CHEETAH

RUGGEDIZED CAMERA SERIES

C4110Y/Z

CMOS 12 MP with Polarization Filters

GigE Vision® with Power over Ethernet (PoE)

Imperx: *C4110Y/Z*

The POE-C4110Y/Z camera features the Sony Pregius IMX253MY/ZR Global Shutter CMOS sensor with a native resolution of 4112 x 3008 in a 1.1” optical format delivering up to 9.6 frames per second with GigE Vision® Power over Ethernet (PoE) output. The sensor is available in monochrome (Z) or color (Y) versions and has a unique 2x2 pixel sub-array where each pixel within the sub-array senses a different polarization angle (0, 45, 90 or 135 degrees). This allows the user to obtain images with four different polarization angles in each image capture. The camera allows the user to select and view images from each polarization angle or save raw image files with all four polarization angles. The C4110Y/Z’s flexibility, outstanding sensitivity, and speed make it suitable for a broad range of diverse and demanding applications from reducing glare off glass, water, and painted surfaces to materials science or 3D image reconstruction.

Specifications

Feature	Description
Output Interface	GigE Vision® with Power over Ethernet (PoE)
Resolution	4112 (H) x 3008 (V) 2056 (H) x 1504 (V) per polarization angle
Sensor	Sony Pregius IMX253MY/ZR CMOS color (Y) or monochrome (Z)
Sensor Format	14.2 mm (H) x 10.4 mm (V), 1.1” optical format
Pixel Size	3.45 microns square
Shutter	Global shutter (GS)
Sensor Digitization	12-bit
Frame Rate	9.6 fps (8-bit), 4.8 fps (10-bit/12-bit unpacked), 6.4 fps (10-bit/12-bit packed)
Dynamic Range	71 dB
Output Bit Depth	8, 10, 12-bit
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps
Digital Gain	1x (0 dB) to 4x (12 dB) with a precision of 0.001x
Black Level Offset	Manual (0 – 255), Auto
White Balance	Manual, Auto, Once, Off
Shutter Speed	1 µs/step, 14 µs to 16 s
Exposure Control	Off, Manual, Auto, External
Regions of Interest (ROI)	2 ROI
Polarization Angles	0, 45, 90, and 135 degrees
Trigger Inputs	External, Pulse generator, Software
Trigger Options	Edge, Pulse width, Trigger filter, Trigger delay, Debounce
Trigger Modes	Free run, Standard, Fast
External Inputs/Outputs	2 IN (OPTO, LVTTL) / 2 OUT (OPTO, TTL)

Feature	Description
Strobe Output	2 strobes, programmable position and duration
Pulse Generator	Yes, programmable
Data Correction	4 LUTs pre-programmed with Gamma 0.45; Bad pixel correction (static, dynamic), Flat field correction
Lens Mount	C-Mount (default)
P-Iris	Optional
P-Iris Control	Auto, Programmable
Supply Voltage Range	12 VDC (5 V – 30 V), 1.5 A inrush
Power Consumption	3.48 W
Camera Current	Typical: 290 mA @ 12 V
PoE Capable	Yes
Size - Width/Height/Length	37 mm (W) x 37 mm (H) x 48.6 mm (L)
Weight	113.2 g
Vibration, Shock	20G (20 – 200 Hz XYZ)/100G
Environmental	-30 °C to +75 °C Operating, -40 °C to +85 °C Storage
Humidity	10% to 90% non-condensing
MTBF	TBD
Military Standard	MIL-STD-810G
Regulatory	FCC Part 15 Class A, CE, RoHs

