

# CHEETAH

RUGGEDIZED CAMERA SERIES

Front View

Rear View

## SFP-C6440

### CMOS 31 MP

10 GigE Vision® with SFP+

#### Imperx: C6440

The low-power SFP-C6440 camera features the Sony Pregius IMX342 Global Shutter CMOS sensor with a native resolution of 6464 x 4860 in an APS-C optical format. The GenCam™ compliant camera delivers up to 30 frames per second in global shutter mode using the 10 GigE Vision® interface via SFP+ transceiver. The camera can be used with either copper or optical cable for extreme distances. The camera conforms to the GigE Vision 2.0 and supports IEEE1588 PTP synchronization and Scheduled Action Commands. The Sony Pregius image sensor delivers outstanding sensitivity and excellent image quality. The camera features low power consumption and operates in extended temperature range from -30 °C to +75 °C. 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 C6440'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

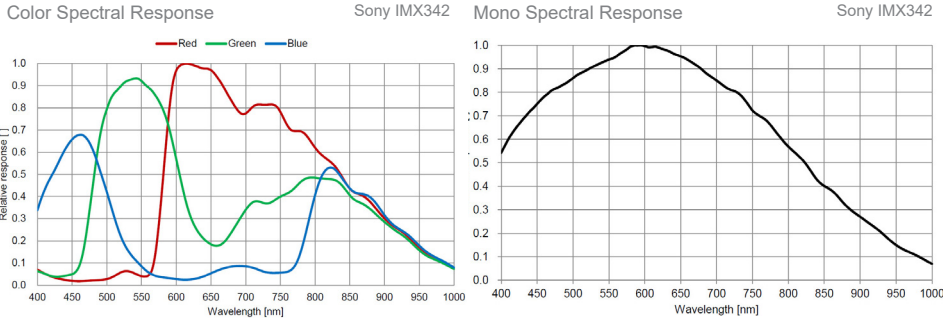
Feature	Description	Feature	Description
Output Interface	10 GigE Vision® with SFP+	Strobe Output	2 strobes, programmable position and duration
Resolution	6464 (H) x 4860 (V)	Pulse Generator	Yes, programmable
Sensor	Sony Pregius IMX342 CMOS Color/Mono	Data Correction	2 LUTs pre-programmed with Gamma 0.45 2 LUTs pre-programmed with Negative LUT Hot and Defective pixel correction (static) 8 Flat Field Correction tables
Sensor Format	22.3 mm (H) x 16.7 mm (V), 27.9 diagonal, APS-C optical format	IEEE 1588 PTP	Supported
Pixel Size	3.45 microns square	Lens Mount	F-Mount (default)
Shutter	Global shutter (GS)	Canon EF-Mount	Optional, Active or Passive
Sensor Digitization	10 or 12-bit	Supply Voltage Range	12 VDC (6.5V–33V), 2 A inrush @ 12 V
Frame Rate	30 fps (8-bit), 15 fps (10-bit/12-bit unpacked), 20 fps (10-bit/12-bit packed)	Camera Current	Typical: 0.54 A @ 12 V
Dynamic Range	71 dB	Power Consumption	Typ.: 6.48 W
Output Bit Depth	8, 10, 12-bit	Size - Width/Height/Length	60 mm (W) x 60 mm (H) x 87.7 mm (L)
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps	Size with SFP-MMF-MOD	60 mm (W) x 60 mm (H) x 101 mm (L)
Digital Gain	0x to 4x (12 dB) with a step of 1/4096	Size with SFP-RJ45-MOD	60 mm (W) x 60 mm (H) x 114 mm (L)
AEC/AGC	Off, Once, Auto	Weight	526.5 g
Gamma Correction	0.00 to 4.00 with a step of 0.01	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	36 µs to 16.0 s	MTBF	TBD
Exposure Control	Off, Internal, External, Auto	Military Standard	MIL-STD-810G
Regions of Interest (ROI)	One Master ROI, two Processing ROI	Regulatory	FCC Part 15 Class A, CE, RoHS, UKCA
Binning	1 x 2, 2 x 1, 2 x 2 (mono cameras only)		
Sub-sampling	1 x 2, 2 x 1, 2 x 2		
Trigger Inputs	External, Pulse generator, Software, Trigger over Ethernet		
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: C6440 Applications

