



MotionBLITZ EoSens[®] Cube7

High-Speed Recording Camera



GigE
VISION

EoSens[®]

MotionBLITZ EoSens[®] Cube7 Advantages at a Glance:

- Extremely flexible in resolution and speed: up to 523 fps at 1,696 (H) x 1,710 (V) pixel resolution
- Stepless adjustable frame rate up to more than 200,000 frames per second at reduced resolution
- Maximum photo sensitivity: 1,200 ASA monochrome, 1,000 ASA RGB
- Up to 12.0 seconds onboard Recording Memory at full resolution and speed
- GigE Vision[®] compatible
- Stand-alone operation up to 1 h (internal battery), image storage up to 24 hrs (Memory Standby Mode)
- ImageBLITZ[®] Automatic Trigger (optional)
- Shockproof up to 100 g shock, 10 g vibration
- Burst Trigger Mode
- Multi Sequence Mode

3 Megapixel Resolution for Detailed Images

Extremely Flexible in Resolution and Speed

The MotionBLITZ EoSens[®] Cube7 offers the features the most varied applications. Resolution and speed can be user defined as needed. 1,696 x 1,710 pixels deliver superb image quality with a high level of detail. Based on MIKROTRON'S high-speed technology the camera captures more than 200,000 frames per second to freeze-frame any action.

Crystal Clear Images

The MotionBLITZ EoSens[®] Cube7 adjusts every single pixel regarding blackvalue and dynamic in real time. The resulting video impresses with crystal clear images.

Onboard Ring Buffer (Pre-/Post-Trigger)

The onboard Ring Buffer allows for buffering of triggered events up to 12 seconds at full resolution and full speed. Freely adjustable pre or post triggered recording settings capture the events as they happen.

ImageBLITZ[®] Automatic Trigger

The ImageBLITZ[®] Automatic Trigger allows image driven triggering directly through the camera by a user defined image region. This image area can be defined and calibrated as a trigger sensor. A change in the brightness, checked in every frame, will trigger the camera or record an event.

Burst Trigger Mode (Post Trigger)

The Burst Trigger Mode allows the user to divide the memory into several thousand image bursts. For every event a defined number of frames will be stored. This makes it easier to record sequence of events.

Dynamic Range Adjustment

The camera's Dynamic Range Adjustment feature allows the user to widen the CMOS sensor's dynamic range for high contrast scenes. Thus, the camera provides clear details even at extreme contrasts.

Maximum Performance at Minimum Form Factor

MotionBLITZ EoSens® Cube7 comes up with a small form factor. The small footprint of approx. 92 x 93 mm (C-Mount version) allows for easy handling, even in cramped conditions.

Flexible and Easy to Use

The camera's Gigabit Ethernet interface makes it possible to operate multiple cameras from any standard Notebook/PC over a distance of up to 100 m. Additionally, images can be stored on the camera's internal memory for up to 24 hours without an external power source (Memory Standby Mode).

A great variety of options

Color version, F-Mount front, rearside placed connectors, Hi-G version, ImageBLITZ® Automatic Trigger, Buffer extension up to 12 seconds, Multi Sequence Mode, IRIG B are optionally available.

Standard Equipment

- Burst Trigger Mode
- FPN Correction
- Dynamic Range Adjustment
- 2.82 s onboard Ring Buffer
- C-Mount front
- Side placed connectors
- Memory Standby Mode
- Internal battery
- Power supply
- Operator software
- Ethernet cable 3 m

Optional Extensions

- Ring Buffer extension up to 12 s recording time at full resolution and full speed
- ImageBLITZ® Automatic Trigger
- Multi Sequence Mode
- Color version
- F-Mount front
- Hi-G 100 g shock, 10 g vibration
- IRIG B synchronisation
- Rearside placed connectors

Resolution and corresponding frame rate

1,696 x 1,710	523 fps
1,280 x 1,024	1,155 fps
1,280 x 720	1,640 fps
1,024 x 1,024	1,410 fps
640 x 480	4,460 fps
512 x 512	5,010 fps
320 x 240	14,770 fps
128 x 128	43,540 fps

Technical Data

(More detailed specifications are available on request)

MotionBLITZ EoSens® Cube7	
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 – 523 fps at full 1,696 (H) x 1,710 (V) resolution, more than 200,000 fps at reduced resolution
Recording time	12.0 s at full resolution and full speed extended recording times at reduced resolution and/or frame rate
Shutter	global electronic shutter from 2 µs to 1 s, in 2 µs steps
Sensor dynamic	up to 90 dB using Dynamic Range Adjustment
Spectral bandwidth	400 – 900 nm
Amplification	Digital Gain 1, 1.5 & 2
System design	scaleable and network-compatible with standard PCs or Notebooks, synchronous processing of multiple cameras
Camera size	69 x 93 x 92 mm (C-Mount) 69 x 93 x 128 mm (F-Mount option)
Weight	900 g, without lens
Camera body temperature	+5 ... 45 °C
Battery capacity	recording: 1 h, standby: 1.5 hrs, data retention: up to 24 hrs (Memory Standby Mode)
Lens mount	C-Mount or F-Mount or FG-Mount
Power supply	10 – 30 V DC external power supply or from internal battery
Power consumption	15 W max.
Software	MotionBLITZ® Director2 operator software for Windows® 7 / 10
Frame storage	BMP, JPG, TIFF, AVI, DNG, PNG and REC (MIKROTRON proprietary raw) file format
Camera-PC interface	Gigabit Ethernet interface
Trigger	triggering with external signal/switch, MotionBLITZ® Director2 software or ImageBLITZ® Automatic Trigger
Synchronisation	in- and output to synchronise multiple cameras or trigger any external devices (5V TTL) alternative ARM output (recording state)
Digital input	4-bit with Optocouplers, inserted in each image
Plug position	side placed, optional rearside placed

fps = frames per second

MIKROTRON GmbH

MIKROTRON GmbH provides a full range of high-speed imaging solutions for challenging applications in industry, engineering, science and sports. The company's extreme slow-motion recording solutions enable customers to optimize manufacturing processes, improve product design, revolutionize quality management and analyze motion.

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