MEGA SPEED®   MS120K

RESOLUTION AND FPS

Min FPS: 35			Approx. Record Time (Seconds)		
Width*	Height	Max FPS	16GB RAM	32 GB RAM	64 GB RAM
1280	800	4,020	4.2	8.3	16.7
1280	720	4,460	4.2	8.3	16.7
1280	640	5,010	4.2	8.3	16.7
1280	480	6,660	4.2	8.4	16.7
1280	320	9,910	4.2	8.4	16.9
1280	256	12,300	4.2	8.5	17.0
1280	200	15,600	4.3	8.5	17.1
1280	156	19,800	4.3	8.6	17.2
1280	120	25,400	4.4	8.7	17.5
1280	64	45,100	4.6	9.1	18.3
1280	32	81,300	5.0	10.0	20.0
1280	16	135,500	5.8	11.7	23.3

SAMPLE APPLICATIONS
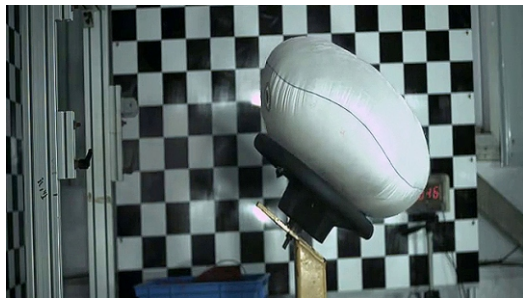
Automotive

Aerospace
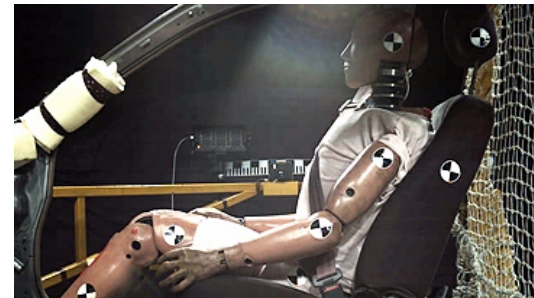
Automotive Testing

Drop Test
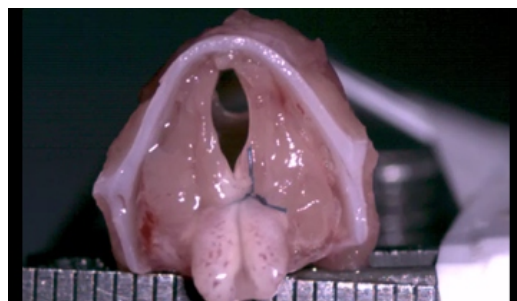
Biology Study

Aerospace

MEGA SPEED®

MS120K

Your Best Choice For Speed, Productivity And Image Size
1280 x 800 at 4000fps

**MS120K model shown with
64 GB camera body and optional accessories.**

Our Mega Speed high speed cameras continue to offer the world's high speed imaging customers with some of the most productive high speed camera designs available. A camera design providing the customer with the very best features and prices available.

Mega Speed cameras are suitable for a wide range of applications. These high-speed cameras are suitable on the test range, in the R&D test lab or for use in that critical application where a dependable camera is needed to capture that all important test video. A camera with automatic high speed file back-up to it's on-board removable solid state dive. Permanently saving the recent test video.

Mega Speed high speed cameras have several standout features such as high write speed removable solid state drives which are accessible through the camerai¯s rear media bay. The removable drives offer data security as well as easy drive removal when replacements are required.

The onboard multi channel data acquisition module is ready to synchronize test data with your high speed image data offering a clear understanding and interpretation of the test video.

Contact us today to arrange a demonstration of our outstanding high speed camera models.

