

Optronis

Make time visible

CAMPERFORM-CYCLONEFIBER SERIES

CycloneFiber-2

High-Speed Machine Vision Camera



Camera shown with CY-FM

CoaXPress
over-Fiber

- OUTDOOR TEST AREA
- MEDICAL ENVIRONMENT
- PRODUCTION FLOOR INSPECTION

- 2 166 fps with 1 920 x 1 080 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-2 is a 2 MPixel camera with low noise pixel. Providing more than 2,000 fps at full resolution it is designed for demanding high-speed machine vision applications. The camera uses the CoaXPRESS-over-Fiber (CoF) de-facto standard protocol. Standard QSFP+ optical transceiver modules can be installed. The main advantage of this transmission is the long range and immunity to EM interference.

- 1920 x 1080 pixel resolution
- low noise pixel

Firmware features

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

SPECIFICATIONS

Sensor type	LUX19HS, Global Shutter
Resolution	1920 pixel x 1080 pixel
Frame rate (full resolution)	20 .. 2166 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
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)	11.5 W
Temperature Ranges	
- operation, ambient	0 .. +35°C / 32 .. 95°F
- operation, amb., with CY-FAN2	0 .. +50°C / 32 .. 122°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	53 dB
Saturation capacity	13 000 e ⁻
Temporal dark noise	22 e ⁻
System gain	60 e ⁻ /DN
Signal-to-Noise Ratio	41 dB
DSNU	40 e ⁻
PRNU	1.8 %
Non-linearity error (v 3.0)	2 %

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

Resolution (HxV)	Frame rate	Resolution (HxV)	Frame rate
1920 x 1080	2166 fps	1920 x 960	2435 fps
1280 x 960	2587 fps	1920 x 480	4840 fps
640 x 480	5148 fps	1920 x 120	18667 fps
512 x 384	6409 fps	1920 x 32	61842 fps
256 x 4	248756 fps	1920 x 8	167504 fps

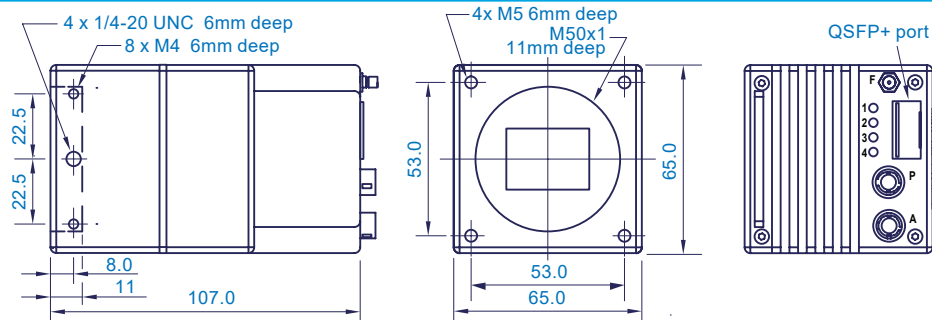
MODELS

CycloneFiber-2-M	monochrome Camera
CycloneFiber-2-C	color Camera, Grade 1
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

TECHNICAL DRAWINGS



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