CHEETAH
RUGGEDIZED CAMERA SERIES

C4020
CMOS 9 MP
Camera Link®

Imperx: C4020

The Cheetah CLF-C4020 camera features the Sony Pregius IMX-255 Global Shutter CMOS sensor with a native resolution of 4112 x 2176 in a 1" optical format delivering up to 57 frames per second with a 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 C4020'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.
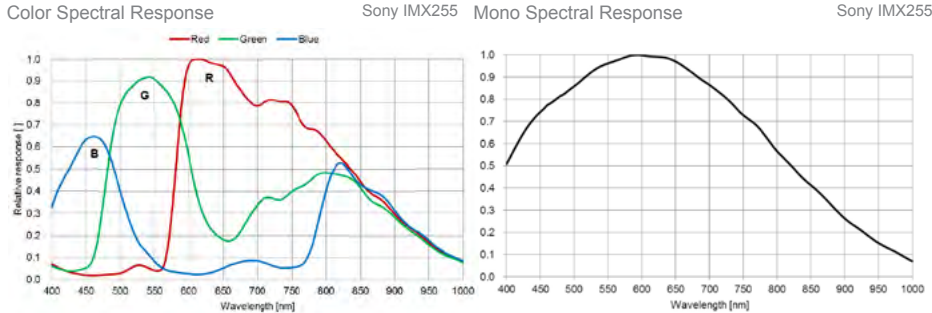
Specifications

Feature	Description
Interfaces available	Camera Link® Base, Medium, Full w/PoCL
Resolution	4112 (H) x 2176 (V)
Sensor	Sony Pregius IMX-255 CMOS Color/Mono
Sensor Format	14.1mm (H) x 7.5mm (V); 1" optical format
Pixel Size	3.45 microns square
Shutter	Global shutter (GS)
Digitization	8, 10, 12 bit
Frame Rate	57 (8-bit), 47 (10-bit), 20 (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)

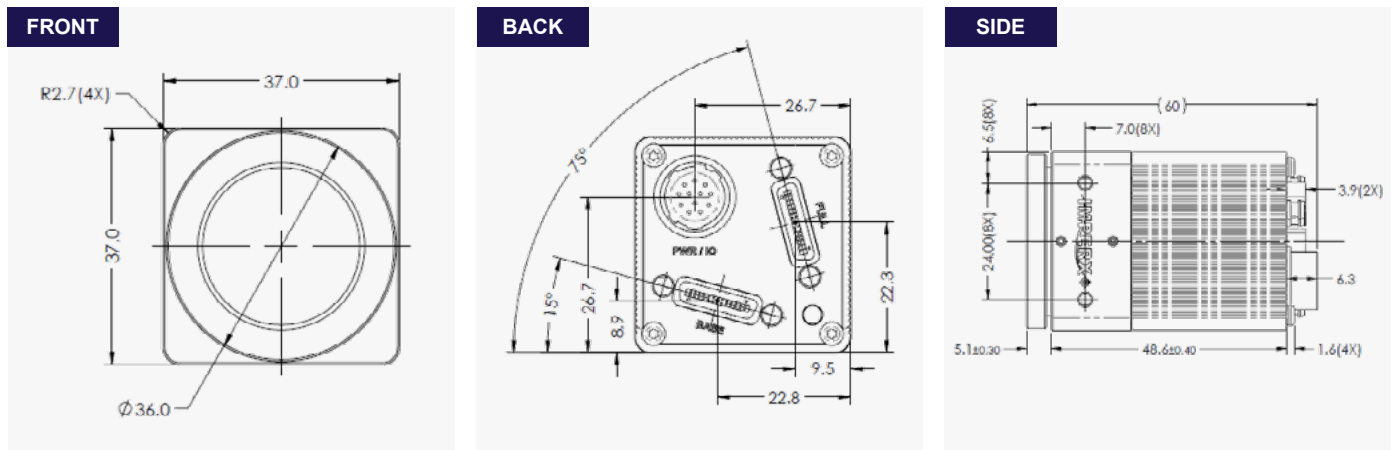| Feature	Description
Strobe Output	2 strobes, programmable position and duration
Pulse Generator	Yes, programmable
Data Correction	4 LUTs; 1 LUT pre-programmed with Gamma 0.45; Bad pixel correction (static, dynamic)
Lens Mount	C-Mount (default)
P-IRIS	Optional
Supply Voltage Range	12VDC (5V – 30V), 1.5 A inrush
Camera Current	Typical: 220mA/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: *C4020 Applications*

The CLF C4020 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 IMX255   Mono Spectral Response   Sony IMX255

Dimensions

FRONT

BACK

SIDE

Ordering Information

Interface Available
Camera Link® Full (CLF)

Sensor Types available
Monochrome
Bayer Color

Lens Mounts
C-Mount (Default)

Accessories (Sold separately)
PS12V04A-Power Supply w/ 1 input and 1 output

Camera Link GUI
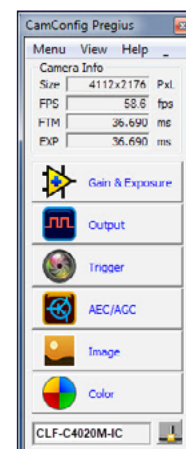
Hirose Connectors

Power and I/O Interface

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