

Optronis

Make time visible

CAMPERFORM-CYCLONEFIBER SERIES

CycloneFiber-5

High-Speed Machine Vision Camera



Camera shown with CY-FM

CoaXPress
over-Fiber

- OUTDOOR TEST AREA
- MEDICAL ENVIRONMENT
- PRODUCTION FLOOR INSPECTION

- 693 fps with 2560 x 1916 pixels
- Global shutter mode with low noise pixel
- CoaXPress-over-Fiber 40 Gbit/s
- EMC immune transmission up to 20 km
- Trigger via CoaXPress-over-Fiber

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FEATURES

CycloneFiber-5 is a high resolution camera with 5 MPixel and low noise pixel. At full resolution the camera provides 693 fps. It is designed for high-speed machine vision applications. The camera uses the de-facto standard protocol CoaXPress-over-Fiber (CoF). Standard QSFP+ optical transceiver modules can be installed. The main advantage of this transmission is the long range and immunity to EM interference.

- 2560 x 1916 pixel resolution
- low noise pixel

Firmware features

- Analogue gain, RGB gain and offset adjustment
- Defect pixel correction (customer activatable)
- LUT factory set or customer definition

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

Resolution (HxV)	Frame rate	Resolution (HxV)	Frame rate
2560 x 1916	693 fps	2560 x 960	1380 fps
1920 x 1080	1227 fps	2560 x 480	2743 fps
1280 x 960	1380 fps	2560 x 120	10579 fps
512 x 384	3418 fps	2560 x 32	35063 fps
256 x 8	95057 fps	2560 x 8	95057 fps

MODELS

CycloneFiber-5-M	monochrome Camera
CycloneFiber-5-C	color Camera,
Scope of delivery	Camera, brief introduction, power supply (except some countries)

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

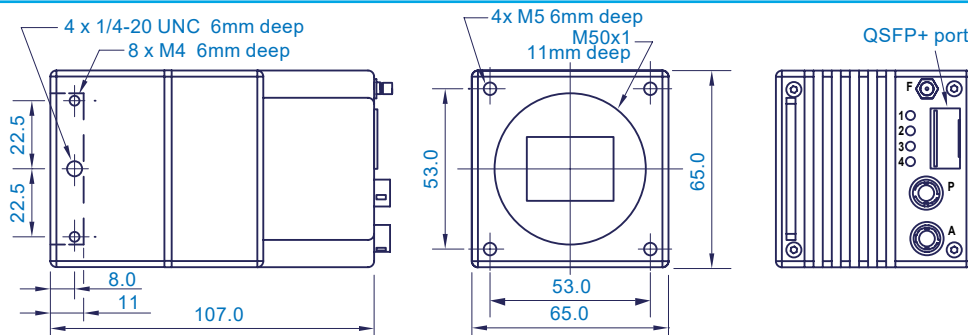
SPECIFICATIONS

Sensor type	LUX51, Global Shutter
Resolution	2560 pixel x 1916 pixel
Frame rate (full resolution)	20 .. 693 fps
Exposure time	4 μs .. 1 / frame rate
Active area / Diagonal	12.80 mm x 9.60 mm / 16.00 mm
Pixel distance	5.0 μm x 5.0 μm
A/D conversion	8/10 Bit
Quantum efficiency (sensor)	45 % @ 550 nm
Synchronization	internal, external, CoF
Synchronization signals	Synch IN and Synch OUT, TTL level, electrically isolated
Interface	QSFP+ port
Protocol	CoaXPress-over-Fiber (CoF)
Power (incl. 1.5 W QSFP+ module)	10 W
Temperature Ranges	
- operation, ambient	0 .. +45°C / 32 .. 113°F
- operation, amb., with CY-FAN2	0 .. +55°C / 32 .. 131°F
- operation, case temperature	0 .. +70°C / 32 .. 158°F
Weight	540 g w/o mount, w/o cooling
Dimensions	65 mm x 65 mm x 107 mm (3D model data available)

EMVA1288 measurements (v3.1 typ.)

Dynamic range	55 dB
Saturation capacity	12 000 e ⁻
Temporal dark noise	21 e ⁻
System gain	52 e ⁻ /DN
Signal-to-Noise Ratio	41 dB
DSNU	75 e ⁻
PRNU	2.3 %
Non-linearity error (v 3.0)	1.2 %

TECHNICAL DRAWINGS



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