1: Handle
2: Standard "C" Mount
3: Power On LED
4: Ready Out
5: IRIG B
6: Sync In
7: Sync Out
8: Trigger
9: ADC-In
10: SDI-Out
11: 12 VDC In
12: Gigabit Ethernet
13: Off/On
14: (Left to Right)
   Idle LED
   Armed LED
   Ready LED
   Record LED
   Download LED
15: Media Bay (Optional)
16: Cooler Fan
17: Internal Battery (Optional)
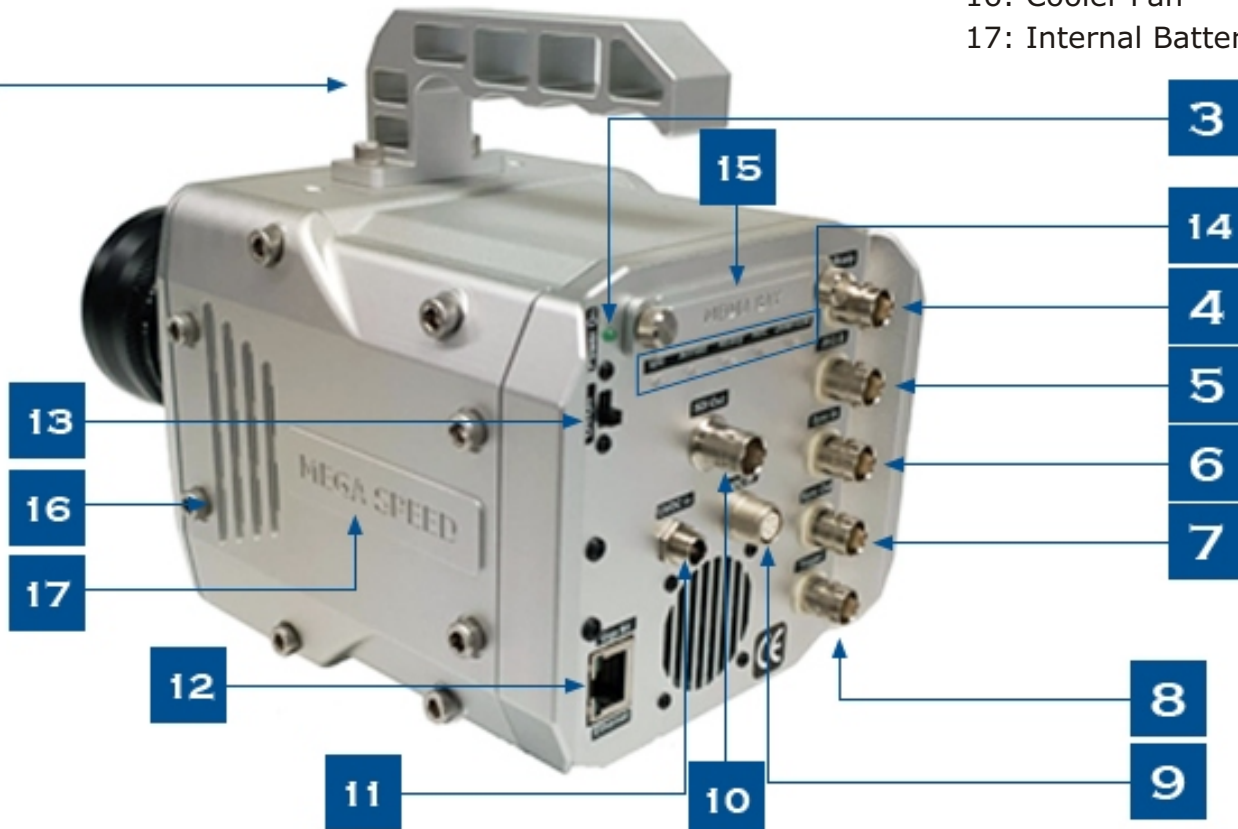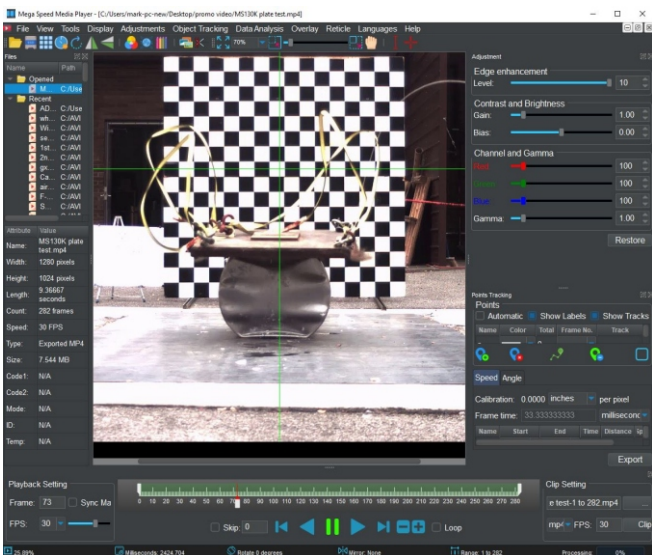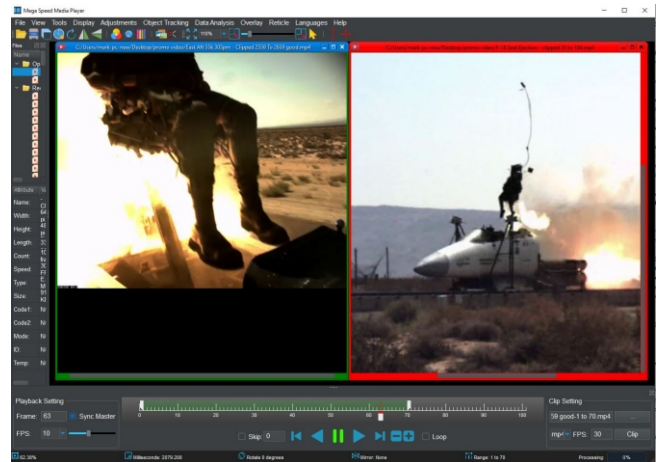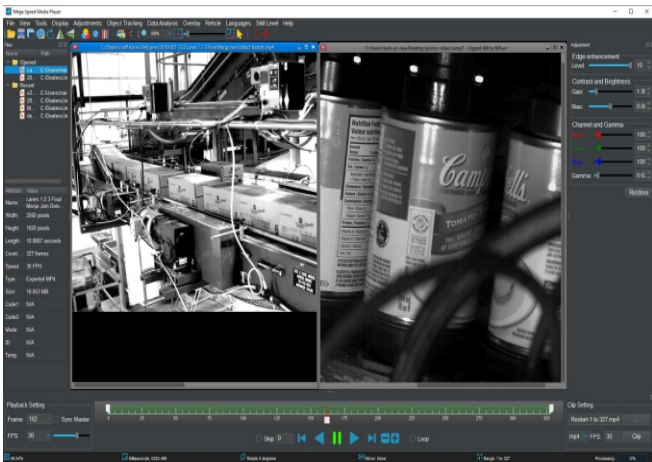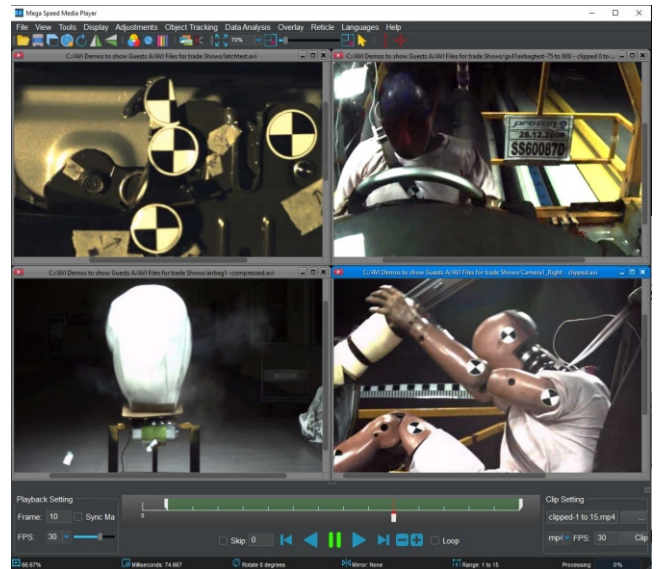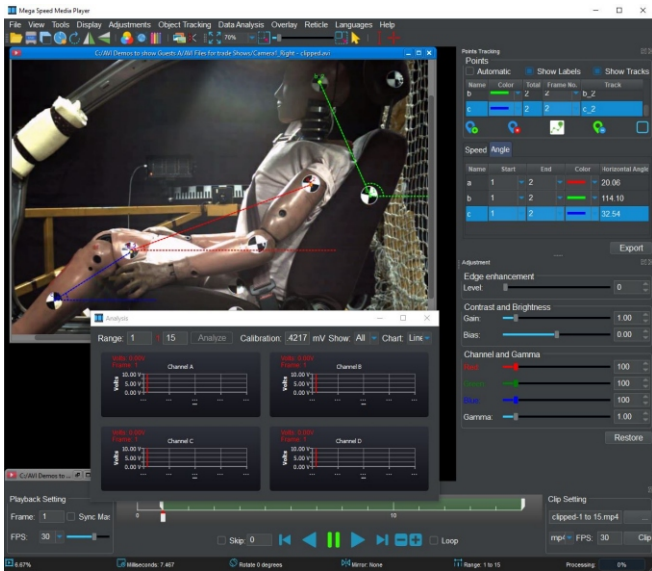
Making Sense Of Your High Speed Image Data. The Included Mega Speed Media Player!

