CHEETAH

RUGGEDIZED CAMERA SERIES

Front View | Rear View

P67-C4510

CMOS 20.4 MP

GigE Vision® with Power over Ethernet (PoE)

Imperx: *C4510*

The P67-C4510 provides the same robust camera design as the POE-C4510 with an IP67 enclosure. The P67-C4510 camera features the Sony Pregius S™ IMX541 Global Shutter CMOS sensor with a native resolution of 4512 x 4512 in a 1.1" optical format delivering up to 5.9 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 the user the ability to set the camera up very easily. Using the simple Gen<I>Cam™ compliant user interface, you can quickly apply image corrections to enhance recognition or quality. The C4510's flexibility, outstanding sensitivity, image quality, and speed make it suitable for a broad range of diverse and demanding applications. By combining the powerful Imperx camera control with an IP67 rated enclosure protecting the camera from dust, water and other contaminants, the P67-C4510 can be utilized in harsh environments.

Specifications

Feature	Description
Output Interface	GigE Vision® with Power over Ethernet (PoE)
Resolution	4512 (H) x 4512 (V)
Sensor	Sony Pregius S IMX541 CMOS Color/Mono
Sensor Format	12.3 mm (H) x 12.3 mm (V), 1.1" optical format (17.5 mm diagonal)
Pixel Size	2.74 microns square
Shutter	Global shutter (GS)
Sensor Digitization	12-bit
Frame Rate	5.9 fps (8-bit), 2.9 fps (10-bit/12-bit unpacked), 3.9 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 – 4095), Auto
White Balance	Manual, Auto, Once, Off
Shutter Speed	50 µs to 16 s
Exposure Control	Off, Manual, Auto, External
Regions of Interest (ROI)	2 ROI
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	1 IN (OPTO) / 2 OUT (OPTO, TTL)
Strobe Output	2 strobes, programmable position and duration
Pulse Generator	Yes, programmable

Feature	Description
Data Corrections	2 LUTs pre-programmed with Gamma 0.45, 2 LUTs pre-programmed with Negative LUT Bad pixel correction (static), Flat field correction
Lens Mount	C-Mount (default)
Supply Voltage Range	12 V DC (6 V – 30 V), 1.5 A inrush @ 12 V PoE (IEEE 802.3af / IEEE 802.3at)
Power Consumption	Typical: 3.96 W @ 12 V; PoE: 5.95 W
Camera Current	Typical: 330 mA @ 12 V
Size - Width/Height/Length	48.5 mm (W) x 42.0 mm (H) x 61 mm (L) (without connectors and a lens tube)
Lens Tube Dimensions	44 mm Lens tube: -Inner diameter 44 mm -Outer diameter 50 mm -Length varies (see IP67 lens tubes spec sheet) 64 mm Lens tube: -Inner diameter 64 mm -Outer diameter 70 mm -Length varies (see IP67 lens tubes spec sheet)
Weight	196 g (without a lens tube)
Vibration, Shock	20G (20 – 200 Hz XYZ) / 100G
Environmental	-30 °C to +75 °C Operating (-40 °C to +85 °C tested), -40 °C to +85 °C Storage
Humidity	10% to 90% non-condensing – for exposure longer than 30 minutes 100% non-condensing – for exposure up to 30 minutes
MTBF	550,000 hours @ 50 °C (EST) (Telcordia SR-332)
Military Standard	MIL-STD-810G
Regulatory	FCC Part 15 Class A, CE, RoHS, UKCA

IMPERX™

Industrial Cameras & Imaging Systems

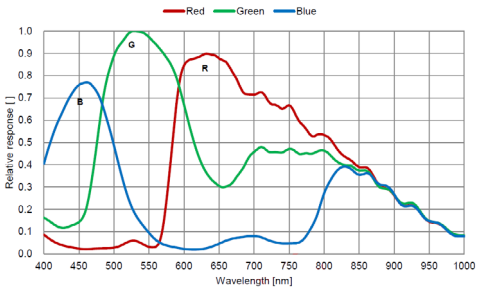
Imperx: *C4510 Applications*

The P67-C4510 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

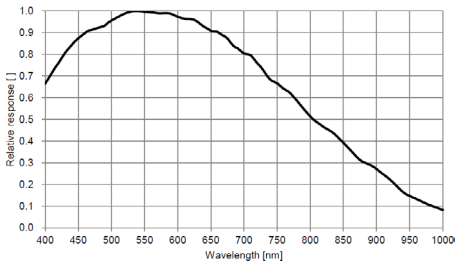
Aerospace ● Satellites ● Surveillance ● Ball Grid Array ● Printed Circuit Board Inspection ● Motion Analysis ● Broadcast Television ● Telepresence ● Unmanned Aerial Vehicles ● Machine Vision ● Intelligent Traffic Systems ● Aerial Imaging ● Open Road Tolling Systems ● Situational Awareness

