

CHEETAH

RUGGEDIZED CAMERA SERIES

Front View

Rear View

C5311

CMOS 16.2 MP

Camera Link®

Imperx: C5311

The CLF-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 32.6 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 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

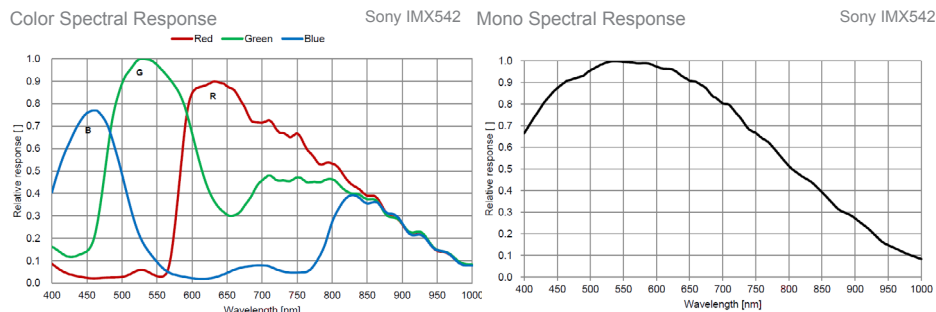
Feature	Description	Feature	Description
Output Interface	Camera Link® Base, Medium, Full w/PoCL®	Strobe Output	2 strobes, programmable position and duration
Resolution	5328 (H) x 3040 (V)	Pulse Generator	Yes, programmable
Sensor	Sony Pregius S IMX542 CMOS Color/Mono	Data Correction	4 LUTs pre-programmed with Gamma 0.45; Bad pixel correction (static, dynamic) 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	8, 10, 12-bit	Supply Voltage Range	12 V DC (6 V – 30 V), 1.5 A inrush @ 12 V
Frame Rate	32.6 fps (8-bit), 26.2 fps (10-bit), 11.3 fps (12-bit)	Power Consumption	Typical: 2.76 W
Dynamic Range	71 dB	Camera Current	Typical: 230 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	530,000 hours @ 50 °C (EST) (Telcordia SR-332)
Regions of Interest (ROI)	2 ROI	Military Standard	MIL-STD-810G
Binning	1x1, 2x2 (Mono cameras only)	Regulatory	FCC Part 15, CE, RoHS, UKCA
Sub-sampling	1x1, 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: C5311 Applications

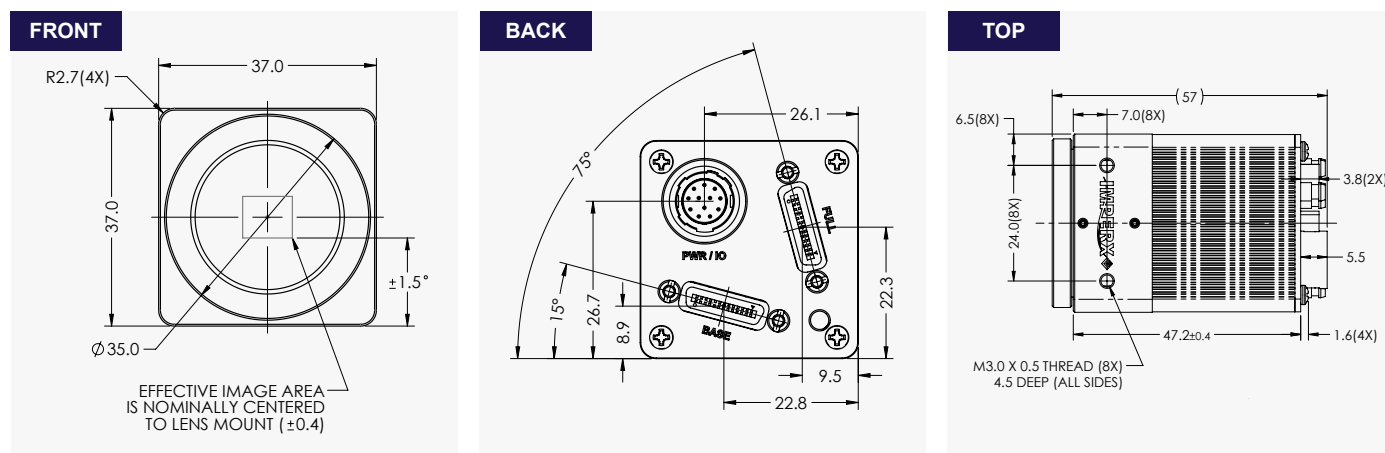
The CLF-C5311 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

Automation • Logistics • Robotics • Pharmaceuticals • Food and Beverages • 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

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

Hirose Connectors

Power and I/O Interface
1. 12 VDC Return 2. +12 VDC 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)

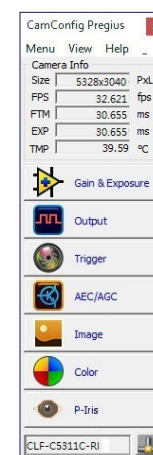
Connector: Hirose HR10A-10R-12PB(71)

Rev: cl_c5311_r3_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)



Software/Drivers/Interface



IMPERX
Industrial Cameras & Imaging Systems

IMPERX 6413 Congress Ave. Suite 150, Boca Raton, FL 33487, USA
Tel: +1-561-989-0006. Email: sales@imperx.com

WWW.IMPERX.COM

Technical data has been fully checked, but accuracy of printed matter is not guaranteed. Subject to change without notice. Copyright 2024