

CHEETAH

RUGGEDIZED CAMERA SERIES

Front View

Rear View

C6420-T CMOS 31 MP

Camera Link®

PRELIMINARY

Imperx: C6420-T

The CLF-C6420-T camera features the Sony Pregius IMX342 Global Shutter CMOS sensor with a native resolution of 6480 x 4860 in an APS-C optical format delivering up to 17 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 C6420'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	Camera Link® Base, Medium, Full w/PoCL®	Strobe Output	2 strobes, programmable position and duration
Resolution	6480 (H) x 4860 (V)	Pulse Generator	Yes, programmable
Sensor	Sony Pregius IMX342 CMOS Color/Mono	Data Correction	4 LUTs pre-programmed with Gamma 0.45; Bad pixel correction (static, dynamic), Flat field correction
Sensor Format	22.3 mm (H) x 16.7 mm (V), APS-C optical format	TEC	Up to 20 °C below camera heat-sink temperature
Pixel Size	3.45 microns square	TEC Control	On, Off, Auto
Shutter	Global shutter (GS)	Forced Air Cooling Control	Auto
Sensor Digitization	8, 10, 12-bit	Lens Mount	F-Mount (default)
Frame Rate	17 fps (8-bit), 14 fps (10-bit), 6 fps (12-bit)	Canon EF Mount	Optional, Active or Passive
Dynamic Range	71 dB	Supply Voltage Range	12 V DC (5 V – 30 V), 1.5 inrush
Output Bit Depth	8, 10, 12-bit	Power Consumption	Typ. (TEC off): 4 W @ 12 V Max (TEC on): 10 W @ 12 V
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps	Camera Current	Typ. (TEC off): 340 mA @ 12 V Max (TEC on): 840 mA @ 12 V
Digital Gain	1x (0 dB) to 4x (12 dB) with a precision of 0.001x	PoCL Capable	Yes, in Base, Medium, Full modes
Black Level Offset	Manual (0 – 255), Auto	Size - Width/Height/Length	60.0 mm (W) x 64.4 mm (H) x 70.0 mm (L)
White Balance	Manual, Auto, Off	Weight	453 g
Shutter Speed	30 µs to 16.0 s	Vibration, Shock	20G/100G
Exposure Control	Off, Manual, External, Auto	Environmental	-30 °C to +75 °C Operating, -40 °C to +85 °C Storage
Regions of Interest (ROI)	2 ROI	Humidity	10% to 90% non-condensing
Binning	1x2, 2x1, 2x2	MTBF	TBD
Sub-sampling	1x2, 2x1, 2x2	Military Standard	MIL-STD-810G
Trigger Inputs	External, Pulse generator, Software, Computer	Regulatory	FCC Part 15 Class A, CE, RoHS
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: C6420-T Applications

The CLF-C6420-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

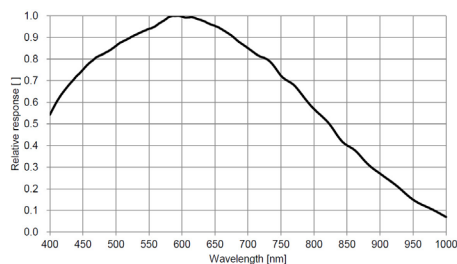
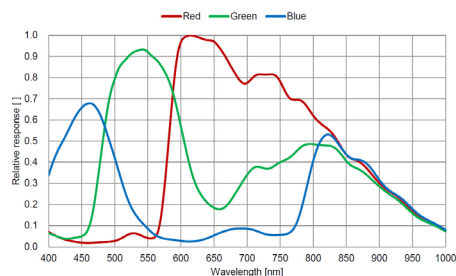
Absolute Quantum Efficiency

Color Spectral Response

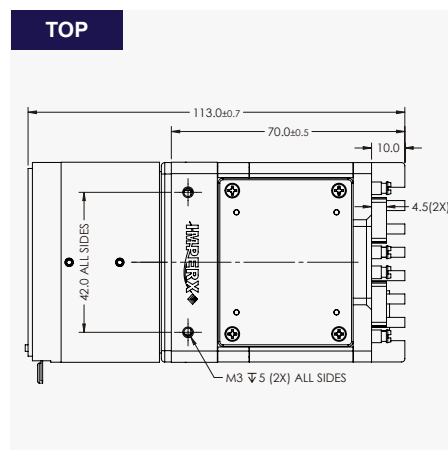
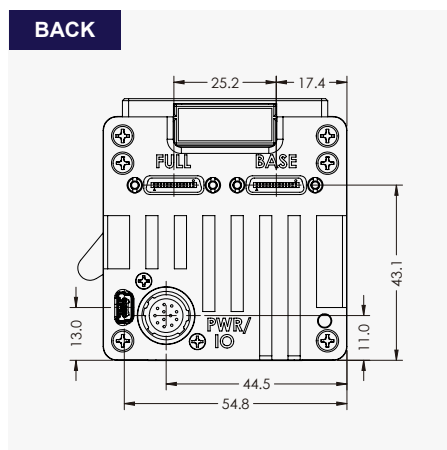
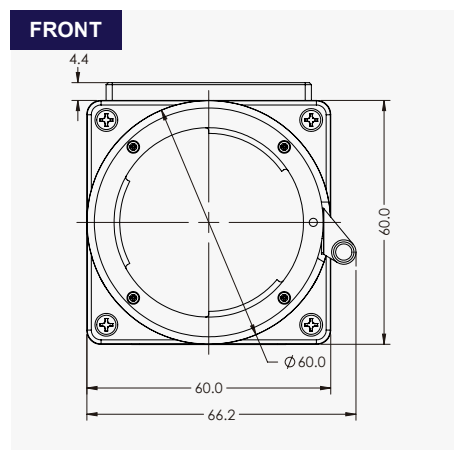
Sony IMX342

Mono Spectral Response

Sony IMX342



Dimensions



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)	
PS12V04A-Power Supply w/ 1 input and 1 output	

Hirose Connectors

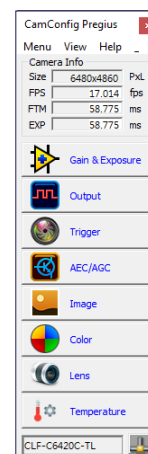
Power and I/O Interface	
	1. 12 VDC Return
	2. +12 VDC
	3. Reserved
	4. Reserved
	5. OUT2 RTN (OPTO)
	6. OUT1 RTN
	7. OUT1 (TTL)
	8. IN1 (OPTO)
	9. IN2 (LVTTTL)
	10. IN1 RTN
	11. IN2 RTN
	12. OUT2 (OPTO)

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

Rev: cl_c6420t_r2_2020

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)

Software/Drivers/Interface



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