

Mikrotron MotionBLITZ[®] LTR2 Overview



The new member in the LTR Family: MotionBLITZ[®] LTR2

The MotionBLITZ[®] LTR2 system with compression mode (Quad Mode) offers permanent recording with 1280 x 1024 at 868 fps up to 1 hour 5 minutes or with 640 x 480 at 250 fps up to 16 hours.

Now you can permanently record two full working shifts with 250 fps.

Troubleshooting is as easy as never before. No exact trigger is needed.

Even full football or tennis matches can be recorded.

**Don't think in seconds as you have done in the past.
Think big, think in hours.**

This new MotionBLITZ[®] LTR2 is available in 3 versions.

- **LTR2 portable: a mobile ruggedized PC for mobile use**
- **LTR2 desktop: a stationary PC for labs**
- **LTR2 Mobile Tower: specially designed for the pharmaceutical industry**

The system comes ready to go as a plug and play long time recording system.

The intuitive Director2 software allows easy operation after a short training.

And the best is the price for example for the MotionBLITZ[®] LTR2 portable system: 14900 EUR list prices

Mikrotron MobionBLITZ[®] LTR2 portable: Market/Benefit/Versions

Markets:

Beverage

Consumer Products

Food

Paper & Printing

Pharmaceutical

Sports

Tabacco

Automotive

LTR2 Benefits:

Increase Uptime

Minimize Downtime

Improve Product Quality

Improve Factory Throughput

Reduce Machine Setup Time

Reduce Production Cycle Time

Reduce Waste

Reduce Machine Malfunctions

Improve Operator Training

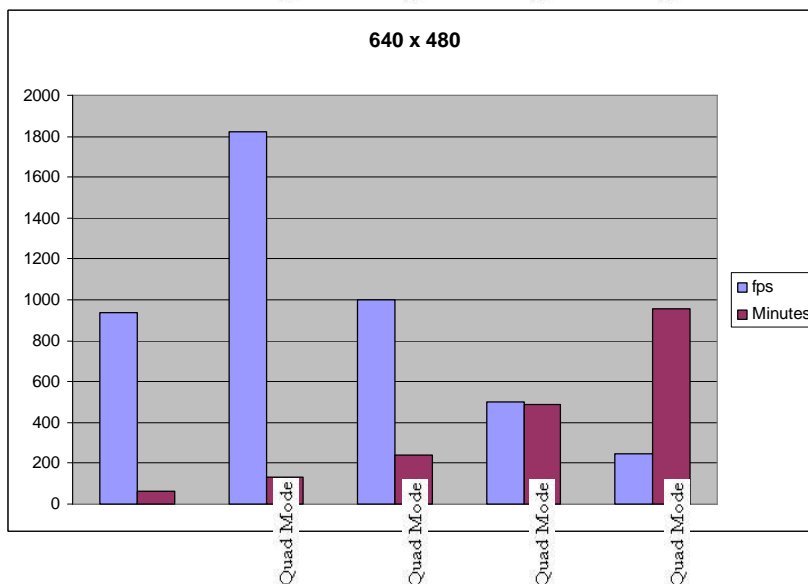
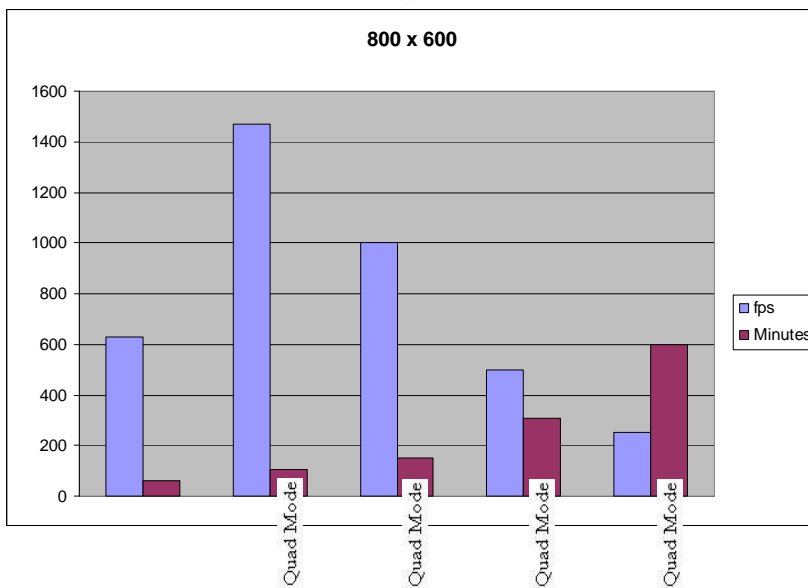
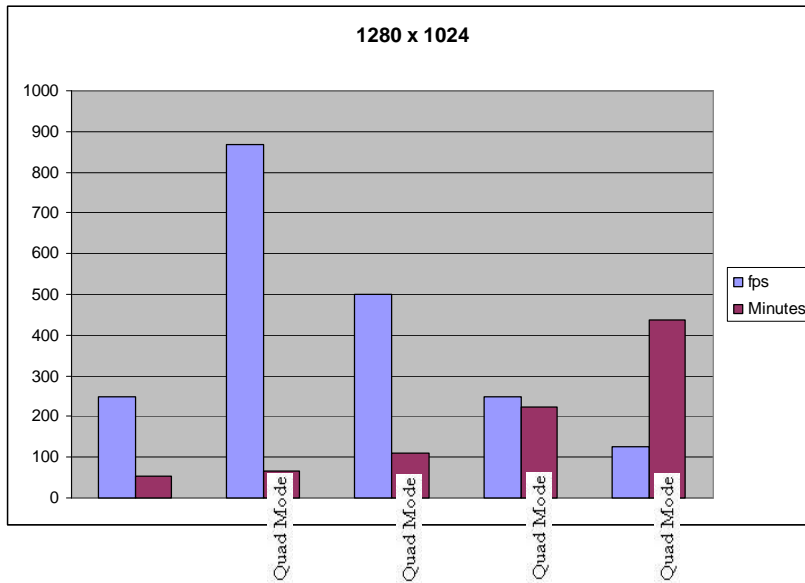
LTR2 Versions:

