



# EoSens® 3CL High-Speed CMOS Camera

## 3 Megapixel High Definition - for detailed images

- **Extremely flexible in resolution and speed:**  
3 Megapixel resolution up to 285 frames per second at 1,690 (H) x 1,710 (V) pixel resolution
- **Adjustable Region of Interest (RoI) with correspondent increased frame rate:**  
604 fps at 1,280 (H) x 1,024 (V) pixel resolution  
858 fps at 1,280 (H) x 720 (V) pixel resolution  
731 fps at 1,000 (H) x 1,000 (V) pixel resolution
- **Stepless adjustable frame rate up to more than 150,000 frames per second at reduced resolution**
- **Maximum photo sensitivity:**  
1,200 ASA monochrome, 1,000 ASA RGB
- **Full Camera Link® interface with 850 MByte/second**
- **Monochrome or color with Bayer-filter**
- **Extended dynamic range up to 80 dB**
- **Small and compact design**
- **C-Mount or F-Mount lens adapter**

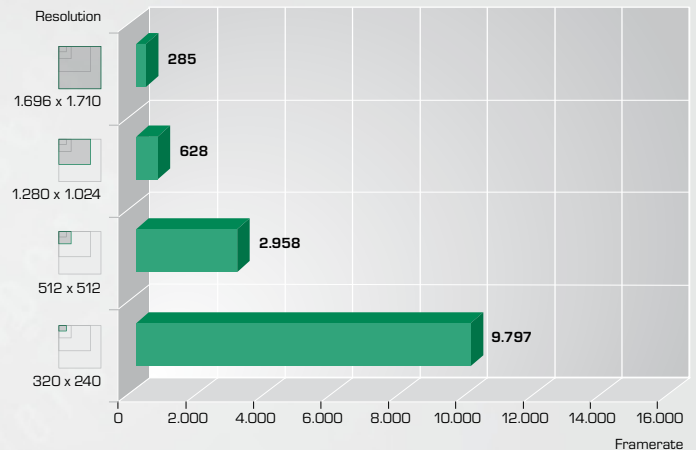


### Lighting becomes a minor matter

The EoSens® 3CL meets the requirements for most varied applications, because resolution and speed are variable adjustable. A resolution of 1,690 (H) x 1,710 (V) pixels ensures superb image quality with extremely sharp images. With the proven Mikrotron high-speed technology the camera takes up to more than 150,000 frames per second.

### Dynamic Range Adjustment

The camera's Dynamic Range Adjustment feature allows to change the CMOS sensor's linear transfer characteristic into a non-linear one. Thus, the camera provides clear details even at extreme dark/light contrasts.



### "Freeze Frame" full frame shutter

The EoSens® 3CL features a "Freeze Frame" shutter that is able to process and store a complete frame while exposing the next image. At exposure times down to 2 µs, this enables even capturing fast moving objects at high definition in synchronous, free run and asynchronous triggered mode.

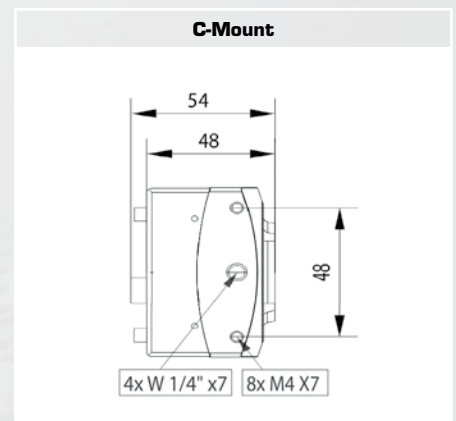
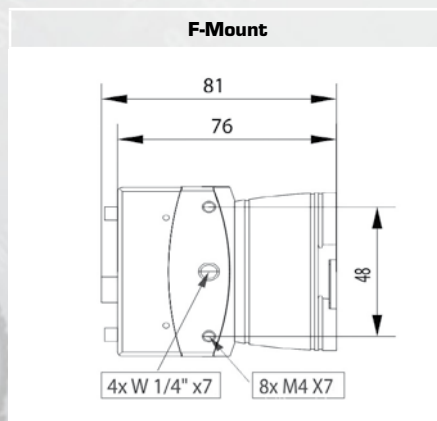
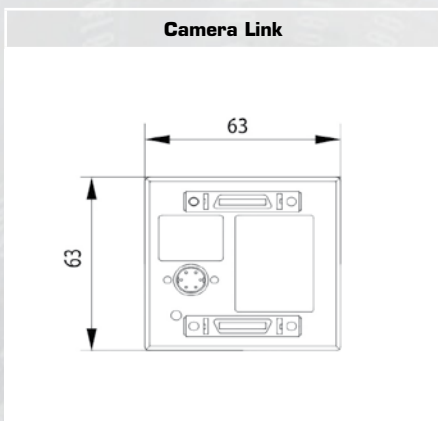


Technical Data	
Sensor	- CMOS sensor 1,696 (H) x 1,710 (V) pixel - active area 19.27 mm (diagonal) - 13.57 (H) x 13.68 (V) mm - 8-bit monochrome or RGB-color with BAYER-filter
Pixel size	8 x 8 µm with micro lenses
Light sensitivity	1,200 ASA monochrome, 1,000 ASA RGB-color, monochrome 25 V/lux-s
Image speed	1-285 fps* at full resolution, up to more than 150,000 fps at reduced resolution
Shutter	global electronic shutter from 1 µs to 1 s, in 2 µs steps
Internal dynamics	up to 80 dB using Dynamic Range Adjustment
Spectral bandwidth	400-900 nm
Pixel clock	60-85 Mhz
Fill factor x quantum efficiency	40 %
Video output	Full Camera Link®, 8 x 8-bit, 10 x 8-bit
Camera configuration	Serial interface via Camera Link® 9,6 - 115 kBd, n, 8, 1
Camera size	63 x 63 x 54 mm (C-Mount)
Weight	300 g, without lens
Lens mount	C-Mount or F-Mount
Camera body temperature	+5... 50 °C
Shock/vibration	70 g, 7 grms
Power supply	8-24 V DC external power supply
Power consumption	7 W max.

Connectors			
<b>6-pin. Hirose power connector</b>			
Pin	Signal	Pin	Signal
1	VCC	4	DGND*
2	VCC	5	GND
3	STRB	6	GND
*DGND...digital GND for STRB signal			
<b>Two 26-pin Camera Link® Connectors</b>			
All signals according to „Full“ Camera Link® specification			
Signal		Description	
CC1		EXP	

Recording Data			
Resolution	Frame Rate	Resolution	Frame Rate
1,696 (H) x 1,710 (V)	285 fps	640 (H) x 480 (V)	5,985 fps
1,280 (H) x 1,024 (V)	604 fps	512 (H) x 512 (V)	2,232 fps
1,280 (H) x 720 (V)	858 fps	320 (H) x 240 (V)	2,084 fps
1,000 (H) x 1,000 (V)	731 fps	120 (H) x 100 (V)	18,881 fps

\* fps = frames per second



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