CHEETAH

RUGGEDIZED CAMERA SERIES

Front View | Rear View

C5420-T
CMOS 17 MP
Camera Link®

Imperx: *C5420-T*

The CLF-C5420-T camera features the Sony Pregius IMX387 Global Shutter CMOS sensor with a native resolution of 5472 x 3084 in a 4/3" optical format delivering up to 32 frames per second with Camera Link® Full Power over Camera Link (PoCL®) output. The Sony Pregius image sensor delivers outstanding sensitivity and excellent image quality. The camera is equipped with thermoelectric Peltier cooling module (TEC) to stabilize the image sensor temperature. 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 C5420-T'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
Output Interface	Camera Link® Base, Medium, Full w/PoCL®
Resolution	5472 (H) x 3084 (V)
Sensor	Sony Pregius IMX387 CMOS Color/Mono
Sensor Format	18.9 mm (H) x 10.6 mm (V), 4/3" optical format
Pixel Size	3.45 microns square
Shutter	Global shutter (GS)
Sensor Digitization	8, 10, 12-bit
Frame Rate	32 fps (8-bit), 26 fps (10-bit), 22 fps (12-bit)
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 – 255), Auto
White Balance	Manual, Auto, Off
Shutter Speed	30 µs to 16.0 s
Exposure Control	Off, Manual, External, Auto
Regions of Interest (ROI)	2 ROI
Binning	1x2, 2x1, 2x2 (Mono cameras only)
Sub-sampling	1x2, 2x1, 2x2
Trigger Inputs	External, Pulse generator, Software, Computer
Trigger Options	Edge, Pulse width, Trigger delay, Debounce
Trigger Modes	Free run, Standard, Fast
External Inputs/Outputs	2 IN (OPTO, LVTTL) / 2 OUT (OPTO, TTL)

Feature	Description
Strobe Output	2 strobes, programmable position and duration
Pulse Generator	Yes, programmable
Data Correction	4 LUTs pre-programmed with Gamma 0.45; Bad pixel correction (static, dynamic), Flat field correction
TEC	Up to 20 °C below camera heat-sink temperature
TEC Control	On, Off, Auto
Forced Air Cooling Control	Auto
Lens Mount	F-Mount (default)
Canon EF Mount	Optional, Active or Passive
Supply Voltage Range	12 V DC (6 V – 30 V), 1.5 inrush @ 12 V
Power Consumption	Typ. (TEC off): 4.2 W @ 12 V (TEC on): 9 W @ 12V Max (TEC auto): 11 W @ 12 V
Camera Current	Typ. (TEC off): 350 mA @ 12 V (TEC on): 750 mA @ 12 V Max (TEC auto): 920 mA @ 12 V
PoCL Capable	Yes, in Medium/Full mode
Size - Width/Height/Length	60.0 mm (W) x 64.4 mm (H) x 70.0 mm (L)
Weight	453 g
Vibration, Shock	20G/100G
Environmental	-30 °C to +75 °C Operating; -40 °C to +85 °C Storage
Humidity	10% to 90% non-condensing
MTBF	TBD
Military Standard	MIL-STD-810G
Regulatory	FCC Part 15 Class A, CE, RoHS, UKCA

IMPERX™
Industrial Cameras & Imaging Systems

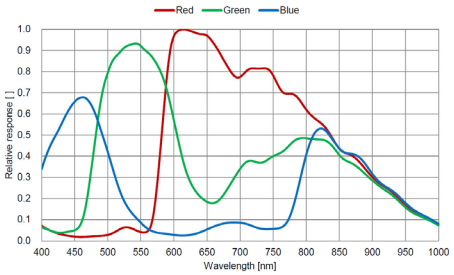
Imperx: *C5420-T Applications*

The CLF-C5420-T incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

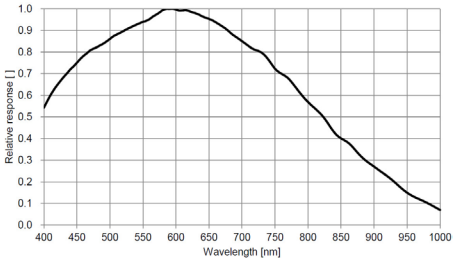
Metrology ● Microscopy ● Flat Panel Display Inspection ● Scientific Imaging ● Ophthalmology ● Fluorescence ● Long Exposures ● Chemiluminescence ● Astronomy ● Pathology ● Histology ● Cytometry ● Aerospace ● Satellites ● Surveillance ● Motion Analysis ● Broadcast Television ● Telepresence ● Unmanned Aerial Vehicles ● Machine Vision ● Intelligent Traffic Systems ● Aerial Imaging ● Open Road Tolling Systems ● Situational Awareness

Absolute Quantum Efficiency

Color Spectral Response — Sony IMX387

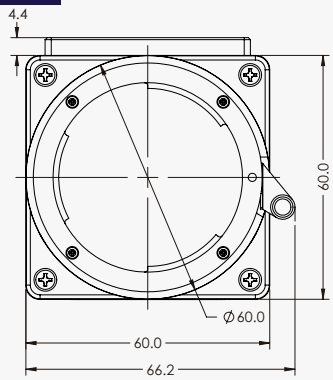


Mono Spectral Response — Sony IMX387

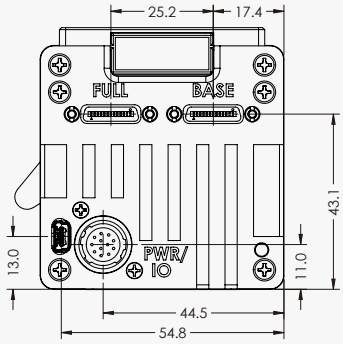


Dimensions

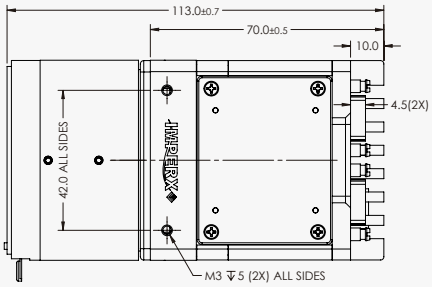
FRONT



BACK



TOP



Ordering Information

Output Interface
Camera Link® Full (CLF) w/PoCL®

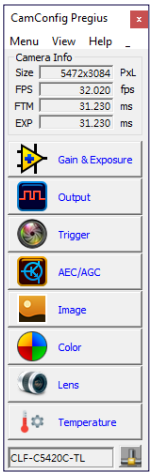
Sensor Types available	
Monochrome	Bayer Color

Ordering
T – Thermoelectric cooling (TEC)

Lens Mounts
F-Mount (Default)
M42 (Optional)
Canon EF Mount (Optional)

Accessories (Sold separately)
PS12V14A-Power Supply w/ 1 input and 1 output

Software/Drivers/Interface



Hirose Connectors

Power and I/O Interface

1. 12 VDC Return	7. OUT1 (TTL)
2. +12 VDC	8. IN1 (OPTO)
3. Reserved	9. IN2 (LVTTL)
4. Reserved	10. IN1 RTN
5. OUT2 RTN (OPTO)	11. IN2 RTN
6. OUT1 RTN	12. OUT2 (OPTO)

Connector: Hirose HR10A-10R-12PB(71)

Rev: cl_c5420t_r2_2021

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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