

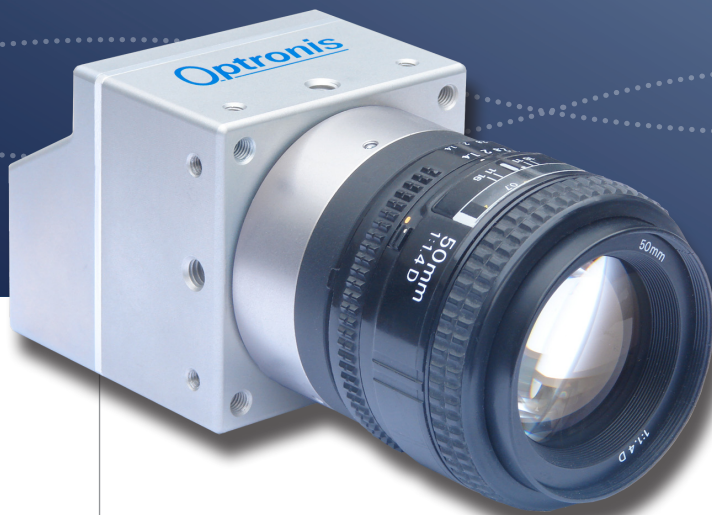
**Optronis**

Make time visible

CAMPERFORM-CYCLONE SERIES

# Cyclone-2-2000

High-Speed Machine Vision Camera



**CXP-12**

- METROLOGY AND HIGH SPEED MACHINE VISION
- LASER LINE PROFIOMETRY
- AUTOMATED OPTICAL INSPECTION (AOI)

- 2 166 fps with 1 920 x 1 080 pixels
- Global shutter with low noise pixel
- Micro-BNC (HD-BNC™) connectors
- CoaXPress V2.0 interface with 4 x 12.5 Gbit/s
- Power and trigger via CoaXPress
- Microsecond and frame counter

## FEATURES

The Cyclone-2-2000 is a high resolution camera with low noise pixels. It is part of Optronis CamPerform-Cyclone series for demanding machine vision applications. Reducing vertical resolution allows increased frame rate.

- 1 920 x 1 080 pixel resolution
- low noise pixel
- frame rate increases with vertical window size reduction

Firmware features

- Analogue gain adjustment
- Analogue offset adjustment
- Hot pixel correction (customer activatable)
- LUT factory set or customer definition
- Framenumber and Microsecond counter on image

## SPECIFICATIONS

Sensor type	LUX19HS, Global Shutter
Resolution	1 920 pixel x 1 080 pixel
Frame rate (full resolution)	20 .. 2 166 fps
Exposure time	4 μs .. 1 / frame rate
Active area / Diagonal	19.20 mm x 10.80 mm / 22.03 mm
Pixel distance	10.0 μm x 10.0 μm
A/D conversion	8/10 Bit
Sensitivity (sensor)	20 V/lux·s @ 550 nm
Quantum efficiency (sensor)	>45 % @ 550 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	12 W, PoCXP, ext.
Temperature Ranges	
- operation, amb., no cooling	0 .. +30°C / 32 .. 86°F
- operation, amb., with CY-HIS	0 .. +40°C / 32 .. 104°F
- operation, amb., with CY-FAN	0 .. +55°C / 32 .. 131°F
- operation, case temperature	0 .. +70°C / 32 .. 158°F
Weight	400 g w/o mount, w/o cooling
Dimensions	65 mm x 65 mm x 71 mm (3D model data available)

## PERFORMANCE (EXAMPLES, 8 BIT)

Resolution (HxV)	Frame rate	Resolution (HxV)	Frame rate
1 920 x 1 080	2 166 fps	1 920 x 960	2 435 fps
1 280 x 960	2 587 fps	1 920 x 480	4 840 fps
640 x 480	5 143 fps	1 920 x 120	18 667 fps
512 x 384	6 409 fps	1 920 x 32	61 842 fps
256 x 8	177 935 fps	1 920 x 8	167 504 fps

## MODELS

Cyclone-2-2000-M	monochrome Camera
Cyclone-2-2000-C	color Camera
Scope of delivery	Camera, 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-HIS	Heat Sink
CY-FAN	Cooling Fan

## EMVA1288 measurements (v3.1 typ. preliminary)

Dynamic range	TBD dB
Saturation capacity	15 000 e <sup>-</sup>
Temporal dark noise	10 e <sup>-</sup>
System gain	15 e <sup>-</sup> /DN
Signal-to-Noise Ratio	50 dB

## TECHNICAL DRAWINGS