IMPERX™
Industrial Cameras & Imaging Systems

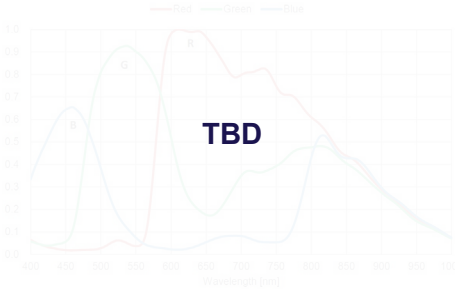
Imperx: *C4110Y/Z Applications*

The POE-C4110Y/Z incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

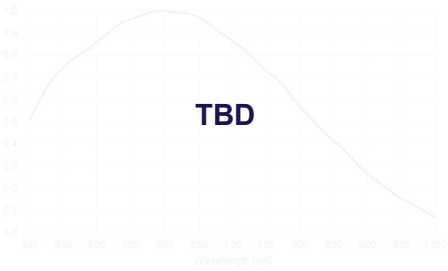
Aerospace ● Satellites ● Surveillance ● Ball Grid Array ● Printed Circuit Board Inspection ● Motion Analysis ● Broadcast Television ● Telepresence ● Unmanned Aerial Vehicles ● Machine Vision ● Intelligent Traffic Systems ● Aerial Imaging ● Open Road Tolling Systems ● Situational Awareness

Absolute Quantum Efficiency

Color Spectral Response — Sony IMX253MYR

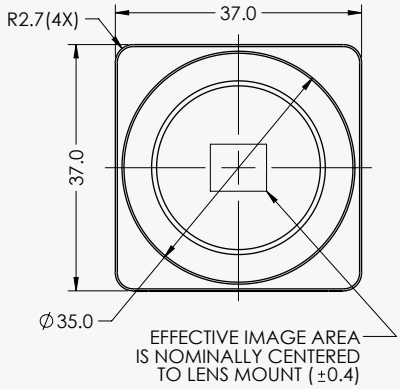


Mono Spectral Response — Sony IMX253MZR

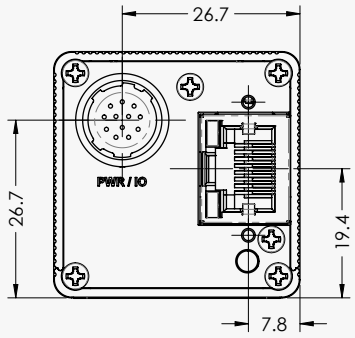


Dimensions

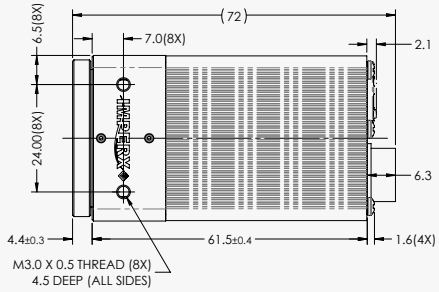
FRONT



BACK



TOP



Ordering Information

Output Interface

GigE Vision® with Power over Ethernet (PoE®)

Sensor Types available

C4110Z = Monochrome

C4110Y = Color

Lens Mounts

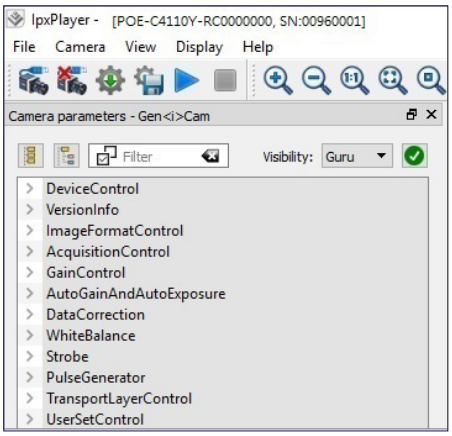
C-Mount (Default)

P-Iris (Optional)

Accessories (Sold separately)

PS12V04A-Power Supply w/ 1 input and 1 output

Gen<I>Cam Compliant Camera Configurator



Hirose Connectors

Power and I/O Interface

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 (LVTTL)
10. IN1 RTN
11. IN2 RTN
12. OUT2 (OPTO)

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

IMPERX Industrial Cameras & Imaging Systems

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