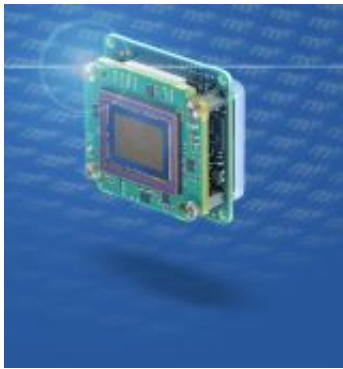


Compact USB3 Vision board-level camera for embedded vision - mvBlueFOX3-5M

| [Camera selector](#)

[Get a free quote: +49 - 71 91 - 94 32 - 888](#)

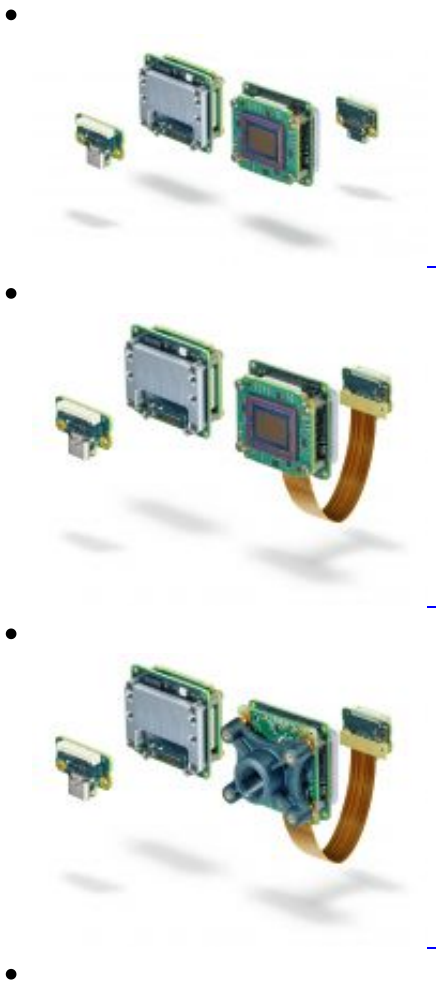


- Compact board-level camera for USB 3 with high quality Sony Pregius and Starvis CMOS sensors (gray scale / color)
- Easy integration into embed systems with different USB interface options via [BFEmbedded Interface](#)
- Same API for Linux or Windows
- Integrated camera features independant of the used embedded system
- Hardware preprocessing onboard (FPGA)
- 256 MByte integrated image memory
- Excellent cost-benefit ratio

The new board-level camera family mvBlueFOX3-5M combines flexibility, image quality, and performance with low cost. The cameras have a huge image memory and a powerful FPGA for onboard preprocessings as well as digital interfaces. With the board-to-board connector there are many integration

scenarios in different environments possible. In doing so you can connect the power supply, USB, and the digital I/Os using the connector. Beside the available interface options you can realize custom specific solutions and direct connections to embedded computers via the open **BFembedded Interface**. For this reason the board-level camera family is suitable for many applications in medicine, microscopy, traffic and industry.

"BFembedded Interface" [Module Kit elements:](#)





/* */

- Sensors
- Features
- Accessories
- Image formats
- Application areas
- Dimensional drawing
- Downloads

CMOS-Sensoren (Sony Pregius - Global Shutter)

Pregius

CM
 OS
 Mod

el BF3- BF3- BF3- BF3- BF3- BF3- BF3- BF3- BF3- BF3- BF3- BF3- [Requ](#) BF3- BF3- [Requ Requ](#) BF3-
 5M-05M-05M-05M-05M-05M-05M-05M-05M-05M-05M-05M-0 [est sa](#) BF3- BF3- [est sa est sa](#) BF3-
[mple](#) 5M-05M-0 [mple mple](#) 5M-0

