

# CHEETAH

RUGGEDIZED CAMERA SERIES

Front View

Rear View

## CXP-C5340

## CMOS 24.6 MP

Dual CXP-6

## PRELIMINARY

### Imperx: C5340

The low-power CXP-C5340 camera features the Sony Pregius S™ IMX530 Global Shutter CMOS sensor with a native resolution of 5312 x 4608 in a 1.2" optical format delivering up to 46.6 frames per second with a dual CXP-6 CoaXPress 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. A dual ADC mode enables HDR imaging by combining high gain and low gain lines within the sensor. Short interframe time of 100 ns makes the camera suitable for PIV applications. The camera features low power consumption and operates over an extended temperature range from -30 °C to +75 °C. Imperx puts you in control and gives you full access to raw data without corrections. Using the simple, intuitive GenICam™ compliant user interface, you can quickly apply image corrections, if desired. The CXP-C5340'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

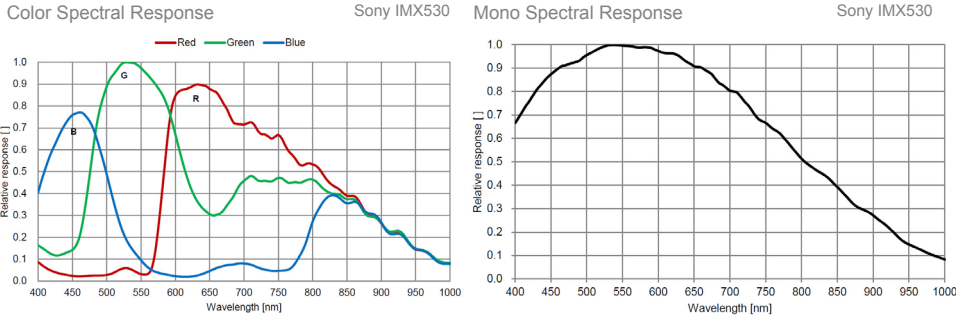
Feature	Description	Feature	Description
Output Interface	2-channel CXP-6 CoaXPress w/PoCXP	PIV Mode	Available in Free run and Fast trigger modes
Resolution	5312 (H) x 4608 (V)	PIV Interframe Time	100 ns (EST)
Sensor	Sony Pregius S IMX530 CMOS Color/Mono	External Inputs/Outputs	2 IN (OPTO, LVTTTL) / 2 OUT (OPTO, TTL)
Sensor Format	14.3 mm (H) x 12.4 mm (V), 1.2" optical format	Strobe Output	2 strobes, programmable position and duration
Pixel Size	2.74 microns square	Pulse Generator	Yes, programmable
Shutter	Global shutter (GS)	Data Correction	2 LUTs pre-programmed with Gamma 0.45, 2 LUTs pre-programmed with Negative LUT; Bad and Defective pixel correction (static), 8 Flat field correction tables
Sensor Digitization	10, 12-bit	Lens Mount	C-Mount (default)
Frame Rate	46.6 fps (8-bit), 37.9 fps (10-bit), 31.7 fps (12-bit)	Canon EF-Mount	Optional, Active or Passive
Dynamic Range	71 dB	Power	Power over CoaXPress or 6.5 V–33 V external power supply (Optional)
Output Bit Depth	8, 10, 12-bit	Power Consumption	Typ.: 4.8 W @ 12 V, 25 °C Max.: 5 W @ 12 V, 75 °C
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps	Size - Width/Height/Length	60 mm (W) x 60 mm (H) x 47 mm (L)
Digital Gain	0x to 4x (12 dB) with a precision of 1/4096	Weight	370 g
AEC/AGC	Off, Once, Auto	Vibration, Shock	20G (20 – 200 Hz XYZ) /100G
Gamma Correction	0.00 to 4.00, with a step of 0.01	Environmental	-30 °C to +75 °C Operating, -40 °C to +85 °C Storage
Black Level Offset	Manual (0 – 255), Auto	Humidity	10% to 90% non-condensing
White Balance	Manual, Auto, Once, Off	MTBF	452,000 hours @ 50 °C (EST) (Telcordia SR-332)
Shutter Speed	8 µs to 16.0 s	Military Standard	MIL-STD-810G
Exposure Control	Off, Internal, External, Auto	Regulatory	FCC Part 15 Class A, CE, RoHS, UKCA
Regions of Interest (ROI)	One Master ROI, two Processing ROI		
Binning	1 x 2, 2 x 1, 2 x 2 (Mono cameras only)		
Sub-sampling	1 x 2, 2 x 1, 2 x 2		
HDR Imaging (Dual ADC)	Available with 12-bit sensor digitization only		
Trigger Inputs	External, Pulse generator, Software, Link Trigger (Trigger over CXP)		
Trigger Options	Edge, Pulse width, Trigger filter, Trigger delay, Debounce		
Trigger Modes	Free run, Standard, Fast		