New Tools To Measure, Synchronize, Batch Process, Clip And Compress. The Fastest Video Analysing Work-Flow Available. Helping You Make Sense Of All Your High Speed Image Data. $1995.00 Value free with every Mega Speed Camera.

MEGA SPEED MS120K SPECIFICATIONS

Sensor Specifications And Exposure Control	▪ CMOS image sensor. 4/3" format. Available in either monochrome or color versions ▪ 1280 x 800 pixels maximum resolution ▪ 1280 x 8 pixels minimum resolution ▪ 4000 fps maximum speed at 1280 x 800 pixels ▪ Image size is software adjustable with 128 x 2 segments ▪ 14 μm x 14um pixel format ▪ Software adjustable global shutter down to 2 μs in 1 μs step ▪ Automatic electronic exposure control or manual exposure control ▪ Spectral Response is 400nm to 1000nm peaking at 550nm ▪ Forced air cooled sensor ▪ ISO comparative value is 12,000 for monochrome sensors ▪ ISO comparative value is 6,000 for color sensors ▪ 8 bit and 10 bit pixel bit depth ▪ Average full well capacity 21,000e
Trigger Options	▪ 3.3 VDC to 24 VDC via BNC trigger jack Optional 3.3VDC to 48 VDC extended range ▪ 3.3 VDC Mega Speed trigger box Optional equipment ▪ Dry contact trigger control Optional ▪ Software controlled manual trigger ▪ Software controlled automatic trigger ▪ Multiple start / stop trigger mode with auto stop when camera memory is full ▪ Pre / post trigger mode with full scale pre and post segment adjustment ▪ Segmented trigger mode with exposure, frame rate, file length & next segment control ▪ Single sequence trigger mode
Time Source And Synchronization	▪ By internal PC clock ▪ By external IRG time clock - user supplied to camera IRIG BNC ▪ Sync in to BNC connector from external clock source or master camera ▪ Sync out from BNC connector from pass through sync source or exposure time ▪ Sync in to BNC connector from external IRIG source - user supplied ▪ 10 ns accurate time propagation delay ▪ 3.3 VDC ready out signal when camera is in armed status via ready BNC
Camera Inputs	▪ IRIG BNC connector ▪ Sync in BNC connector ▪ Multi channel data acquisition analog to digital connector for 0 to 10 VDC levels ▪ Multi channel field input connector for field data ▪ DC power supply jack ▪ Marker BNC connector for frame tagging ▪ 1 Gigabit 45 jack for Gigabit camera control Optional NBASE2.5 Ethernet connection
Camera Outputs	▪ Ready out BNC connector ▪ Sync out BNC connector ▪ SDI video out BNC connector ▪ Idle status LED ▪ Armed status LED ▪ Ready status LED ▪ Recording status LED ▪ Download status LED ▪ Power on status LED ▪ Battery charge status LED Optional when equipped with internal battery backup
Video Output	▪ Live stream to PC via Gigabit connection ▪ 1280 x 720 SDI 60 fps Optional
Camera Input Protection	▪ Reverse input voltage protection ▪ Optically isolated camera inputs ▪ ESD circuitry protection ▪ EMI shielding ▪ Camera temperature watch dog ▪ Camera voltage level watch dog ▪ Auto re-boot and re-arm on power failure

