

CHEETAH

RUGGEDIZED CAMERA SERIES

C4180 CMOS 12 MP Dual CXP-6



Imperx: C4180

The C5180 features the ON Semiconductor Python NOIP1XX012KA CMOS image sensor with a native resolution of 4096 x 3072 in a 4/3" optical format. The GenICam™ compliant camera delivers up to 1 frames per second in global shutter mode using a dual CXP-6 CoaXPress interface. CMOS technology eliminates smear columns from areas of ultra-bright intensity and specular reflections in uncontrolled lighting applications. The Imperx Cheetah line provides excellent image quality with Imperx proprietary processing. In addition, Imperx puts you in control and gives you full access to raw data without corrections. Using the simple, intuitive Graphical User Interface, you can quickly apply or remove image corrections. Flexibility and image quality make the C4180 suitable for a broad range of diverse and demanding applications. Imperx can help optimize the camera to your exacting requirements.

Specifications

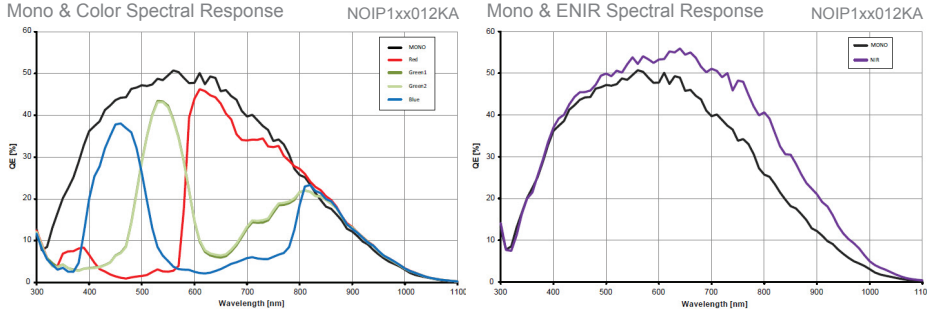
Feature	Description	Feature	Description
Interfaces available	2-channel CXP-6 CoaXPress®, USB3, Camera Link® Full (CLF), GigE Vision®	Strobe Output	2 strobes, programmable position and duration
Resolution	4096 x 3072	Pulse Generator	Yes, programmable
Sensor	Python NOIP1XX012KA, CMOS Color/Mono/ENIR	Image Enhancement	Two LUTs: 1 LUT pre-programmed with Gamma 0.45
Sensor Format	18.4 mm (H) x 13.8 mm (V) 23.0.5 mm diagonal 4/3" optical format	Data Corrections	Bad pixel correction (static, dynamic) flat field correction, fixed pattern noise
Pixel Size	4.5 µm	Lens Mount	F-Mount (Default), M42, EF Canon (passive or active)
NIR Sensitivity	Mono: 850nm: 18%, 950nm: 6% ENIR: 850nm: 30%, 950nm: 11%	Power	Power over CXP (PoCXP)
Shutter	Global shutter (GS)	Camera Current	Typical: TBD, Maximum: TBD
Fixed Pattern Noise	<0.9 LSB	Size - Width/Height/Length	72.0mm (W) x 72.0mm (H) x 34.7mm (L) – Applies to all interfaces
Digitization	10 bit	Weight	379g
Frame Rate	6i fps (10 bit), 1fps (8 bit)	Vibration, Shock	TBD
Pixel Clock	32MHz to 360MHz (TBD)	Environmental	-40°C to +85°C Operating, -50°C to +90°C Storage
Dynamic Range	59 dB	Humidity	10% to 90% non-condensing
Row Overhead Time (ROT)	Zero	MTBF	>323,000 hours @ 40°C (Telcordia SR-332)
Bit Depth	8, 10 bit	Military Standard	MIL-STD-810□
Analog Gain Control	1x, 1.26x, 1.87x, 3.17x	Regulatory	FCC Part 15 Class A, CE, RoHs
Digital Gain	1x (0dB) to 15.9 (24 dB) with a precision of 0.001x. (AGC available)		
AEC/AGC	Yes		
White Balance	Manual, auto, off		
Shutter Speed	1 µs/step, 40 µs to 1.0 sec		
Exposure Control	Off, internal, external. (AEC available)		
Regions of Interest (ROI)	1 ROI		
Averaging Decimation	1 x 2, 2 x 1, 2 x 2		
Sub-sampling Decimation	1 x 2, 2 x 1, 2 x 2		
Trigger Inputs	External, pulse generator, software		
Trigger Options	Edge, debounce		
Trigger Modes	Internal, external, software		
External Inputs/Outputs	2 IN (OPTO, LVTTTL) / 2 OUT (OPTO, TTL)		

