

# CHEETAH

RUGGEDIZED CAMERA SERIES

Front View

Rear View

## C4510 CMOS 20.4 MP Camera Link®

### PRELIMINARY

#### Imperx: C4510

The CLF-C4510 camera features the Sony Pregius S™ IMX541 Global Shutter CMOS sensor with a native resolution of 4512 x 4512 in a 1.1" optical format delivering up to 25.9 frames per second with Camera Link® Full Power over Camera Link (PoCL®) output. The Pregius S technology uses a stacked back-illuminated pixel structure offering reduced pixel size, increased peak quantum efficiency, and improved sensitivity with fast lenses. 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. The C4510'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

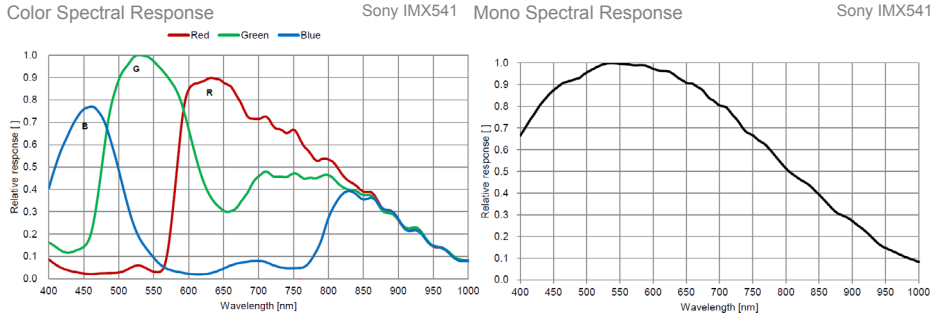
Feature	Description	Feature	Description
Output Interface	Camera Link® Base, Medium, Full w/PoCL®	Strobe Output	2 strobes, programmable position and duration
Resolution	4512 (H) x 4512 (V)	Pulse Generator	Yes, programmable
Sensor	Sony Pregius S IMX541 CMOS Color/Mono	Data Correction	4 LUTs pre-programmed with Gamma 0.45; Bad pixel correction (static, dynamic) Flat field correction
Sensor Format	12.3 mm (H) x 12.3 mm (V), 1.1" optical format (17.5 mm diagonal)	Lens Mount	C-Mount (default)
Pixel Size	2.74 microns square	P-IRIS	Optional
Shutter	Global shutter (GS)	P-IRIS Control	Auto, Programmable
Sensor Digitization	8, 10, 12-bit	Supply Voltage Range	12 V DC (6 V – 30 V), 1.5 A inrush @ 12 V
Frame Rate	25.9 fps (8-bit), 20.8 fps (10-bit), 8.9 fps (12-bit)	Power Consumption	Typical: 2.64 W
Dynamic Range	71 dB	Camera Current	Typical: 220 mA @ 12 V
Output Bit Depth	8, 10, 12-bit	PoCL	PoCL capable in Base/Medium/Full mode
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps	Size - Width/Height/Length	37.0 mm (W) x 37.0 mm (H) x 47.2 mm (L)
Digital Gain	1x (0 dB) to 4x (12 dB) with a precision of 0.001x	Weight	103.4 g
Black Level Offset	Manual (0 – 255), Auto	Vibration, Shock	Complies with IEC60068-2-64 and IEC60068- 2-27
White Balance	Manual, Auto, Once, Off	Environmental	-30 °C to +75 °C Operating; -40 °C to +85 °C Storage
Shutter Speed	30 µs to 16.0 s	Humidity	10% to 90% non-condensing
Exposure Control	Off, Manual, External, Auto	MTBF	TBD
Regions of Interest (ROI)	2 ROI	Military Standard	MIL-STD-810G
Binning	1x2, 2x1, 2x2	Regulatory	FCC Part 15, CE, RoHS, UKCA
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: C4510 Applications

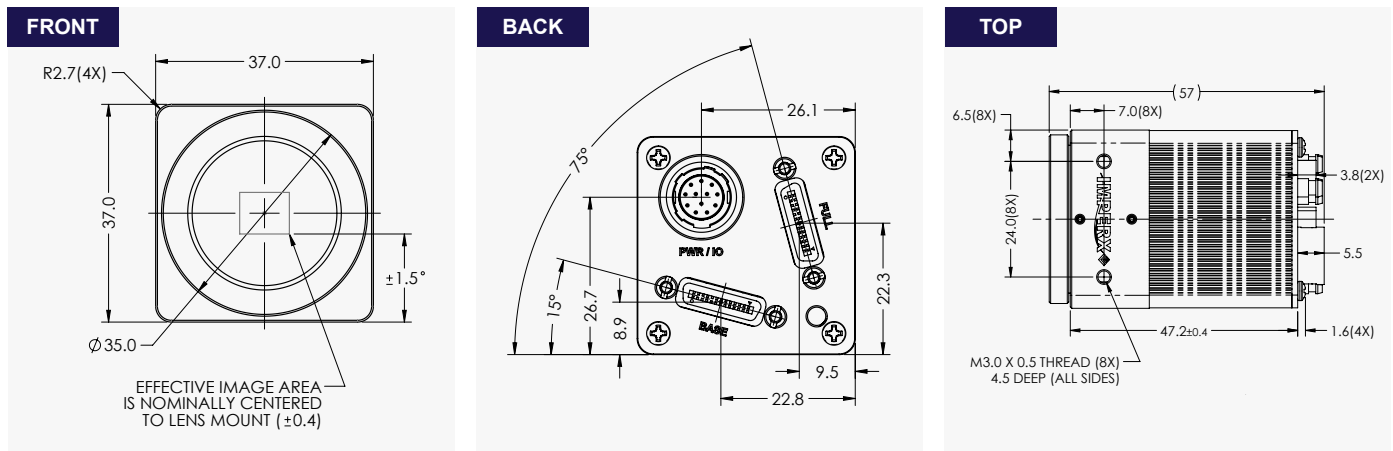
The CLF-C4510 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

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

## Absolute Quantum Efficiency



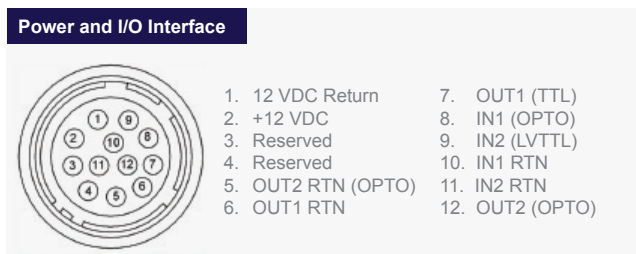
## Dimensions



## Ordering Information

<b>Output Interface</b> Camera Link® Full (CLF) w/PoCL®	<b>Lens Mounts</b> C-Mount (Default) P-Iris (optional)
<b>Sensor Types available</b> Monochrome Bayer Color	<b>Accessories (Sold separately)</b> PS12V14A – Power Supply w/ 1 input & 1 output PS12V18A – Power Supply w/ 1 input, 1 output, and a P-Iris connector

## Hirose Connectors



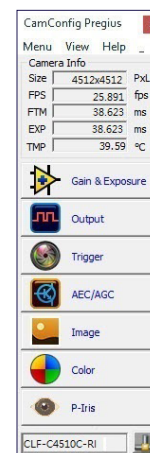
Connector: Hirose HR10A-10R-12PB(71)

Rev: c\_l\_c4510\_r3\_2021

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)



## Software/Drivers/Interface



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