

## BLASTCAM™ HIGH SPEED CAMERA

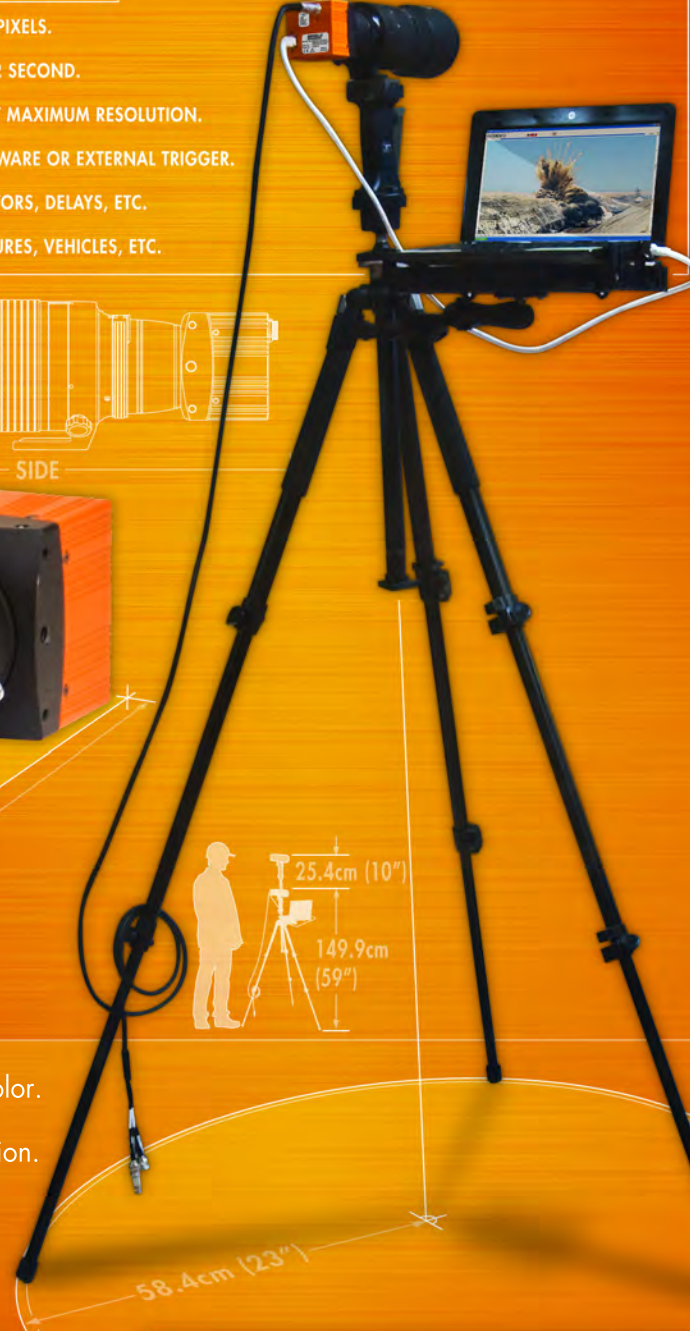
- RESOLUTION: UP TO 1280 X 1024 PIXELS.
- SPEED: UP TO 112,000 FRAMES PER SECOND.
- RECORDING TIME: 3.2 SECONDS AT MAXIMUM RESOLUTION.
- TRIGGERING: AUTOMATIC BY SOFTWARE OR EXTERNAL TRIGGER.
- FIRING TIMES OF: HOLES, DETONATORS, DELAYS, ETC.
- BLAST EFFECTS ON: ROCK, STRUCTURES, VEHICLES, ETC.



BACK



SIDE



# BLASTCAM™

## HIGH SPEED CAMERA

Blasts and their effects occur too quickly to be captured with standard speed video cameras. To see what you've been missing – you must record your blasts with high speed video.

If you want to determine the effects of blasts on structures or vehicles or determine the actual firing times of your blastholes and the nature of the rock movement, the digital video camera with the light sensitivity, speed and resolution to accurately capture these events is the BlastCam™ High Speed Camera. It is a complete high speed video recording system with an easy-to-use operator interface and the ability to self-trigger for unattended recording without the need to run external trigger wires.

### EXPLOSIVES CONSUMERS AND MANUFACTURERS

Your delay detonators must provide the timing blasts need under your specific blasting conditions. Blastholes firing at incorrect times reduce rock fragmentation, effect blast movement, and can increase blast vibrations. The BlastCam™ High Speed Camera with the included ProAnalyst® TrackOne Edition software is used to document the actual firing times of blastholes to 1 millisecond accuracy.

### RESEARCHERS OF BLAST EFFECTS

You are running a sophisticated testing program involving measurement of the effects of energetic materials. The BlastCam™ High Speed Camera is a portable, affordable alternative to expensive high speed digital video cameras traditionally used by corporate, university and government researchers to video record the effects of blasting on structures and vehicles. Multiple cameras at distances of up to 100 m (328 ft.) from the BlastCam™ Controller can be easily networked and time-synchronized providing researchers the ability to record events from multiple camera angles for accurate 3-D motion analyses using the optional ProAnalyst® 3-D Professional Edition software available from MREL.