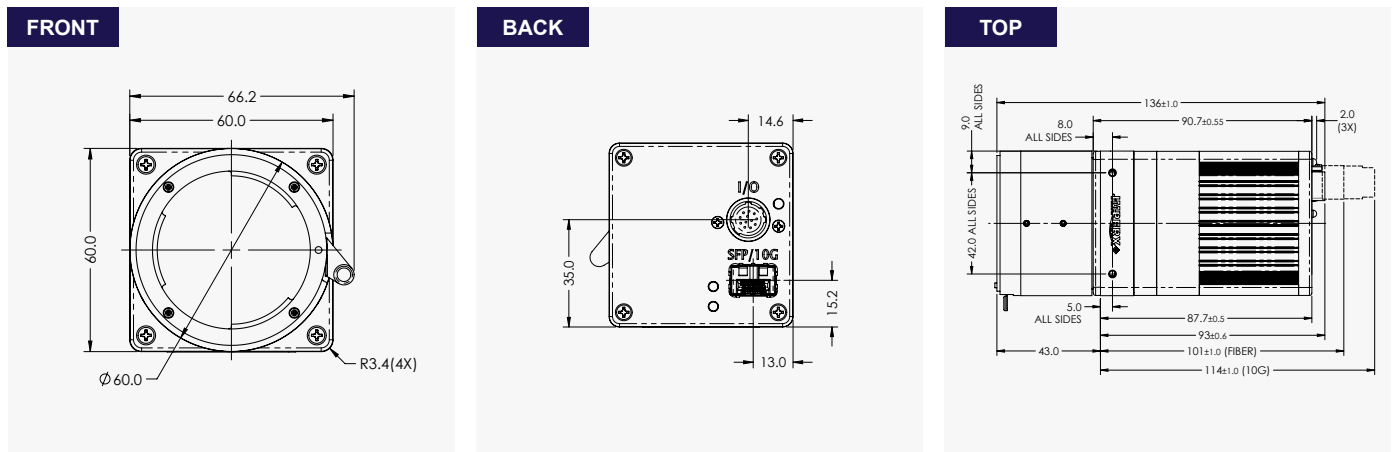
The SFP-C6440 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

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



## Dimensions



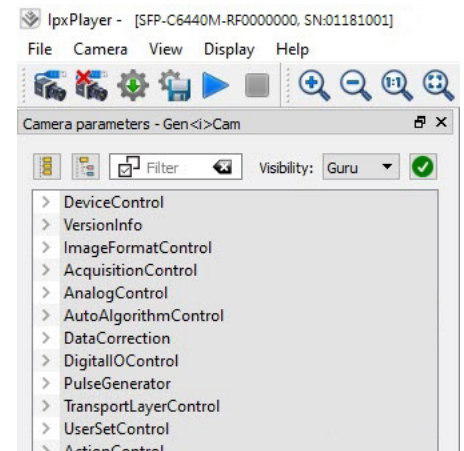
## Ordering Information

Output Interface	
10 GigE Vision® with SFP+ (SFP)*	
Sensor Types available	
Monochrome	Bayer Color
Lens Mounts	
F Mount (Default)	M42 (Optional)
Canon EF Mount (Optional)	

\* When ordering the camera, make sure to choose an SFP+ transceiver module.

Accessories (Sold separately)	
PS12V14A – Power Supply w/ 1 input and 1 output	
SFP-MMF-MOD – SFP+ multi-mode fiber transceiver module 850 nm, up to 300 m	
SFP-RJ45-MOD – SFP+ 10G copper RJ-45 module, up to 30 m	
CBL-PWIO01 – Cable Power; Hirose 12p (F) to loose end; 2 meters	

## Gen<I>Cam Compliant Camera Configurator



## Hirose Connectors

Power and I/O Interface	
	<ol style="list-style-type: none"> <li>12/24V DC Return</li> <li>+12/24V DC Power</li> <li>Reserved</li> <li>Reserved</li> <li>OUT2 RTN (OPTO)</li> <li>OUT1 RTN</li> <li>OUT1 (TTL)</li> <li>IN1 (OPTO)</li> <li>IN2 (LVTTTL)</li> <li>IN1 RTN</li> <li>IN2 RTN</li> <li>OUT2 (OPTO)</li> </ol>

Connector: Hirose HR 10A-10R-12PB(71)

Rev: sfp\_c6440\_r11\_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)



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