LTR2 portable

LTR2 Desktop

LTR2 Mobile Tower

Mikrotron MobionBLITZ[®] LTR2 portable: Resolution vs fps vs minutes



High-Speed long time recording up to 16 hours at VGA resolution

- Complete system for long time recording applications
- mobile use with a compact systemhousing of 44 x 35 x 24 cm (incl. display)
- Up to 55 minutes recording time at full speed and full resolution
- Up to 120 frames per second at 1,696 (H) x 1,710 (V) pixels resolution – MC 3010/11
- Up to 250 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 specific development and research. High-speed video simplifies the analysis and optimization of processes; errors are quickly detected and can be eliminated. The MotionBLITZ® LTR2 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 user defined 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 Director2 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.



MotionBLITZ® LTR2 portable

Long Time Recording System

Technical Data	
Recording time	Comparison of resolution and recording times
Image speed MC 1362/63	1–250 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	1–120 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 – 17" display with 1,280 x 1,024 resolution – 44x 35 x 24 cm
System weight	17 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, 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)
-- WLAN
-- Remote Access

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 LTR2 adapted to synchronization
– Burst Trigger Mode
– Dynamic Range Adjustment
– Quad Mode (not available for MC 3010/11)

Comparison of resolution and recording times without/with Quad Mode				
Resolution	Frame Rate	Recording Time (min)	MC 1362/63	
1280 (H) x 1024 (V)	250	55	X	
	250	3h43	X	Quad Mode
1,280 (H) x 1,024 (V)	868	1h05	X	Quad Mode
	480	57	X	
1,040 (H) x 640 (V)	1378	1h12	X	Quad Mode
	629	60	X	
800 (H) x 600 (V)	1468	1h44	X	Quad Mode
	1000	2h32	X	Quad Mode
800 (H) x 600 (V)	500	5h05	X	Quad Mode
	935	1h03	X	
640 (H) x 480 (V)	1824	2h10	X	Quad Mode
	1000	3h58	X	Quad Mode
640 (H) x 480 (V)	500	7h57	X	Quad Mode
	250	15h55	X	Quad Mode

alternative:
1696 (H) x 1710 (V) at 120 fps with 55 minutes recording time with MC3010/11 (no Quad Mode available)

The data refer to standard memory size.

* fps = frames per second

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High-Speed long time recording up to 16 hours at VGA resolution

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- mobile tower use with a compact systemhousing of stainless steel
- Up to 55 minutes recording time at full speed and full resolution
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- Maximum photo sensitivity: 2,500 ASA monochrome, 2,000 ASA RGB
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- 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® LTR2 Mobile Tower 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.

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System housing	– stainless steel PC housing – 17" display with 1,600 x 1,200 resolution – .
System weight	100 kg
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