MEGA SPEED MS120K SPECIFICATIONS

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Memory	▪ 32GB internal SD RAM recording buffer ▪ High speed re-moveable SSD Optional. 256 GB, 512 GB or 1TB
Camera Firmware	▪ Remote on-site firmware upgrade feature
Record Times	▪ 8.2 seconds at 1280 x 850 , 8 bit depth ▪ Stream time length to camera SSD are frame rate and image size dependant
PC Software Control	▪ Mega Speed Camera Control ▪ Windows 10 ▪ Software control for all camera functions (frame rate, exposure time, image size etc) ▪ Download rate control ▪ Auto-download and re-arm for next event ▪ Frame time, event and settings stamping ▪ Trigger glitch detection
Video Editing Software	▪ Mega Speed AVI Player ▪ Video playback and review ▪ Video file clipping and merging ▪ vertical and horizontal cross hair reticules ▪ Thumbnail view ▪ MP4 video compression engine ▪ Gamma, white balance ▪ image cropping ▪ image rotation ▪ Image export to JPEG, BMP, TIFF, DNG, AVI, H.264, MP4, RAW, MSV, PDF ▪ Compatible with other vendors software ▪ Video playback time base adjustment ▪ Basic object tracking , velocity and distance measurement ▪ multi channel data analysis tools synchronized to video file ▪ Image grid
PC Requirements	▪ Modern day PC running Windows 10 ▪ 500GB minimum hard drive ▪ 8 GB PC RAM ▪ 1 GB Ethernet chip-set ▪ 1 RJ 45 connection for GB connection to camera ▪ USB 2.0 / 3.0 USB ports for SATA dock cable ▪ CAT6 cable for camera connection ▪ 17" 1920 x 1080 monitor resolution
Lens Mount	▪ "C" mount Optional F mount, Canon, Pentax, etc.
Camera Size	▪ 4.5" x 4.98 x 6"
Camera Weight	▪ 3.5 lbs
Camera Body / Structure	▪ Machined aluminum frame anodized hard coat natural finish for low solar load. ▪ Compact efficient modern design ▪ Vented side ribs ▪ Heat sink and forced air cooling ▪ Convenient top mount handle ▪ Convenient quick attach BNC and multi-pin rear connections ▪ Full function camera status LED indicators
Camera Mounts	▪ 5 -bottom1/4 x 20 tpi, threaded 0.250 . 2 top 1/20 tpi both threaded 0.250 down
Camera Power Requirements	▪ 12 VDC 23 watts ▪ 10 VDC to 36 VDC Optional ▪ Internal battery Optional
Temperature / Shock Rating	▪ -5°C - to +40°C. 50G, 10ms, half sine wave, 4 axis, repeated. Optional 100G
Frame Rates	▪ 3720 fps @ 1280 x 864. 8.2 seconds record time ▪ 4014 fps @ 1280 x 800 8.2 seconds record time ▪ 4455 fps @ 1280 x 720 8.2 seconds record time ▪ 6238 fps @ 640 x 480 17.8 seconds record time ▪ 13,080 fps @ 320 x 240 34 seconds record time

