CHEETAH

RUGGEDIZED CAMERA SERIES

Front View | Rear View

P67-C2820

CMOS 8.1 MP

GigE Vision® with Power over Ethernet (PoE)

PRELIMINARY

Imperx: *C2820*

The P67-C2820 provides the same robust camera design as the POE-C2820 with an IP67 enclosure. The P67-C2820 camera features the Sony Pregius S™ IMX487 Global Shutter CMOS sensor with a native resolution of 2856 x 2848 in a 2/3" optical format capturing images in the UV spectral range from 200 nm to 400 nm and delivering up to 14.8 frames per second with GigE Vision® Power over Ethernet (PoE) output. The Pregius S technology uses a stacked back-illuminated pixel structure with or without a double A/R coated quartz glass window offering reduced pixel size, and quantum efficiency similar to the popular ICX407(UV) image sensor. Using the simple Gen<I>Cam™ compliant user interface, you can quickly apply image corrections to enhance recognition or quality. The C2820's flexibility, outstanding sensitivity, image quality, and speed make it suitable for a broad range of diverse and demanding applications. The IP67 rated enclosure protects the camera from dust, water and other contaminants and the wide operational temperature range makes the P67-C2820 suitable for harsh environments.

Specifications

Feature	Description
Output Interface	GigE Vision® with Power over Ethernet (PoE)
Resolution	2856 (H) x 2848 (V)
Sensor	Sony Pregius S IMX487 CMOS Ultraviolet
Spectral Range	200 nm–400 nm
Sensor Format	7.8 mm (H) x 7.8 mm (V), 2/3" optical format (11.1 mm diagonal)
Pixel Size	2.74 microns square
Shutter	Global shutter (GS)
Sensor Digitization	12-bit
Frame Rate	14.8 fps (8-bit), 7.4 fps(10-bit/12-bit unpacked), 9.8 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), 0.001x step
Black Level Offset	Manual (0 – 4095), Auto
White Balance	Manual, Auto, Once, Off
Shutter Speed	26 µs to 16 s
Exposure Control	Off, Manual, Auto, External
Regions of Interest (ROI)	2 ROI
Binning	1x1, 2x2
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	Not Specified*1
Military Standard	MIL-STD-810G
Regulatory	FCC Part 15 Class A, CE, RoHS, UKCA

*1 UV illumination inherently damages the image sensor increasing image sensor dark current with dose.
The amount of damage and the useful life of the image sensor is dependent upon the radiant power and duration. For more information, contact Imperx.

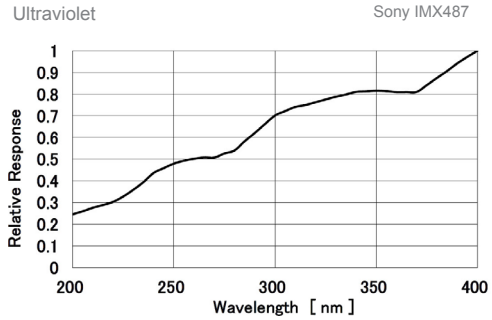
IMPERX™
Industrial Cameras & Imaging Systems

Imperx: *C2820 Applications*

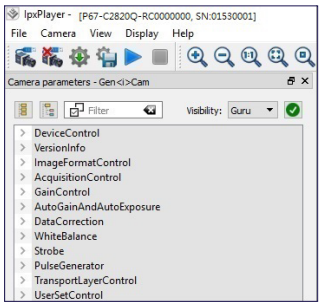
The P67-C2820 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

Infrastructure Inspection ● Sorting Materials ● Mask Inspection ● Printing Inspection ● Semiconductor Manufacturing ● Printed Circuit Board Inspection ● Flat Panel Display Inspection ● Scientific Imaging ● Metrology ● High-Resolution Microscopy ● UV Spectroscopy ● Fluorescence Analysis ● Food Processing ● Astronomy ● Machine Vision ● Aerial Imaging ● Unmanned Aerial Vehicles

Spectral Sensitivity

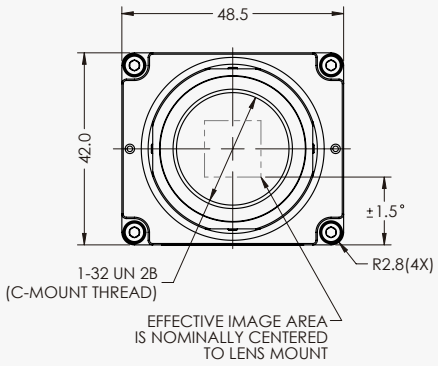


Gen<I>Cam Compliant Camera Configurator

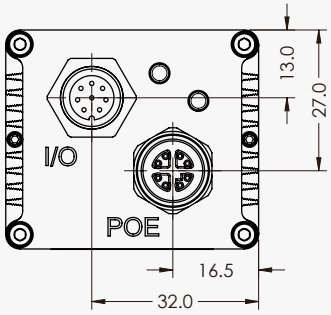


Dimensions

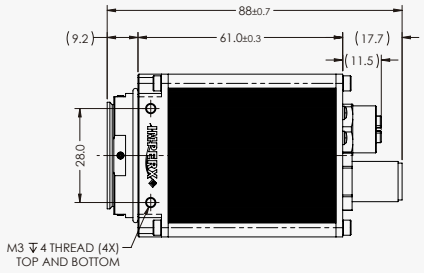
FRONT



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

Q - Ultraviolet with quartz glass cover
W - Ultraviolet without glass cover

Lens Mounts

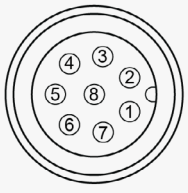
C-Mount

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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Rev: p67_c2820_r2_2023

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Environmental Management System ISO 14001:2015 Registered
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