Imperx: C4180 Applications

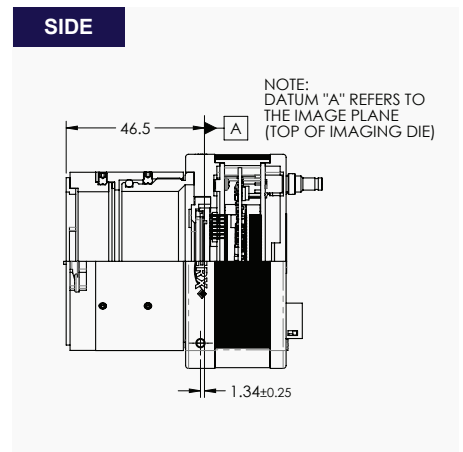
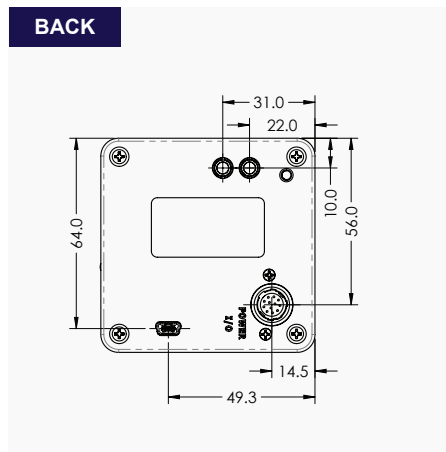
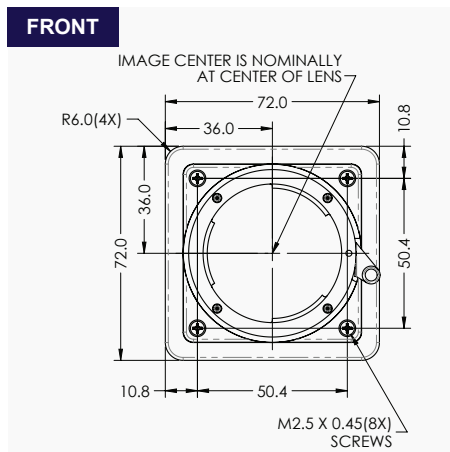
The C4180 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.

Aerospace • Satellites • Surveillance • Military and Non-Military Ground Vehicles • Ball Grid Array • Printed Circuit Board Inspection • Motion Analysis • Broadcast Television • Telepresence • Unmanned Aerial Vehicles • Machine Vision • Reconnaissance • Aerospace • Intelligent Traffic Systems • Aerial Imaging • Open Road Tolling Systems • Situational Awareness

Absolute Quantum Efficiency



Dimensions



Ordering Information

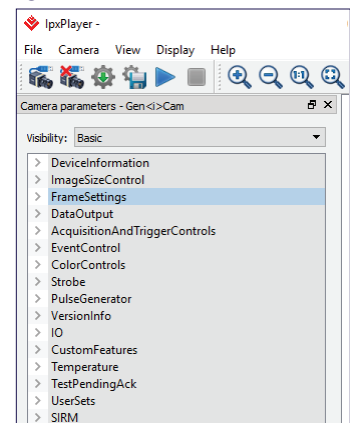
Interface Available	
2-channel CXP-6	Camera Link Full (CLF)
CoaXPress	
USB3	GigE Vision

Sensor Types available	
Monochrome	
Bayer Color	
NIR	

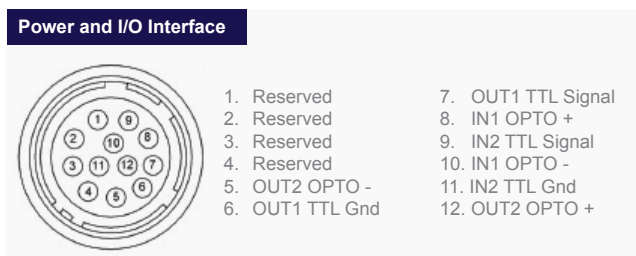
Lens Mounts	
F-Mount (Default)	
M42	
EF Canon	

Accessories (Sold separately)	
PS12V04A-Power Supply w/ 1 input and 1 output	

GenICam Compliant Camera Configurator



Hirose Connectors



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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