MEGA SPEED MS120K SPECIFICATIONS

	▪ 23,852 fps @128 x 128 87.2 seconds record time ▪ * Note: Maximum speed is only affected by image height. 1280x128 can also be captured at 23,852 fps
Included In The Box	▪ Camera ▪ Camera handle ▪ BNC patch cables and tees ▪ 15' CAT 6 Ethernet cable ▪ Camera brick power supply ▪ Camera control software ▪ AVI player software ▪ Training Videos ▪ Foam lined hard protective and storage case ▪ Installation CD with install software and owner's manual
Available As An Option	▪ Color or monochrome image sensor ▪ Extended 3.3VDC to 48 VDC trigger input range ▪ 3.3 VDC Mega Speed trigger box ▪ Dry contact trigger control ▪ NBASE 2.5 Ethernet connection ▪ Internal battery and charge status LED ▪ 1280 x 720 SDI 60 fps ▪ SSD size (240 GB, 512GB or 1TB) ▪ F mount for Nikon, Canon, Pentax ▪ Internal battery back up ▪ 10VDC to 36 VDC supply voltage ▪ Internal battery ▪ ADC patch cable ▪ Lenses with various focal lengths ▪ Tri-pod ▪ LED work lights ▪ Hi G-Force cables and connectors
	Specifications and option availability subject to change without notice. Confirm with your sales rep before placing an order

Notes: Available options are high-lighted in GRAY color.

MEGA SPEED MS120K SPECIFICATIONS

Mechanical Dimensions

BOTTOM VIEW
MOUNTING HOLE PATTERN

1/4-20 UNC
THREADING ⌵.200"
5 PLACES
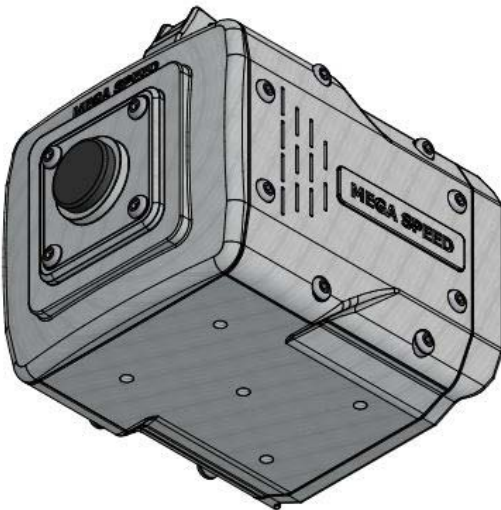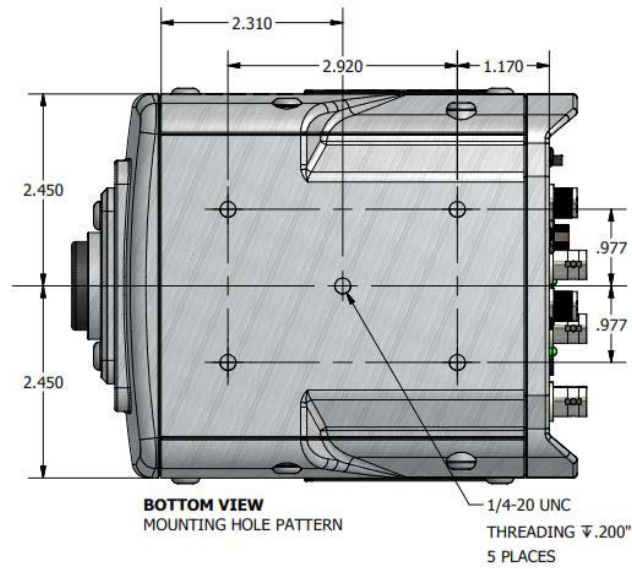
ISOMETRIC BOTTOM RIGHT

ISOMETRIC TOP RIGHT