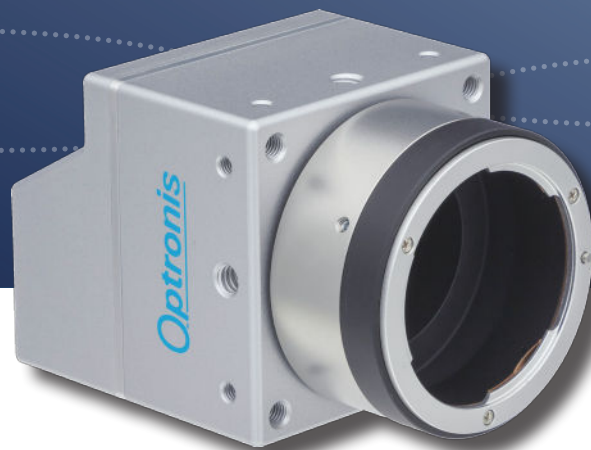


CAMPERFORM-CYCLONE SERIES

# Cyclone-21-230

High-Speed Machine Vision Camera



**CXP-12**

- ✓ HIGH SPEED MACHINE VISION
- ✓ AUTOMATED OPTICAL INSPECTION (AOI)
- ✓ SEMICONDUCTOR QUALITY CONTROL

- GSPRINT4521
- 230 fps with 5120 x 4096 pixels
- Global shutter mode
- High full well capacity >30 ke-
- CoaXPress V2.0 interface with 4 x 12.5 Gbit/s
- Power and trigger via CoaXPress

# Cyclone-21-230 High-Speed Machine Vision Camera *Optronis*

Make time visible

## FEATURES

With 21 MPixel resolution the Cyclone-21-230 still provides high frame rate of 230 fps. The camera is part of Optronis' CamPerform-Cyclone series for demanding machine vision applications.

- 5 120 x 4 096 pixel resolution
- low noise pixel
- sensor frame rate increases with vertical window size reduction

Firmware features

- Analogue gain adjustment
- Analogue offset adjustment
- Defect pixel correction (customer activatable)
- Framenumber and Microsecond counter on image

## SPECIFICATIONS

Sensor type	GSPRINT4521, Grade 1
Resolution	5 120 x 4 096 pixel
Frame rate (full resolution)	1 .. 230 fps
Exposure time	4 $\mu$ s .. 1 / frame rate
Active area / Diagonal	23.04 mm x 18.43 mm / 29.5 mm
Pixel distance	4.5 $\mu$ m x 4.5 $\mu$ m
A/D conversion	8/10 Bit
Device Tap Geometry	1X-2YE
Quantum efficiency (sensor)	50 % @ 520 nm
Synchronization	internal, external, CoaXPress
Synchronization signals	Synch IN and Synch OUT, TTL level, electrically isolated
Interface	CoaXPress 2.0 (4 ch., CXP-12) Micro-BNC (HD-BNC) connectors
Power	external supply <18.0 W, PoCXP
Temperature Ranges	- operation, amb., with CY-FAN2 0 .. +30°C / 32 .. 86°F - operation, case temperature 0 .. +50°C / 32 .. 122°F
Weight	400 g w/o mount, w/o CY-FAN2
Dimensions	65 mm x 65 mm x 73 mm (3D model data available)

## PERFORMANCE (EXAMPLES, 8 BIT, SEE ALSO FRAME RATE CALCULATOR)

Resolution (HxV)	Frame rate	Resolution (HxV)	Frame rate
5 120 x 4 096	230 fps	5 120 x 2 048	456 fps
3 840 x 2 176	442 fps	5 120 x 1 024	897 fps
1 920 x 1 088	871 fps	5 120 x 512	1 735 fps
1 024 x 1 024	924 fps	5 120 x 32	14 055 fps
640 x 480	1 898 fps	4 928 x 32	14 436 fps

## MODELS

Cyclone-21-230-M	monochrome camera
Cyclone-21-230-C	color camera
Scope of delivery	camera, CY-FAN2, brief introduction

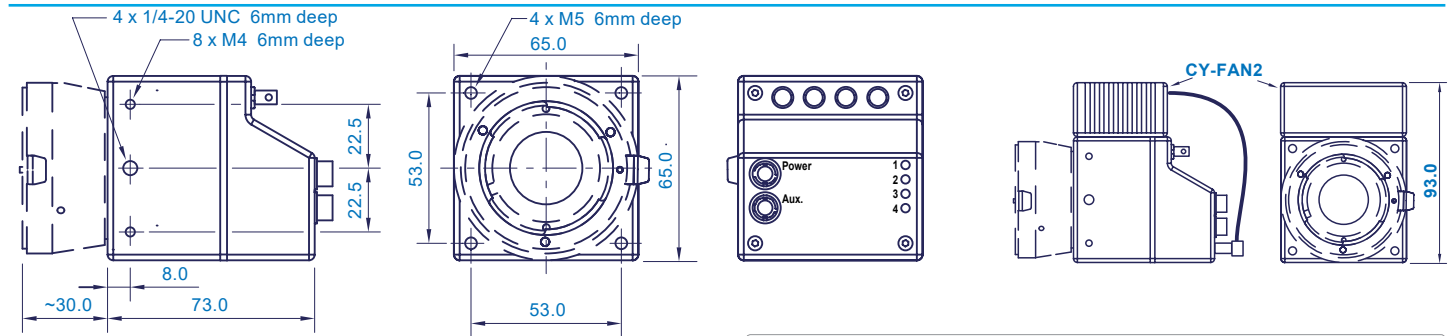
## ACCESSORIES

CY-CM	C-Mount lens adapter
CY-FM	F-Mount lens adapter
CY-M42	M42 Mount lens adapter
CPH6-PTC	Pig tail cable for synch
CPH6-USB	Programming Cable
CY-FAN2	Cooling Fan

## EMVA1288 measurements (v3.1 typ. 10 bit)

Dynamic range	58 dB
Saturation capacity	31 000 e <sup>-</sup>
Temporal dark noise	36 e <sup>-</sup>
System gain	32 e <sup>-</sup> /DN
Signal-to-Noise Ratio	45 dB
DSNU	18 e <sup>-</sup>
PRNU	1.6 %
Non-linearity error (v 3.0)	0.5 %

## TECHNICAL DRAWINGS



## CONTACT INFORMATION

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