

CHEETAH

RUGGEDIZED CAMERA SERIES

Front View

Rear View

C5311

CMOS 16.2 MP

GigE Vision® with Power over Ethernet (PoE)

Imperx: C5311

The POE-C5311 camera features the Sony Pregius S™ IMX542 Global Shutter CMOS sensor with a native resolution of 5328 x 3040 in a 1.1" optical format delivering up to 7.4 frames per second with GigE Vision® Power over Ethernet (PoE) 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 C5311'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

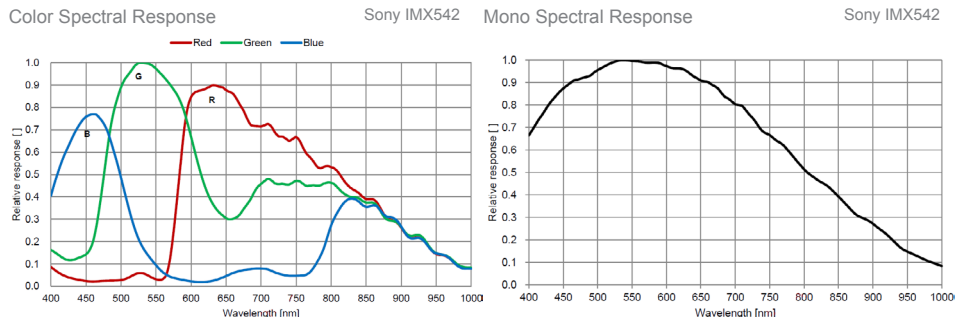
Feature	Description	Feature	Description
Output Interface	GigE Vision® with Power over Ethernet (PoE)	Strobe Output	2 strobes, programmable position and duration
Resolution	5328 (H) x 3040 (V)	Pulse Generator	Yes, programmable
Sensor	Sony Pregius S IMX542 CMOS Color/Mono	Data Corrections	2 LUTs pre-programmed with Gamma 0.45, 2 LUTs pre-programmed with Negative LUT Bad pixel correction (static), Flat field correction
Sensor Format	14.6 mm (H) x 8.3 mm (V), 1.1" optical format (16.8 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	12-bit	Supply Voltage Range	12 VDC (6 V – 30 V), 1.5 A inrush @ 12 V PoE (IEEE 802.3af / IEEE 802.3at)
Frame Rate	7.4 fps (8-bit), 3.7 fps (10-bit/12-bit unpacked), 4.9 (10-bit/12-bit packed)	Power Consumption	Typical: 3.96 W @ 12 V; PoE: 5.95 W
Dynamic Range	71 dB	Camera Current	Typical: 330 mA @ 12 V
Output Bit Depth	8, 10, 12-bit	Size - Width/Height/Length	37 mm (W) x 37 mm (H) x 61.6 mm (L)
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps	Weight	125.2 g
Digital Gain	1x (0 dB) to 4x (12 dB) with a precision of 0.001x	Vibration, Shock	20G (20 – 200 Hz XYZ)/100G
Black Level Offset	Manual (0–4095), Auto	Environmental	-30 °C to +75 °C Operating -40 °C to +85 °C Storage
White Balance	Manual, Auto, Once, Off	Humidity	10% to 90% non-condensing
Shutter Speed	57 µs to 16.0 s	MTBF	530,000 hours @ 50 °C (EST) (Telcordia SR-332)
Exposure Control	Off, Manual, Auto, External	Military Standard	MIL-STD-810G
Regions of Interest (ROI)	2 ROI	Regulatory	FCC Part 15 Class A, CE, RoHS, UKCA
Binning	1x1, 2x2 (Mono cameras only)		
Sub-sampling	1x1, 2x2		
Trigger Inputs	External, Pulse generator, Software		
Trigger Options	Edge, Pulse width, Trigger delay, Debounce, Trigger over Ethernet		
Trigger Modes	Free run, Standard, Fast		
External Inputs/Outputs	2 IN (OPTO, LVTTTL) / 2 OUT (OPTO, TTL)		

