

CHEETAH

RUGGEDIZED CAMERA SERIES

Front View

Rear View

CXP-C5341 CMOS 16 MP

Dual CXP-6

Imperx: C5341

The low-power CXP-C5341 camera features the Sony Pregius S™ IMX532 Global Shutter CMOS sensor with a native resolution of 5312 x 3040 in a 1.1" optical format delivering up to 69.5 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 2 μ s 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-C5341'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

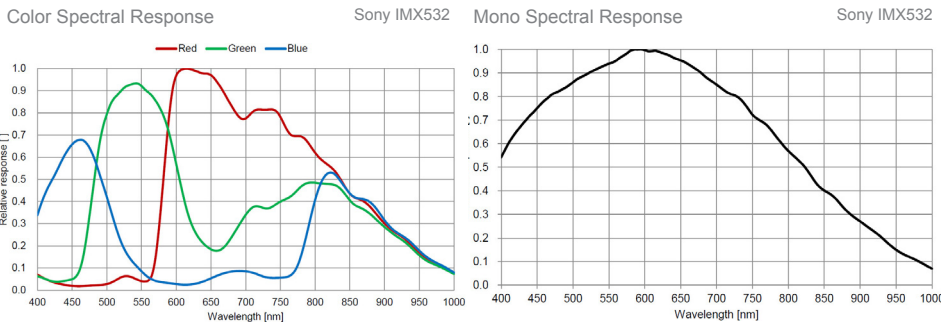
Feature	Description	Feature	Description
Output Interface	2-channel CXP-6 CoaXPress w/PoCXP	Strobe Output	2 strobes, programmable position and duration
Resolution	5312 (H) x 3040 (V)	Pulse Generator	Yes, programmable
Sensor	Sony Pregius S IMX532 CMOS Color/Mono	Data Correction	2 LUTs pre-programmed with Gamma 0.45, 2 LUTs pre-programmed with Negative LUT; Bad and Defective pixel correction (static), 8 Flat field correction tables
Sensor Format	14.6 mm (H) x 8.3 mm (V), 1.1" optical format	Lens Mount	C-Mount (default)
Pixel Size	2.74 microns square	Canon EF-Mount	Optional, Active or Passive
Shutter	Global shutter (GS)	Power	Power over CoaXPress or 6.5 V–33 V external power supply (Optional)
Sensor Digitization	10, 12-bit	Power Consumption	Typ.: 4.68 W @ 12 V, 25 °C Max.: 4.88 W @ 12 V, 75 °C
Frame Rate	69.5 fps (8-bit), 56.6 fps (10-bit), 47.3 fps (12-bit)	Size - Width/Height/Length	60 mm (W) x 60 mm (H) x 47 mm (L)
Dynamic Range	71 dB	Weight	370 g
Output Bit Depth	8, 10, 12-bit	Vibration, Shock	20G (20 – 200 Hz XYZ) / 100G
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps	Environmental	-30 °C to +75 °C Operating, -40 °C to +85 °C Storage
Digital Gain	0x to 4x (12 dB) with a step of 1/4096	Humidity	10% to 90% non-condensing
AEC/AGC	Off, Once, Auto	MTBF	452,000 hours @ 50 °C (EST) (Telcordia SR-332)
Gamma Correction	0.00 to 4.00, with a step of 0.01	Military Standard	MIL-STD-810G
Black Level Offset	Manual (0 – 4095), Auto	Regulatory	FCC Part 15 Class A, CE, RoHS UKCA
White Balance	Manual, Auto, Once, Off		
Shutter Speed	8 μ s to 16.0 s		
Exposure Control	Off, Internal, External, Auto		
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		
PIV Mode	Available in Free run and Fast trigger modes		
PIV Interframe Time	2 μ s (recommended by the image sensor's manufacturer)		
External Inputs/Outputs	2 IN (OPTO, LVTTTL) / 2 OUT (OPTO, TTL)		

Imperx: C5341 Applications

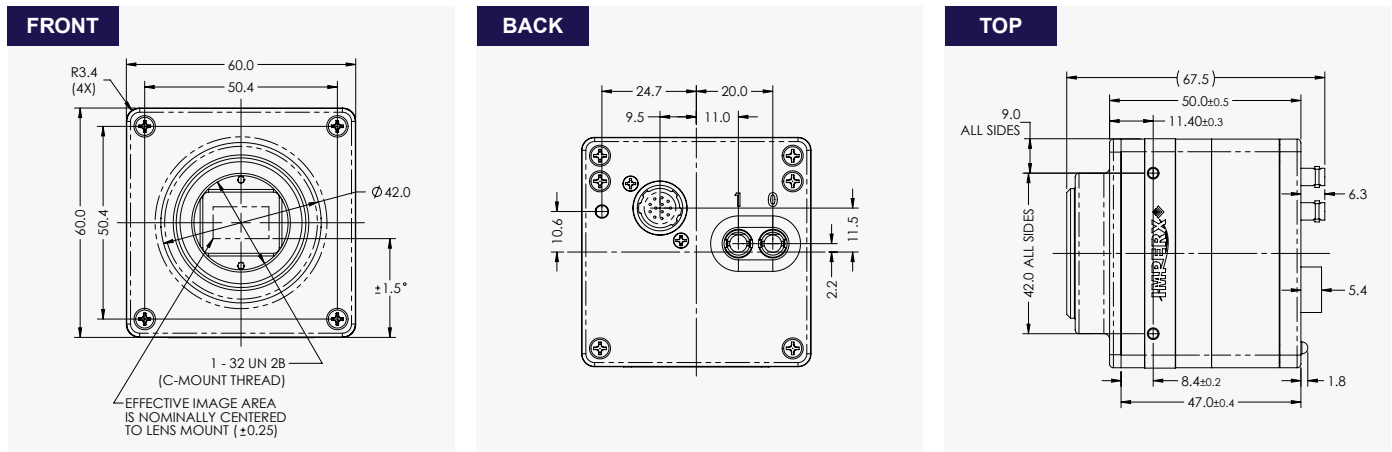
The CXP-C5341 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

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



Ordering Information

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

Lens Mounts
C-Mount (Default) M42 (Optional)
F-Mount (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

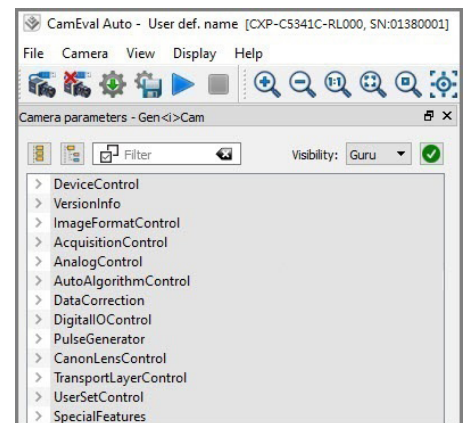


Image of the software interface is for illustrative purposes only. Camera configurator software is not available from Imperx, but is available from the frame grabber supplier.

Connectors

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

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

Rev: cxp_c5341_r4_2024

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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