

# CHEETAH

RUGGEDIZED CAMERA SERIES

Front View

Rear View

## CXP-C5440

### CMOS 17 MP

Dual CXP-6

### Imperx: C5440

The CXP-C5440 camera features the Sony Pregius IMX387 Global Shutter CMOS sensor with a native resolution of 5472 x 3084 in a 4/3" optical format delivering up to 56.5 frames per second with a dual CXP-6 CoaXPress output. CMOS technology eliminates smear columns from areas of ultra-bright intensity and specular reflections in uncontrolled lighting applications. The Imperx Cheetah line provides excellent image quality with Imperx proprietary processing. In addition, 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-C5440'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

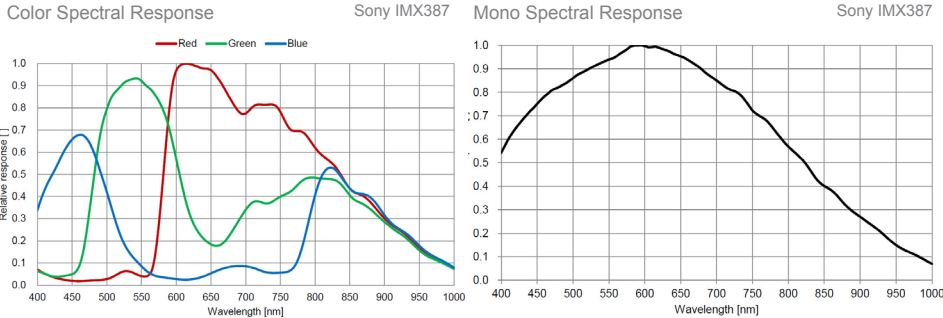
Feature	Description	Feature	Description
Output Interface	2-channel CXP-6 CoaXPress w/PoCXP	Strobe Output	2 strobes, programmable position and duration
Resolution	5472 (H) x 3084 (V)	Pulse Generator	Yes, programmable
Sensor	Sony Pregius IMX387 CMOS Color/Mono	Data Correction	2 LUTs pre-programmed with Gamma 0.45, 2 LUTs pre-programmed with Negative LUT; Bad and Defective pixel correction (static), 8 Flat field correction tables
Sensor Format	18.8 mm (H) x 10.6 mm (V), 4/3" optical format	Forced Air Cooling Control	On, Off, Auto
Pixel Size	3.45 microns square	Lens Mount	F-Mount (default)
Shutter	Global shutter (GS)	Canon EF-Mount	Optional, Active or Passive
Sensor Digitization	10, 12-bit	Power	Power over CoaXPress or 6.5 V–33 V external power supply (Optional)
Frame Rate	56.5 fps (8-bit), 55.3 fps (10-bit), 40.4 fps (12-bit)	Power Consumption	Typ. (Fan is On): 9.2 W (at 25 °C), Max. (Fan is Off): 9.9 W (at 25 °C)
Dynamic Range	71 dB	Size - Width/Height/Length	60 mm (W) x 60 mm (H) x 60.2 mm (L)
Output Bit Depth	8, 10, 12-bit	Weight	500 g
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps	Vibration, Shock	20G (20 – 200 Hz XYZ) /100G
Digital Gain	1x (0 dB) to 4x (12 dB) with a precision of 0.001x	Environmental	-30 °C to +65 °C Operating (Fan is On), -30 °C to +50 °C Operating (Fan is Off); -40 °C to +85 °C Storage
AEC/AGC	Off, Once, Auto	Humidity	10% to 90% non-condensing
Gamma Correction	0.00 to 4.00, with a step of 0.01	MTBF	451,875 hours @ 50 °C (Fan is Off) (Telcordia SR-332)
Black Level Offset	Manual (0 – 255), Auto	Military Standard	MIL-STD-810G
White Balance	Manual, Auto, Once, Off	Regulatory	FCC Part 15 Class A, CE, RoHS, UKCA
Shutter Speed	36 µs to 16.0 s		
Exposure Control	Off, Internal, External, Auto		
Regions of Interest (ROI)	1 ROI		
Binning	1 x 2, 2 x 1, 2 x 2		
Sub-sampling	1 x 2, 2 x 1, 2 x 2		
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		
External Inputs/Outputs	2 IN (OPTO, LVTTTL) / 2 OUT (OPTO, TTL)		