Absolute Quantum Efficiency

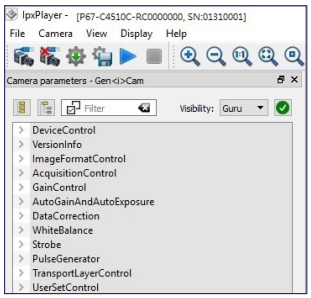
Color Spectral Response — Sony IMX541



Mono Spectral Response — Sony IMX541

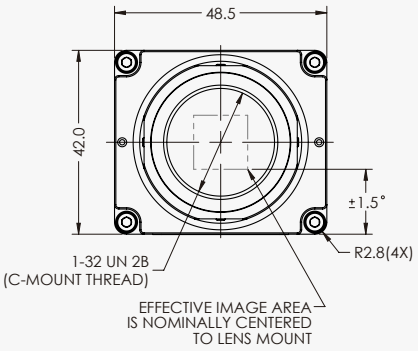


Gen<I>Cam Compliant Camera Configurator

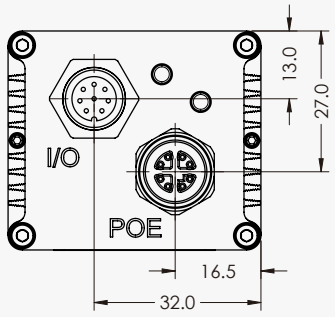


Dimensions

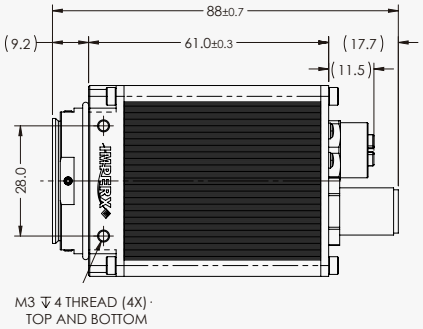
FRONT



BACK



TOP



Ordering Information

Please specify the camera model code and select an IP67 lens tube (see IP67 lens tubes spec sheet).

Output Interface

GigE Vision® with Power over Ethernet (PoE)® in IP67 enclosure (P67)

Sensor Types available

Monochrome
Bayer Color

Lens Mounts

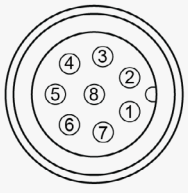
C-Mount

Accessories (Sold separately)

CBL-IO08-0001 – Cable, 8 pin I/O, BULGIN CONN to Pigtail, 2 m
CBL-XRJ45-0002 – Cable, RJ45 to 8 position M12/Xcode (IP67 METZ CONN), 2 m
CBL-XRJ45-0003 – Cable, RJ45 to 8 position M12/Xcode (IP67 METZ CONN), 3 m
CBL-XRJ45-0005 – Cable, RJ45 to 8 position M12/Xcode (IP67 METZ CONN), 5 m
CBL-XRJ45-0010 – Cable, RJ45 to 8 position M12/Xcode (IP67 METZ CONN), 10 m
CBL-XRJ45-0015 – Cable, RJ45 to 8 position M12/Xcode (IP67 METZ CONN), 15 m
CBL-XRJ45-0020 – Cable, RJ45 to 8 position M12/Xcode (IP67 METZ CONN), 20 m

Connectors

Power and I/O Interface



1. Reserved
2. +12V DC
3. IN1 (OPTO)
4. IN1/OUT1 RETURN
5. OUT2 RETURN
6. OUT1 (OPTO)
7. +12V DC RETURN
8. OUT2 (TTL)

Connector: BULGIN PXMBNI12RPM08APCM12

1000BASE-T Ethernet Interface

		Cable Wires:
1.	TD0+	White/Orange
2.	TD0-	Orange
3.	TD1+	White/Green
4.	TD1-	Green
5.	TD3+	White/Brown
6.	TD3-	Brown
7.	TD2-	White/Blue
8.	TD2+	Blue

Connector: MACOM MMT361A315

GiGE VISION® PoE POWER OVER ETHERNET

IMPERX™ Industrial Cameras & Imaging Systems

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