Imperx: C5311 Applications

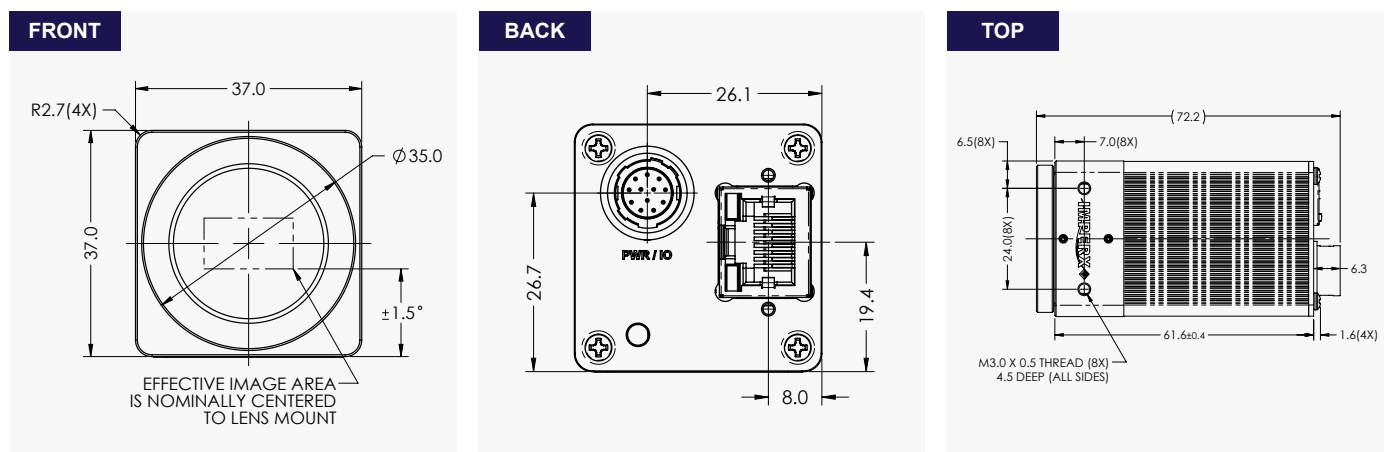
The POE-C5311 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

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

Absolute Quantum Efficiency



Dimensions

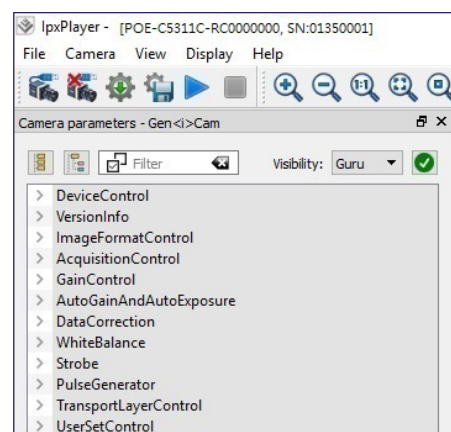


Ordering Information

Output Interface	
GiG Vision® with Power over Ethernet (PoE®)	
Sensor Types available	
Monochrome	Bayer Color
Lens Mounts	
C-Mount (Default)	P-Iris (Optional)

Accessories (Sold separately)	
PS12V14A-Power Supply w/ 1 input and 1 output	
PS12V18A-Power Supply w/ 1 input, 1 output, and a P-Iris connector	
CBL-PWIO01-I/O Cable; Hirose 12p (F) to loose end; 2 m	

Software/Drivers/Interface



Hirose Connectors

Power and I/O Interface	
	<ul style="list-style-type: none"> 1. 12 VDC Return 2. +12 VDC Power 3. Reserved 4. Reserved 5. OUT2 RTN (OPTO) 6. OUT1 RTN 7. OUT1 (TTL) 8. IN1 (OPTO) 9. IN2 (LVTTTL) 10. IN1 RTN 11. IN2 RTN 12. OUT2 (OPTO)

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

Rev: poe_c5311_r3_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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