

# Compact High Speed Buffer Camera MotionBLITZ® Cube1 / Cube2

## Visualize the Invisible

A picture tells a story. What do 500 or 1,000 pictures tell about a second's event? Modern machines and production processes are too fast for visual analysis with the naked human eye. High speed video extends a second to a minute – providing insight that helps to immediately understand what's going on. No more guessing and trying.

See – know – act ...and win. Slow motion provides competitive advantages through faster, better understanding of fast processes. Faster progress is seen in R&D, engineering, production, quality assurance and maintenance.

- **Inspection/monitoring of fast running machine parts**
- **Optimization of production machines**
- **Analysis of explosively processes**
- **Shock and vibration analysis**
- **Material testing, crash testing, quality control**
- **Movement analysis, ergonomics, sports**

### Compact, Portable and Ready-to-Use

Any existing Gigabit Ethernet LAN can be used to connect MotionBLITZ® Cube to a standard PC or notebook. Also, operating of multiple cameras simultaneously from one or more stations is possible. The compact size of the camera, combined with the internal battery backup makes MotionBLITZ® Cube ideal for mobile and standalone use. With Mikrotron's user-friendly software, MotionBLITZ® Cube is easily installed and operated. Just one click gives you a live image for adjustment, or starts recording while you monitor the object on screen.

### Flexible In Resolution and Speed

Free selection of RoI (Region of Interest) and frame rate enables the system to flexibly match any given recording situation. A few mouse clicks let you adjust the image sector to capture just as much as you need, at the required speed to see it sharp. A background maximizer calculates and sets best speed per RoI-size or best RoI per selected speed.



### Triggering with History Function

Once started, the system records continuously to the image FIFO-buffer. The trigger signal starts the finishing process of the recording sequence. The history function lets the buffer keep a set number of frames in memory and fill the rest with post-trigger recording. Thus you can learn what made things happen that way. History size can be set from 0 to 100% of recording time. Archivation can be in standard BMP or AVI-file format on the hard disk of the connected PC.

Cube2 even goes one step further: its ImageBLITZ® feature allows object generated triggering by a selectable part of the RoI used as sensor.

- **Cube1 - up to 1,000 fps\* at full 640 x 512 Res.**
- **Cube2 - up to 500 fps\* at full 1280 x 1024 Resolution; up to 45,000 fps\* at reduced Resolution**
- **Frame Rate and Resolution Adjustable**
- **Recording Time up to 3 / 6s at Maximum Resolution**
- **Internal Rechargeable Battery for Standalone Use**
- **Large Trigger and Recording Operations**
- **Optional - ImageBLITZ® Self-Trigger**
- **Gigabit Ethernet Interface**
- **Image Archiving in BMP and AVI File Format**
- **Windows™ Based Installation and User Interface Software and Documentation**

\*fps: frames per second

# Compact High Speed Buffer Camera MotionBLITZ® Cube1 / Cube2

## Model Types Cube1 (640 x 512, frame rate up to 1,000 fps)

| Model Type            | Monochrome/<br>Color | Recording Time at<br>640 x 512, 1,000 fps* | Photo sensitivity<br>accordant | ImageBLITZ®<br>Option | Hi-G Option<br>(100G) |
|-----------------------|----------------------|--|--------------------------------|-----------------------|-----------------------|
| MotionBLITZ® Cube1-3  | M                    | 3.3 sec.                                   | 200 ASA                        | Yes                   | -                     |
| MotionBLITZ® Cube1-6  |                      | 6.5 sec.                                   |                                | Yes                   | -                     |
| MotionBLITZ® Cube1-3C | C                    | 3.3 sec.                                   | 160 ASA                        | Yes                   | -                     |
| MotionBLITZ® Cube1-6C |                      | 6.5 sec.                                   |                                | Yes                   | -                     |

## Model Types Cube2 (1,280 x 1,024 at 500fps, up to 46,000 fps\* at reduced resolution)

| Model Type            | Monochrome/<br>Color | Recording Time at<br>1,280 x 1,024, 500 fps* | Photo sensitivity<br>accordant | ImageBLITZ®<br>Option | Hi-G Option<br>(100G) |
|-----------------------|----------------------|--|--------------------------------|-----------------------|-----------------------|
| MotionBLITZ® Cube2-3  | M                    | 3.3 sec.                                     | 200 ASA                        | Yes                   | Yes                   |
| MotionBLITZ® Cube2-6  |                      | 6.5 sec.                                     |                                | Yes                   | Yes                   |
| MotionBLITZ® Cube2-3C | C                    | 3.3 sec.                                     | 160 ASA                        | Yes                   | Yes                   |
| MotionBLITZ® Cube2-6C |                      | 6.5 sec.                                     |                                | Yes                   | Yes                   |

## Technical Data:

|                            | Cube1  | Cube2   |
|----------------------------|--|---|
| Max Resolution             | 640(H) x 512(V)  | 1,280(H) x 1,024(V)                                 |
| Selectable Recording Rates | 68-1000 fps*   | 12-45,000 fps* (Over 500 fps at reduced resolution) |
| Shutter Speed              | Global Electronic Shutter from 1/40s to 1/250,000s             | Global Electronic Shutter from 1/20s to 1/250,000s  |
| Sensor                     | RGB color with BAYER filter or monochrome                      |   |
| Camera Size                | 94 x 70x 110 mm (W x H x L)                                    |   |
| Weight                     | 980 g (2.16 lbs.), without lens, incl. battery set             |   |
| Operating Temperature      | + 5...45°C (41 – 113°F)  |   |
| Battery Capacity           | Recording mode: ca. 30 minutes; standby mode: ca. 1 hour       |   |
| Lens Mount                 | Standard C-Mount, optional Nikon / F-Mount with adapter        |   |
| Power Supply               | 10.5 - 24 V DC external power supply, or from internal battery |   |
| Software                   | MotionBLITZ® Director operating software for Windows™ 7/10     |   |
| Frame Storage              | BMP and AVI - file format                                      |   |

### Camera Input/ Outputs

|                             |  |
|-----------------------------|--|
| Camera-PC Interface         | 1000 / 100 Ethernet interface (Gigabit Ethernet) |
| Trigger and Synchronisation | Trigger- and Sync. Input, opto coupled           |
| Sync. Output                | TTL-Sync., Strobe Signal                         |
| Analog Input                | 0 - 2,5 V (8-Bit)                                |
| Digital Input               | 4-Bit (TTL)                                      |

\*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.

Mikrotron GmbH  
Landshuter Str. 20-22  
85716 Unterschleißheim  
Tel.: +49 (0) 89-72 63 42-00  
Fax: +49 (0) 89-72 63 42-99  
info@mikrotron.de • www.mikrotron.de

**Special Electronics**  
**Digital SlowMotion**  
**Image Processing**

**MIKROTRON**  
High-Speed Vision Solutions