Availability	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Order																			
Resolution	728	1456	1936	1936	2064	2064	2464	2464	4112	4112	4112	4112	5328	5472	4432	4512	5328	6480	
Frame rate	544	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Frame rate [Hz]	1088	1216	1216	1544	1544	2056	2056	2176	2176	3008	3008	3040	3080	4432	4512	4608	4856		
MPixel	0.4	1.6	2.4	2.4	3.2	3.2	5.1	5.1	8.9	8.9	12.4	12.4	16.2	16.9	19.6	20.4	24.6	31.5	
Max. frame rate	436	226	161	46.9	119	55	75	35	42.4	31.9	30.7	23	23.4	22.5	19.3	18.6	15.4	12	
Frame rate [Hz]	36.9	26.5	164	46.9	123	199	276	86	168	31.9	122	45	25.5	26.5	22.7	20.9	17.6	14.4	
Binned	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
Shutter	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	
Sensor size	1/2.9	1/2.9	1/1.2	1/1.2	1/1.8	1/1.8	2/3	2/3	1	1	1.1	1.1	1.1	4/3	4/3	1.1	1.2	APS-C	
Pixel size	6.9	3.45	5.86	5.86	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	2.74	3.45	3.45	2.74	2.74	3.45	
Exposure time	20 µs	10 µs	10 µs	10 µs	10 µs	20 µs	10 µs	20 µs	10 µs	10 µs	10 µs	10 µs	10 µs	10 µs	10 µs	10 µs	10 µs	10 µs	
ADC resolution	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	

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1288																			
Pipelined global shutter trigger mode	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Manufacturer	Man	Sony	Sony	Sony	Sony	Sony	Sony	Sony	Sony	Sony	Sony	Sony	Sony	Sony	Sony	Sony	Sony	Sony	Sony
Sensor	IMX	IMX	IMX	IMX	IMX	IMX	IMX	IMX	IMX	IMX	IMX	IMX	IMX	IMX	IMX	IMX	IMX	IMX	IMX
Resolution	287	273	174	249	252	265	250	264	255	267	253	304	542	387	367	541	540	342	

¹ G = Grau, C = Farbe, GE = Grau & Infrared Enhanced

² [Burst-Mode](#) / Streaming

³ Max. AOI-Width (Farbvariante): 4096 Pixel

⁴ Max. Binning Horizontal / Max. Binning Vertical / Max. Decimation Horizontal / Max. Decimation Vertical

⁵ EMVA1288-Messdaten der Grauvariante

CMOS-Sensoren (Sony Starvis - Rolling Shutter)



CMOS

Model

	BF3-5M-0064Z	BF3-5M-0124R	BF3-5M-0205Z
Availability to order	✓	✓	✓
Variant ¹	G / C	G / C	G / C
Resolution ²	3096 x 2080	4064 x 3044	5544 x 3692
MPixel	6.4	12.4	20.5
Max. frame rate [Hz] ³	59 / 60 / 60	30.7 / 35.4 / 35.4	18.5 / 21.98 / 52
Binning ⁴	16 / 16 / 16 / 16	16 / 16 / 16 / 16	16 / 16 / 16 / 16
Shutter	Rolling Shutter / Global	Rolling Shutter / Global	Rolling Shutter / Global
	Reset	Reset	Reset
Sensor size	1/1.8	1/1.7	1
Pixel size [µm]	2.4	1.85	2.4
Exposure time	70 µs - 20 s	110 µs - 20 s	490 µs - 20 s
ADC resolution / output	12	12	12
Spectral sensitivity			

/

/

/

DR ⁴	/	/	/
EMVA 1288	/	/	/
Manufacturer	Sony	Sony	Sony
Sensor	IMX178	IMX226	IMX183

¹ G = Gray, C = Color, E = Gray & Infrared Enhanced

² Data of gray scale version

³ streaming / [Burst mode](#) / Max. streaming depending on sensor either with 2x2 Binning or Decimation (Horizontal x Vertical)

⁴ Max. Binning Horizontal / Max. Binning Vertical / Max. Decimation Horizontal / Max. Decimation Vertical. **Note: Not all combinations of binning and decimation values are possible.**

⁵ mvDualADCEnable = On, otherwise 12

⁶ EMVA1288 measurement data of gray scale version

- USB 3.2 Gen 1 (5 GBit/s)