EoSens

MotionBLITZ® LTR1 portable
Long Time Recording System

High-Speed long time recording up to 55 minutes

- **Complete system for long time recording applications**
- **mobile use with a compact systemhousing of 51 x 39 x 24 cm (incl. display)**
- **Up to 55 minutes recording time at full speed and full resolution**
- **Up to 285 frames per second at 1,696 (H) x 1,710 (V) pixels resolution – MC 3010/11**
- **Up to 506 frames per second at 1,280 (H) x 1,024 (V) pixels resolution – MC 1362/63**
- **Maximum photo sensitivity: 2,500 ASA monochrome, 2,000 ASA RGB**
- **Stepless adjustable frame rate up to 35,000 frames per second at reduced resolution**
- **Lossless recording without compression**
- **Windows® 7 based Director2 operator software**
- **Image storage in BMP, JPG, TIFF, AVI, DNG, PNG and REC (Mikrotron proprietary raw) file format**
- **Quad Mode: 4 x speed or recording time (not available for MC 3010/11)**

High-speed video long time recording systems deliver fast results in many areas of industrial and scientific development and research. High-speed video simplifies the analysis and optimization of processes; errors are quickly detected and can be eliminated. The MotionBLITZ® LTR1 portable is an all purpose system, which allows high-speed recording even in long time situations. Therefore it is ideal wherever a powerful analytical tool is required.

Analysis of fast moving and continuing events

- **Movement of fast running machine parts testing**
- **Optimization of production machines**
- **Process testing**
- **Ballistic trajectory analysis**
- **Motion analysis**
- **Quality control, quality assurance**

Flexible and easy use

The MotionBLITZ® Director2 operator software allows userdefined adjusting of window size and frame rate. Thereby the system can be easily adapted for any specific need. The required RoI can be defined by using the mouse. At the same time the system indicates the maximum resulting frame rate. Different, user defined camera settings can be stored. The MotionBLITZ® Director2 software allows cutting and converting of the recorded images.

Triggered recording with history function

The Ring Buffer allows buffering of triggered events up to 55 minutes at full resolution and speed. The history function allows pre and post event recording through free selection of frames or recording time. Triggering via external signal.

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.

Marker function

With the LTR1 marker function it is possible to set a marker in each frame. The marker is an external signal from a switch or a machine signal. The specifically marked frames can easily be accessed after the record.

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Special Electronics
Digital Slow Motion
Image Processing

MIKROTRON

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Technical Data	
Recording time	see "Comparison of the particular camera models"
Image speed MC 1362/63	1–506 fps* with 8-bit at 1,280 x 1,024 pixels resolution up to 35,000 fps at reduced resolution
Image speed MC 3010/11	1–285 fps with 8-bit at 1,696 x 1,710 pixels resolution up to 35,000 fps at reduced resolution
Amplification	Digital Gain 1–4, stepless (not available for MC 3010/11)
System housing	– portable PC – 20" display with 1,600 x 1,200 resolution – 51 x 39 x 24 cm
System weight	22 kg
Camera size	63 x 63 x 47 mm (C-Mount) 63 x 63 x 74 mm (F-Mount)
Lens mount	C-Mount or F-Mount
Frame grabber	Full Camera Link® frame grabber
Environment	+5…45 °C
Power supply	100–240 V, 50–60 Hz
Trigger	triggering with external signal/switch or MotionBLITZ® Director2 operator software
Synchronisation	synchronisation in- and output
Digital input	8 channels with Optocouplers, inserted in each image
Software	MotionBLITZ® Director2 operator software for Windows® 7/64-bit
Data export	DVD-writer, USB 3.0, eSATA, Gigabit Ethernet
Frame storage	BMP, JPG, TIFF, AVI, DNG, PNG and REC (Mikrotron proprietary raw) file format
Record mode	ring file, until end of file

Standard Equipment

– Camera MC 1362
– portable PC
– Director2 operator software
– 5 m camera cable
– power supply with 5 m cable
– 55 min recording time
– external trigger interface
– 1.6 TB additional internal storage space
– carrying case with wheels and pull handle

Optional Extensions

– Color camera (RGB)
– Camera with 3 MP resolution (MC 3010/11)
– F-Mount lens mount
– 10 m camera cable (via Copper)
– up to 1,000 m via Fiber Link
– SSD (Solid State Drive)

MotionBLITZ® Director2 software features

– storable camera settings
– 8 free selectable I/Os
– gamma correction
– free adjustable grid
– RGB color picker
– selectable marking lines
– multisequence recording, external triggered
– several LTR1 adapted to synchronization
– Burst Trigger Mode
– Dynamic Range Adjustment
– Quad Mode (not available for MC 3010/11)

Comparison of the particular camera models

Resolution	Frame Rate	Recording Time	MC 1362/63	MC 3010/11
1,696 (H) x 1,710 (V)	–	–	X	
	285	44		X
1,280 (H) x 1,024 (V)	506	55	X	
	604	46		X
1,040 (H) x 768 (V)	800	57	X	
	910	50		X
800 (H) x 600 (V)	1,258	60	X	
	1,407	54		X
640 (H) x 480 (V)	1,869	63	X	
	2,084	57		X
480 (H) x 320 (V)	3,437	69	X	
	3,556	67		X
320 (H) x 240 (V)	5,672	84	X	
	5,985	79		X
160 (H) x 100 (V)	17,612	130	X	
	16,902	135		X

The data refer to standard memory size.

* fps = frames per second

Revision K/1

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