

Preliminary

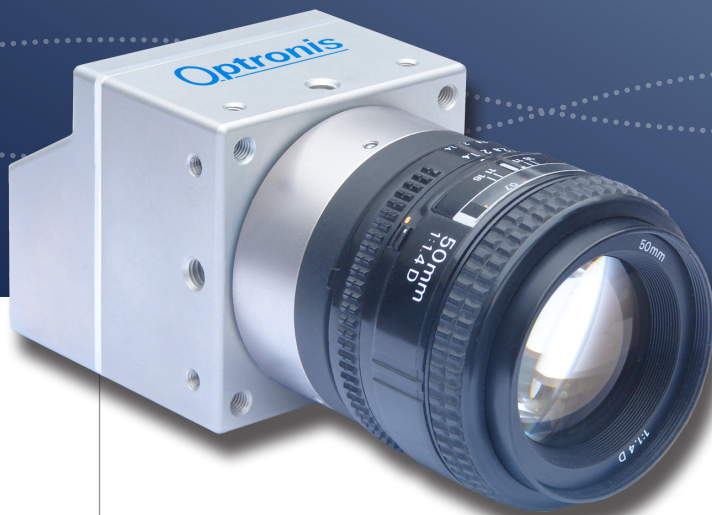
**Optronis**

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)

- 2 157 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

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# Cyclone-2-2000 High-Speed Machine Vision Camera **Optronis**

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## 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 .. 2 158 fps
Exposure time	4 $\mu$ s .. 1 / frame rate
Active area / Diagonal	19.20 mm x 10.80 mm / 22.03 mm
Pixel size	10.0 $\mu$ m x 10.0 $\mu$ m
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.
Operating ambient temperature	0 .. +40°C / 32 .. 104°F
Weight	400 g without mount
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	2 158 fps	1 920 x 960	2 428 fps
1 280 x 960	2 598 fps	1 920 x 480	4 845 fps
640 x 480	5 186 fps	1 920 x 120	19 145 fps
512 x 384	6 476 fps	1 920 x 32	68 699 fps
256 x 8	250 000 fps	1 920 x 8	233 576 fps

## MODELS

Cyclone-2-2000-M	monochrome Camera
Cyclone-2-2000-C	color Camera
Scope of delivery	Camera, brief introduction

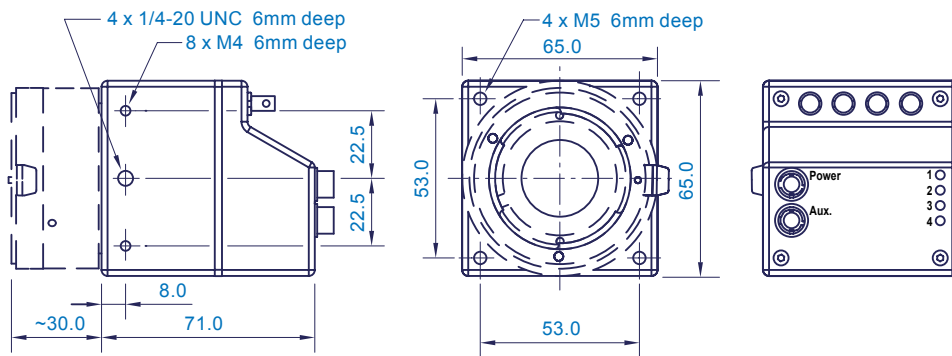
## ACCESSORIES

Lens mounts: C-mount, F-mount, G-mount, M42-mount
Power supply, pig tail cable, programming cable, fan

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

Dynamic range	TDB 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
DSNU	50 e <sup>-</sup>
PRNU	1.5 %
Non-linearity error $ LE_{min} ,  LE_{max} $	TBD % (TBD % EMVA1288 v3.0)

## TECHNICAL DRAWING



## CONTACT INFORMATION

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