-programmed with Gamma 0.45; Bad pixel correction (static, dynamic)
Lens Mount	C-Mount (default)
P-IRIS	Optional
P-IRIS Control	Auto, Programmable
Supply Voltage Range	12 V DC (5 V – 30 V), 1.5 A inrush
Power Consumption	Typical: 2.4 W
Camera Current	Typical: 200 mA @ 12 V
PoCL	PoCL capable in Base /Medium/Full mode
Size - Width/Height/Length	37.0 mm (W) x 37.0 mm (H) x 48.6 mm (L)
Weight	91.8g
Vibration, Shock	Complies with IEC60068-2-64 and IEC60068-2-27
Environmental	-30 °C to +75 °C Operating; -40 °C to +85 °C Storage
Humidity	10% to 90% non-condensing
MTBF	TBD
Military Standard	MIL-STD-810G
Regulatory	FCC Part 15 Class A, CE, RoHS

IMPERX
Industrial Cameras & Imaging Systems

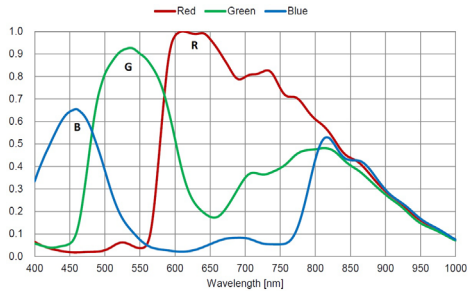
Imperx: *C2020 Applications*

The CLF-C2020 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

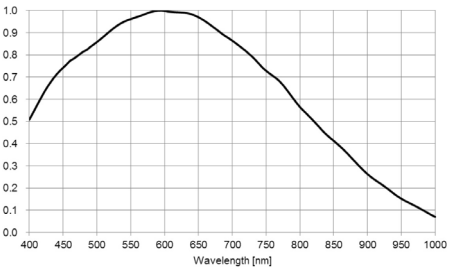
Aerospace ● Satellites ● Surveillance ● Ball Grid Array ● Printed Circuit Board Inspection ● Motion Analysis ● Broadcast Television ● Telepresence ● Unmanned Aerial Vehicles ● Machine Vision ● Intelligent Traffic Systems ● Aerial Imaging ● Open Road Tolling Systems ● Situational Awareness

Absolute Quantum Efficiency

Color Spectral Response — Sony IMX252

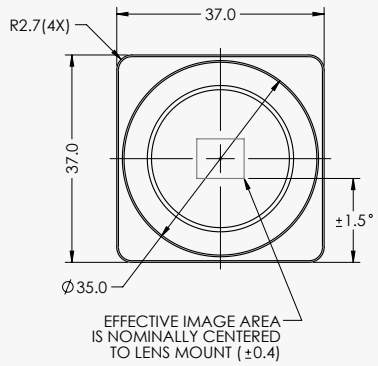


Mono Spectral Response — Sony IMX252



Dimensions

FRONT



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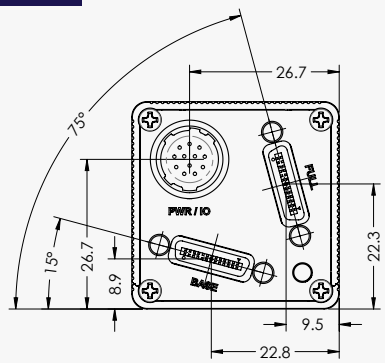
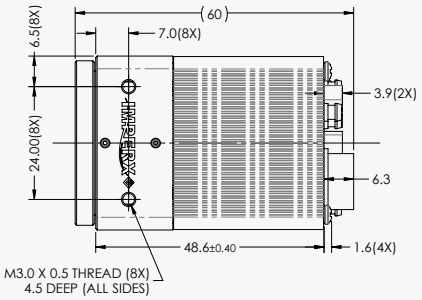


TOP



Ordering Information

Output Interface

Camera Link® Full (CLF) w/PoCL®

Sensor Types available

Monochrome
Bayer Color

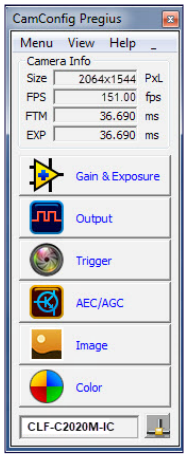
Lens Mounts

C-Mount (Default)
P-Iris (Optional)

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)

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

Rev: cl_c2020_r1_2019

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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