

Preliminary

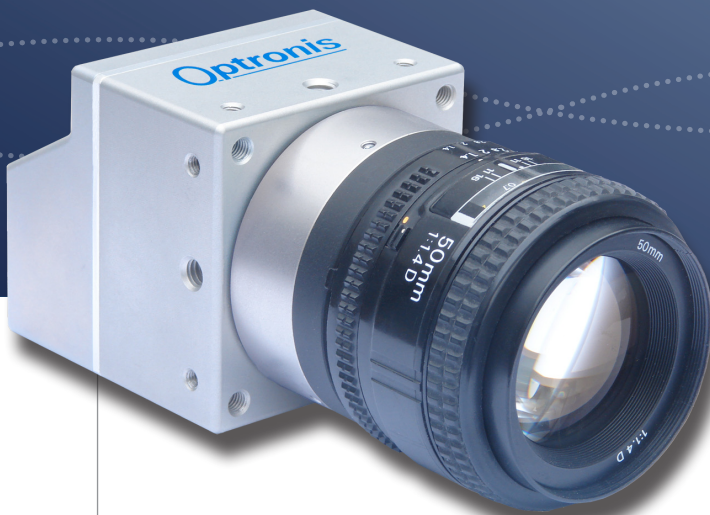
Optronis

Make time visible

CAMPERFORM-CYCLONE SERIES

Cyclone-16-294

High-Speed Machine Vision Camera



CXP-12

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

- 294 fps with 4 672 x 3 416 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-16-294 High-Speed Machine Vision Camera **Optronis**

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FEATURES

The Cyclone-16-294 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.

- 4 672 x 3 416 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	LUX160, Global Shutter
Resolution	4 672 pixel x 3 416 pixel
Frame rate (full resolution)	20 .. 2 94 fps
Exposure time	4 µs .. 1 / frame rate
Active area / Diagonal	18.22 mm x 13.32 mm / 22.56 mm
Pixel size	3.9 µm x 3.9 µm
A/D conversion	8/10 Bit
Sensitivity (sensor)	5 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)

EMVA1288 measurements (v3.1 typ. preliminary)

Dynamic range	TDB dB
Saturation capacity	10 000 e ⁻
Temporal dark noise	TDB e ⁻
System gain	TDB e ⁻ /DN
Signal-to-Noise Ratio	TDB dB

PERFORMANCE (EXAMPLES, 8 BIT)

Resolution (HxV)	Frame rate	Resolution (HxV)	Frame rate
4 672 x 3 416	294 fps	4 672 x 3 072	327 fps
2 304x 1720	603 fps	4 672 x 2048	490 fps
2 304 x 1024	1 024 fps	4 672 x 256	3 900 fps
1024 x 512	2 021 fps	4 672 x 32	29 596 fps
1 024 x 8	103 896 fps	4 672 x 16	55 904 fps

MODELS

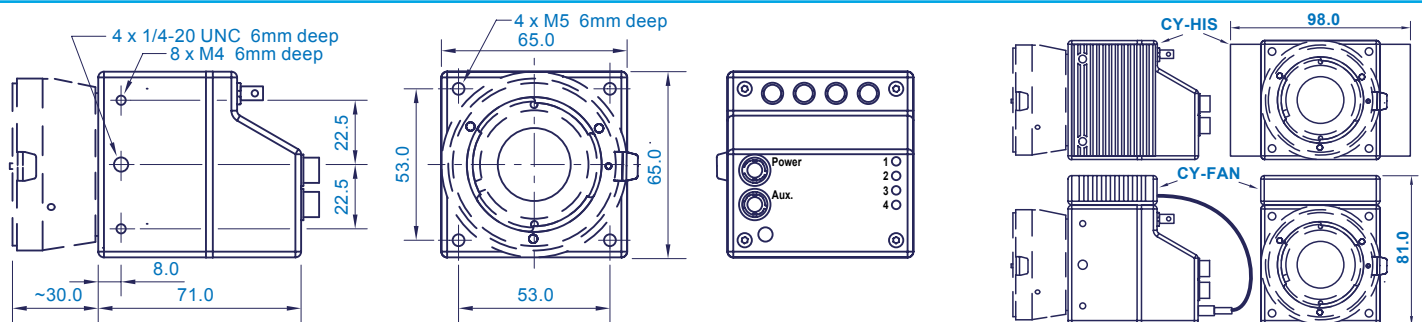
Cyclone-16-294-M	monochrome Camera
Cyclone-16-294-C	color Camera
Scope of delivery	Camera, brief introduction

ACCESSORIES

CY-CM	C-Mount lens adapter
CY-FM	F-Mount lens adapter
CY-M42	M42 Mount lens adapter
CPH4-PSA	Power Supply
CPH6-PTC	Pig tail cable for synch
CPH6-USB	Programming Cable
CY-HIS	Heat Sink
CY-FAN	Cooling Fan



TECHNICAL DRAWINGS



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