## Imperx: C5340 Applications

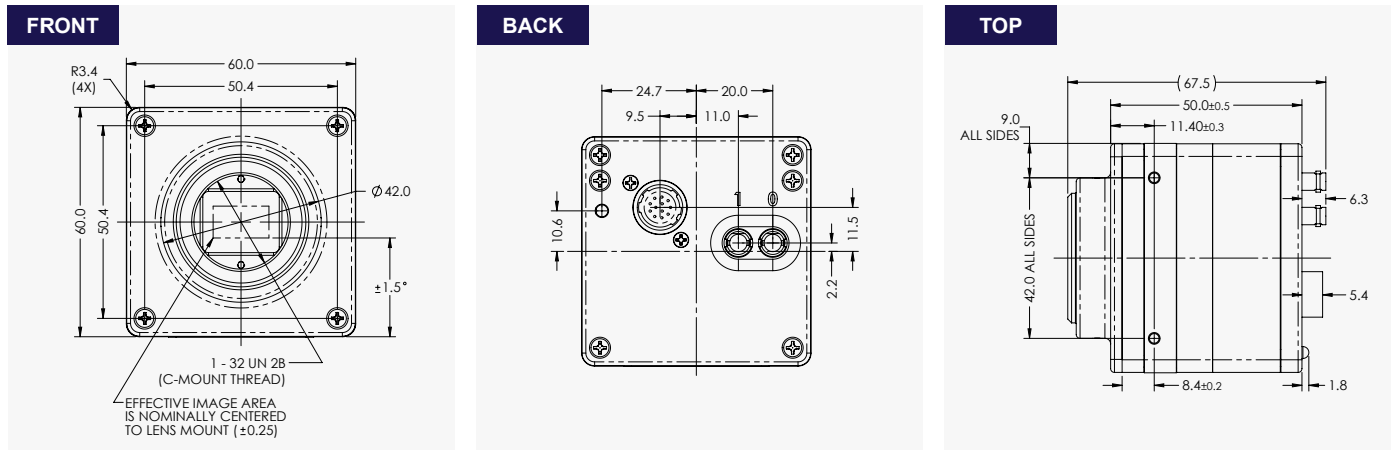
The CXP-C5340 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

Particle Image Velocimetry • Aerospace • Satellites • Surveillance • Ball Grid Array • Printed Circuit Board Inspection • Motion Analysis • Unmanned Aerial Vehicles • Machine Vision • Intelligent Traffic Systems • Aerial Imaging • Situational Awareness

## Absolute Quantum Efficiency



## Dimensions (Preliminary)

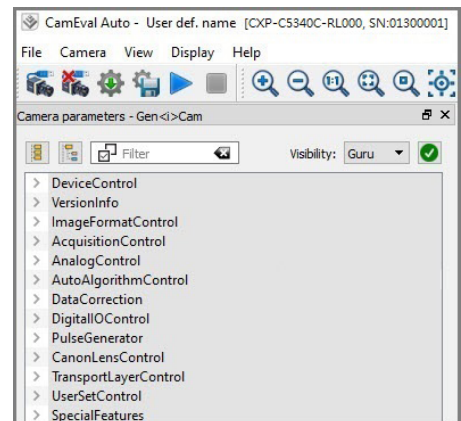


## Ordering Information

<b>Output Interface</b>
2-channel CXP-6 CoaXPress w/PoCXP (CXP)
<b>Sensor Types available</b>
Monochrome
Bayer Color

<b>Lens Mounts</b>
C-Mount (Default) M42 (Optional)
F-Mount (Optional) Canon EF Mount (Optional)
<b>Accessories (Sold separately)</b>
PS12V14A: Power Supply w/1 input and 1 output
CBL-PWIO01: Cable Power; Hirose 12p (F) to loose end; 2 meters

## Gen<I>Cam Compliant Camera Configurator



## Connectors

<b>Power and I/O Interface</b>	<b>CXP-connectors</b>
<ol style="list-style-type: none"> <li>12/24 VDC Return</li> <li>+12/24V DC</li> <li>Reserved</li> <li>Reserved</li> <li>OUT2 RTN (OPTO)</li> <li>OUT1 RTN</li> <li>OUT1 (TTL)</li> <li>IN1 (OPTO)</li> <li>IN2 (LVTTTL)</li> <li>IN1 RTN</li> <li>IN2 RTN</li> <li>OUT2 (OPTO)</li> </ol>	Two micro-BNC (HD-BNC) 75 Ohm jacks

Connector: Hirose HR 10A-10R-12PB(71)

Rev: cxp\_c5340\_r1\_2022

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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