

4 Megapixel High Resolution - for detailed images

- **Extremely flexible in resolution and speed:**
4 Megapixel resolution up to 470 frames per second at 2,336 (H) x 1,728 (V) pixel resolution
- **Full HD: 1,920 (H) x 1,080 (V) at 910 fps**
- **Adjustable Region of Interest (RoI)**
- **Stepless adjustable frame rate up to more than 100,000 frames per second at reduced resolution**
- **Maximum photo sensitivity:**
3,200 ASA monochrome, 2,400 ASA RGB
- **CoaXPress® interface up to 2 GByte/second, 5W5 connector, 5 lanes coax cable, up to 40 m at full speed**
- **Monochrome or color with Bayer-filter**
- **Small and compact design**
- **C-Mount or F-Mount lens mount**

CoaXPress® - next generation of high-speed standard

CoaXPress® is the answer to the ever increasing speed of modern Machine Vision cameras. CoaXPress® provides a bandwidth of up to 2 GByte/s on 4 coax lanes. Using the innovative concept of an additional upstream link there is a guarantee for low latency and jitter for image exposure and control. All this is combined using one 5W5 connector on the camera and one standard cable integrating 5 coax lines. Cable lengths of up to 40 m are achievable.



CXP-3 CXP-5 5W5

Full HD at 910 frames per second

With 910 frames per second at Full HD resolution, the camera is ideal for a wide range of applications, especially where images have to be presented to the public. High-speed images of the highest quality make the camera an excellent analysis tool for recording fast motion in sports (for example in driving technique in golf or tennis). But also for many broadcast applications (for example commercials or wildlife documentaries).

Extremely flexible in resolution and speed

The EoSens® 4CXP is suitable for the most various applications. A resolution of 2,336 (H) x 1,728 (V) pixels ensures superb image quality with extremely detailed images. With the proven Mikrotron high-speed technology the camera takes up to more than 100,000 frames per second.

"Freeze Frame" full frame shutter

The "Freeze Frame" shutter 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.

PRELIMINARY



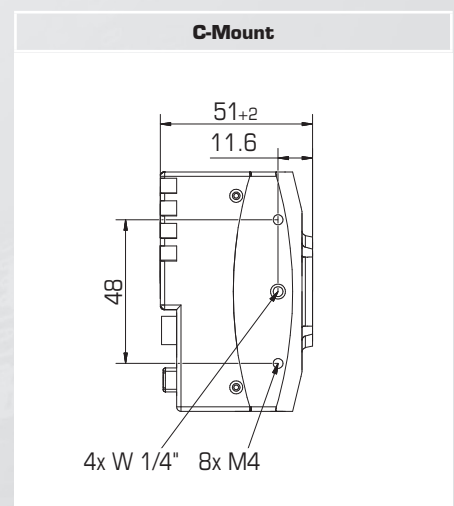
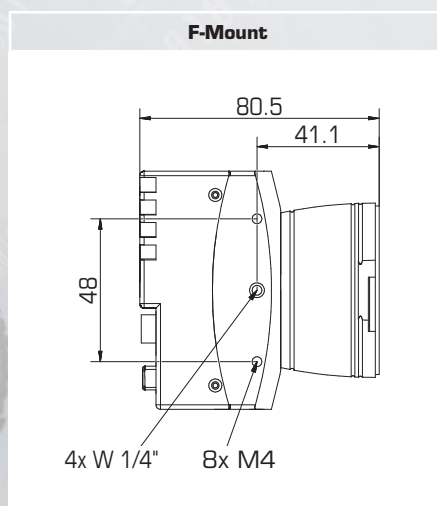
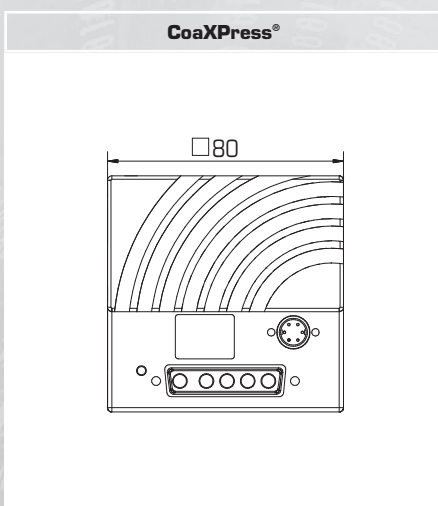
EoSens® 4CXP High-Speed CMOS Camera

Technical Data	
Sensor	- CMOS sensor 2,336 (H) x 1,728 (V) pixel - active area 20.34 mm (diagonal) - 16.35 (H) x 12.10 (V) mm - 10-bit monochrome or RGB-color with Bayer Pattern
Pixel size	7 x 7 µm with pinned photo diode pixel
Light sensitivity	3,200 ASA monochrome, 2,400 ASA RGB-color, monochrome 11 V/lux-s
Image speed	1-470 fps* at full resolution (8 bit), up to more than 100,000 fps at reduced resolution (8 bit)
Shutter	global electronic shutter from 2 µs to 1 s, in 2 µs steps
Spectral bandwidth	350-850 nm
Fill factor x quantum efficiency	40 %
Amplification	Digital Gain 1-4 times (8 Bit modes), 1/1,024 steps
Video output	CoaXPress®, CXP-5 (or CXP-3), 5W5 up to 2 GByte/s
Camera configuration	Gen<l>Cam compliant
Camera size	80 x 80 x 53 mm (C-Mount) 80 x 80 x 81 mm (F-Mount)
Weight	450 g, (C-Mount) without lens 490 g, (F-Mount) without lens
Lens mount	C-Mount or F-Mount
Camera body temperature	+5... 50 °C
Shock/vibration	70 g, 7 grms
Power supply	12-24 V external power supply
Power consumption	7 W max.

Connectors			
6-pin. Hirose power connector			
Pin	Signal	Pin	Signal
1	VCC	4	DGND*
2	VCC	5	GND
3	STRB	6	GND
*DGND...digital GND for STRB signal			
5W5 CoaXPress® Connector			
All signals according to CoaXPress® specification			

Resolution and Speed - CXP-5			
2,336 (H) x 1,728 (V) 470 fps	1,280 (H) x 1,024 (V) 960 fps		
2,048 (H) x 1,024 (V) 900 fps	1,280 (H) x 720 (V) 1370 fps		
1,920 (H) x 1,080 (V) 910 fps	1,536 (H) x 512 (V) 1920 fps		

Resolution and Speed - CXP-3			
2,336 (H) x 1,728 (V) 274 fps	1,280 (H) x 1,024 (V) 463 fps		
2,048 (H) x 1,024 (V) 463 fps	1,280 (H) x 720 (V) 658 fps		
1,920 (H) x 1,080 (V) 439 fps	1,536 (H) x 512 (V) 925 fps		



* fps = frames per second

All trademarks are properties of their respective owners. Mikrotron reserves the right of change without notice. Mikrotron is not liable for harm or damage incurred by information contained in this document.

PRELIMINARY