

CHEETAH

RUGGEDIZED CAMERA SERIES

Front View

Rear View

SFP-C5440

CMOS 17 MP

10 GigE Vision® with SFP+

Imperx: C5440

The 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 56.5 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 Sony Pregius image sensor delivers outstanding sensitivity and excellent image quality. 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, if desired. 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

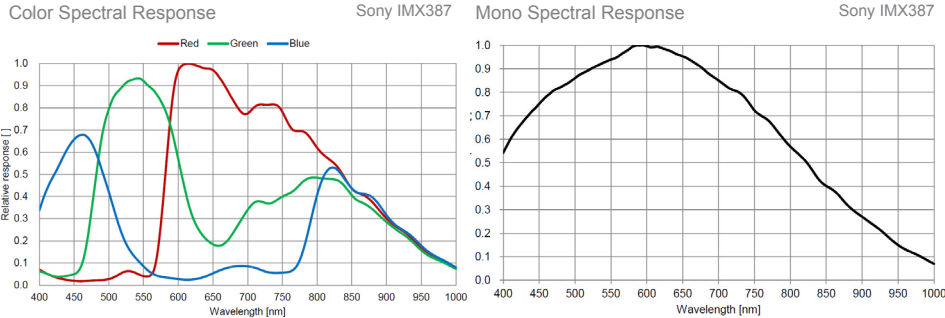
| Feature | Description | Feature | Description |
|---------------------------|--|----------------------------|--|
| Output Interface | 10 GigE Vision® with SFP+ | Pulse Generator | Yes, programmable |
| Resolution | 5472 (H) x 3084 (V) | Data Correction | 2 LUTs pre-programmed with Gamma 0.45 2 LUTs pre-programmed with Negative LUT Hot and Defective pixel correction (static) 8 Flat Field Correction tables |
| Sensor | Sony Pregius IMX387 CMOS Color/Mono | Forced Air Cooling Control | On, Off, Auto |
| 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: 1.2 A @ 12 V |
| Frame Rate | 56.5 fps (8-bit), 34.7 fps (10-bit/12-bit unpacked), 40.4 fps (10-bit/12-bit packed) | Power Consumption | Typ.:14.4 W, Max.:16.8 W |
| Dynamic Range | 71 dB | Size - Width/Height/Length | 60 mm (W) x 60 mm (H) x 99 mm (L) |
| Output Bit Depth | 8, 10, 12-bit | Size with SFP-MMF-MOD | 60 mm (W) x 60 mm (H) x 112.2 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 125 mm (L) |
| Digital Gain | 1x (0 dB) to 4x (12 dB) with a precision of 0.001x | Weight | 530 g |
| AEC/AGC | Yes | Vibration, Shock | 20G (20 – 200 Hz XYZ) /100G |
| Black Level Offset | Manual (0 – 4095), Auto | Environmental | -30 °C to +70 °C (EST) Operating (with a fiber 10GBase-R transceiver module), (may vary depending on the transceiver module used) -30 °C to +45 °C Operating (with a copper 10GBase-T transceiver module) |
| White Balance | Manual, Auto, Once, Off | | -40 °C to +85 °C Storage |
| Shutter Speed | 36 µs to 16.0 s | Humidity | 10% to 90% non-condensing |
| Exposure Control | Off, Internal, External, Auto | MTBF | 378,000 hours @ 50 °C (EST) (Telcordia SR-332) |
| Regions of Interest (ROI) | 1 ROI | Military Standard | MIL-STD-810G |
| Binning | 1 x 2, 2 x 1, 2 x 2 (mono cameras only) | Regulatory | FCC Part 15 Class A, CE, RoHS, UKCA |
| Sub-sampling | 1 x 2, 2 x 1, 2 x 2 | | |
| 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, LVTTTL) / 2 OUT (OPTO, TTL) | | |
| Strobe Output | 2 strobes, programmable position and duration | | |

Imperx: C5440 Applications

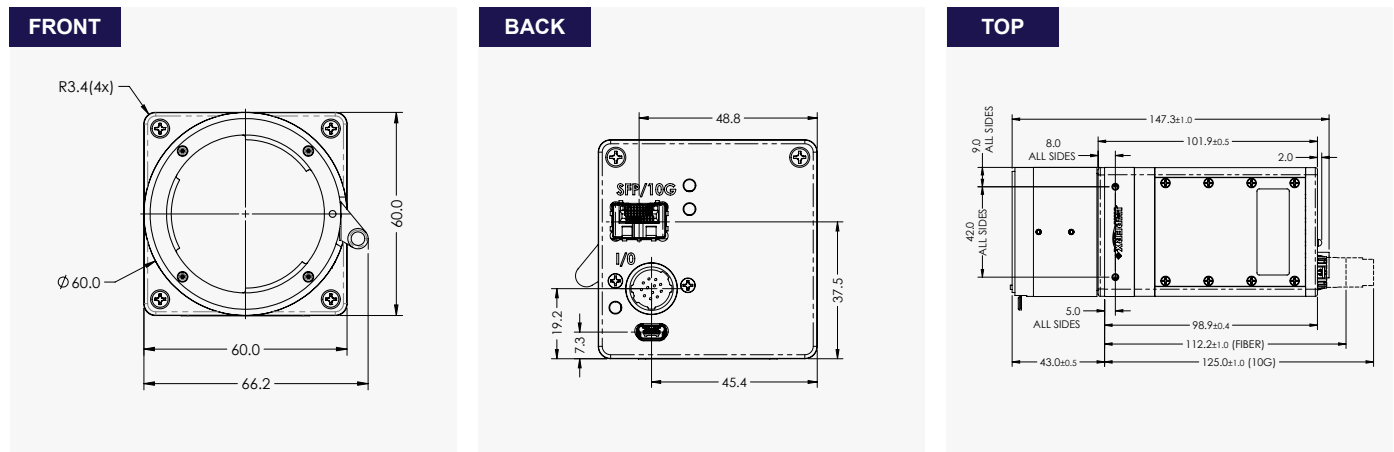
The SFP-C5440 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

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 | |

Hirose Connectors

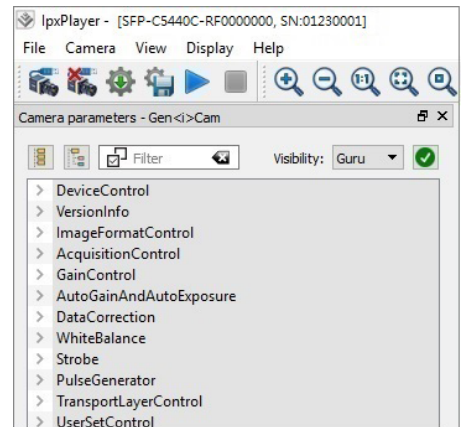
| Power and I/O Interface | |
|-------------------------|-----------------|
| | |
| 1. 12 VDC Return | 7. OUT1 (TTL) |
| 2. +12V DC | 8. IN1 (OPTO) |
| 3. Reserved | 9. IN2 (LVTTTL) |
| 4. Reserved | 10. IN1 RTN |
| 5. OUT2 RTN (OPTO) | 11. IN2 RTN |
| 6. OUT1 RTN | 12. OUT2 (OPTO) |

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

Rev: sfp_c5440_r9_2022

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)

Gen<I>Cam Compliant Camera Configurator



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