## Imperx: C5440 Applications

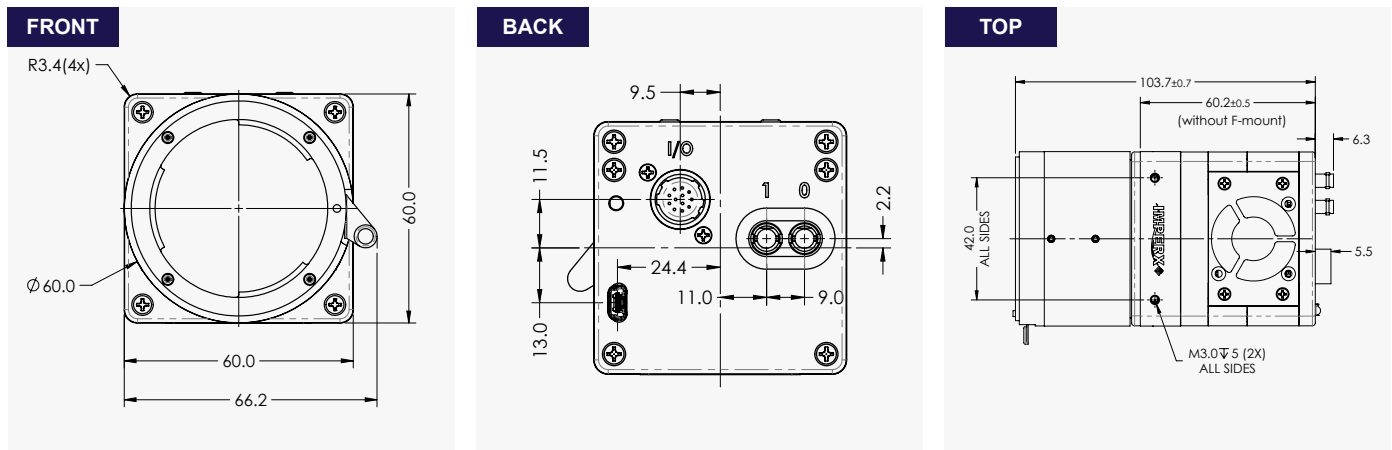
The CXP-C5440 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

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



## Dimensions



## Ordering Information

**Output Interface**  
2-channel CXP-6 CoaXPress w/PoCXP (CXP)

**Sensor Types available**  
Monochrome  
Bayer Color

**Lens Mounts**  
F Mount (Default) M42 (Optional)  
Canon EF Mount (Optional)

**Accessories (Sold separately)**  
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

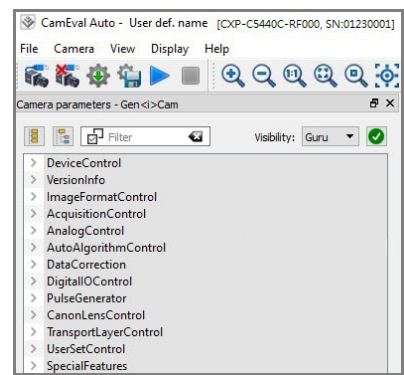


Image of the software interface is for illustrative purposes only. Camera configurator software is not available from Imperx, but is available from the frame grabber supplier.

## Connectors

**Power and I/O Interface**

- 12/24 VDC Return
- +12/24V DC
- Reserved
- Reserved
- OUT2 RTN (OPTO)
- OUT1 RTN
- OUT1 (TTL)
- IN1 (OPTO)
- IN2 (LVTTTL)
- IN1 RTN
- IN2 RTN
- OUT2 (OPTO)

**CXP-connectors**  
Two micro-BNC (HD-BNC) 75 Ohm jacks

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

Rev: cxp\_c5440\_r11\_2023

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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