

CHEETAH

RUGGEDIZED CAMERA SERIES

Front View

Rear View

SFP-C5440

CMOS 17 MP

10 GigE Vision® with SFP+

Imperx: C5440

The low-power SFP-C5440 camera features the Sony Pregius IMX387 Global Shutter CMOS sensor with a native resolution of 5472 x 3084 in a 4/3" optical format. The Gen-I-Cam™ compliant camera delivers up to 55.3 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 C5440'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

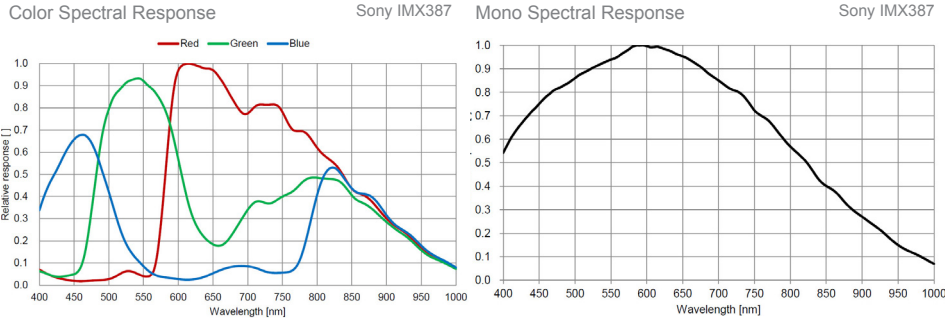
Feature	Description	Feature	Description
Output Interface	10 GigE Vision® with SFP+	Pulse Generator	Yes, programmable
Resolution	5472 (H) x 3084 (V)	Data Correction	2 LUTs pre-programmed with Gamma 0.45 2 LUTs pre-programmed with Negative LUT Hot and Defective pixel correction (static) 8 Flat Field Correction tables
Sensor	Sony Pregius IMX387 CMOS Color/Mono	IEEE 1588 PTP	Supported
Sensor Format	18.8 mm (H) x 10.6 mm (V), 4/3" optical format	Lens Mount	F-Mount (default)
Pixel Size	3.45 microns square	Canon EF-Mount	Optional, Active or Passive
Shutter	Global shutter (GS)	Supply Voltage Range	12 VDC (6.5V–33V), 2 A inrush @ 12 V
Sensor Digitization	10 or 12-bit	Camera Current	Typical: 0.52 A @ 12 V
Frame Rate	55.3 fps (8-bit), 27.8 fps (10-bit/12-bit unpacked), 37.0 fps (10-bit/12-bit packed)	Power Consumption	Typ.: 6.24 W
Dynamic Range	71 dB	Size - Width/Height/Length	60 mm (W) x 60 mm (H) x 87.7 mm (L)
Output Bit Depth	8, 10, 12-bit	Size with SFP-MMF-MOD	60 mm (W) x 60 mm (H) x 101 mm (L)
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps	Size with SFP-RJ45-MOD	60 mm (W) x 60 mm (H) x 114 mm (L)
Digital Gain	0x to 4x (12 dB) step of 1/4096	Weight	530 g
AEC/AGC	Off, Once, Auto	Vibration, Shock	20G (20 – 200 Hz XYZ) / 100G
Gamma Correction	0.00 to 4.00 with a step of 0.01	Environmental	-30 °C to +75 °C Operating -40 °C to +85 °C Storage
Black Level Offset	Manual (0 – 4095), Auto	Humidity	10% to 90% non-condensing
White Balance	Manual, Auto, Once, Off	MTBF	TBD
Shutter Speed	36 µs to 16.0 s	Military Standard	MIL-STD-810G
Exposure Control	Off, Internal, External, Auto	Regulatory	FCC Part 15 Class A, CE, RoHS, UKCA
Regions of Interest (ROI)	One master ROI, two Processing ROI		
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)		
Strobe Output	2 strobes, programmable position and duration		

Imperx: C5440 Applications

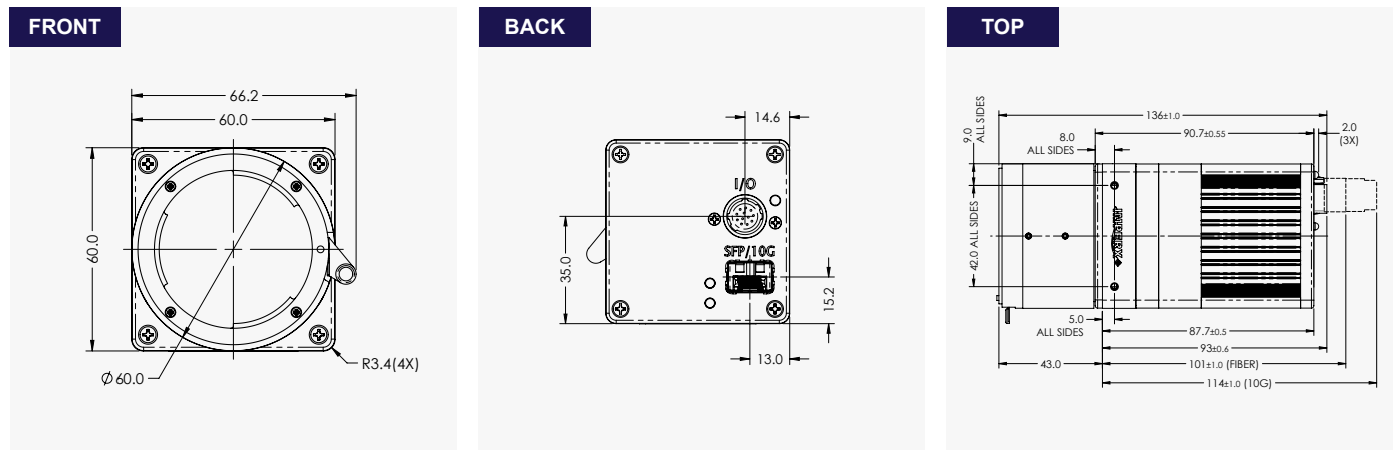
The SFP-C5440 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

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



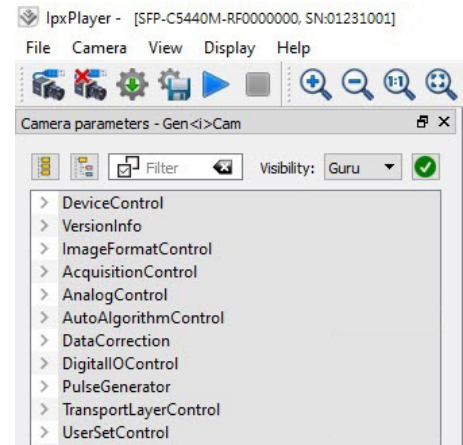
Ordering Information

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"> 12/24V DC Return +12/24V DC Power Reserved Reserved OUT2 RTN (OPTO) OUT1 RTN OUT1 (TTL) IN1 (OPTO) IN2 (LVTTTL) IN1 RTN IN2 RTN OUT2 (OPTO)

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

Rev: sfp_c5440_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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