- Excellent light sensitivity: 3,200 ASA mono & 2,000 ASA color.
- Outstanding image quality: Up to 1280 x1024 pixel resolution.
- Extremely fast: Up to 112,000 fps @ reduced resolutions.
- Software based automatic trigger for unattended recording.
- Provided fully equipped in a rugged, portable carry case.
- Easy to use: Point & click camera control and analysis software.
- MREL's 1 year Comprehensive Parts & Labour Warranty.

MREL Group of Companies Limited //  
 1555 Sydenham Road // Kingston, Ontario K7L 4V4 // Canada //  
 Tel: +1.613.545.0466 // Fax: +1.613.542.8029  
[www.mrel.com](http://www.mrel.com)



## BLASTCAM™ HIGH SPEED CAMERA

Attach the lens to the camera. Mount the camera and the BlastCam™ Controller onto the BlastCam™ Tripod. Connect the camera to the BlastCam™ Controller and connect the camera to AC or DC power with the cables provided.

## BLASTCAM™ CONTROLLER

Turn on the controller. It runs on an internal rechargeable battery or on AC power. Start the BlastCam™ Software which controls all functions of the camera and displays the camera's field of view. Set the camera's triggering and recording parameters. If desired, set automatic saving of the recorded video to AVI format or to a series of BMP image files after the blast. If preferred, disconnect the controller from the camera before the blast. The controller is not required to record video and can be reconnected after the blast. Use the controller to play back and save all or part of the video, and analyze the video with the ProAnalyst® Software (which can be alternatively installed on the Operator's PC running Windows™).

## BLASTCAM™ TRIPOD

Collapsible, has rugged mounts for quickly connecting the camera and the controller to the tripod.

## CONNECTORS

Power-in, Trigger-in, Sync-in, Strobe-out.

### EXAMPLES OF VIDEO RESOLUTIONS, RECORDING SPEEDS AND RECORDING TIMES

Camera Resolution Setting (H x V pixels)	Maximum Camera Recording Speed Available (fps*)	Recording Time at Maximum Speed	Recording Time at 500 fps Speed	Recording Time at 1000 fps Speed
1280 x 1024	506	3.2 s	3.3 s	—
1280 x 800	647	3.2 s	4.2 s	—
1024 x 768	816	3.4 s	5.5 s	—
1280 x 512	1,008	3.3 s	6.6 s	3.3 s
1024 x 512	1,220	3.4 s	8.2 s	4.1 s
800 x 600	1,258	3.6 s	9.0 s	4.5 s
640 x 480	1,869	3.7 s	14.0 s	7.0 s
512 x 512	2,033	4.0 s	16.4 s	8.2 s
320 x 240	5,672	4.9 s	55.9 s	28.0 s
144 x 144	13,541	7.7 s	3.5 min	1.7 min
144 x 72	24,435	8.5 s	6.9 min	3.5 min
128 x 2	112,183	1.2 min	4.7 hrs	2.3 hrs

### FREE SOFTWARE TRIAL

Contact MREL to apply for your free 21-day trial of ProAnalyst® Software.

\*fps = frames per second.

MREL is committed to product innovation; accordingly product may undergo specification improvements without notice.  
Copyright © 2011 MREL Group of Companies Limited. BlastCam™ High Speed Camera, BlastCam™ High Speed Camera Logo, and MREL Logo are trademarks or registered trademarks of MREL Group of Companies Limited.  
Windows™ is a registered trademark of Microsoft Corporation.  
ProAnalyst® is a registered trademark of Xcitex, Inc. v8.0 -18012011

## BLASTCAM™ HIGH SPEED CAMERA SPECIFICATIONS:

**Models:** BlastCam™ 2G Mono. BlastCam™ 2G Color.

**Settings:** The BlastCam™ Control & Playback Software on the BlastCam™ Controller's LCD color display has an on-screen menu. The menu allows the operator to make all camera settings in the field including: selection of play and live modes; trigger mode; recording rate; resolution; shutter speed; video save mode; play forward; play reverse; play speed; play frame by frame in step mode.

**Resolution:** CMOS sensor 1,280 (H) x 1,024 (V) pixels. 10-bit monochrome or 30-bit RGB color with BAYER-Filter.

**Light Sensitivity:** 3,200 ASA monochrome, 2,000 ASA color.

**Recording Speeds:** 1-506 fps\* at full 1,280 (H) x 1,024 (V) pixels resolution, up to 112,000 fps at reduced resolution.

**Recording Times:** 3.2 seconds at full resolution and 506 fps. Longer recording times are available at reduced resolution and/or reduced recording speeds.

**Trigger:** Externally by trigger switch or trigger signal, or internally by software detection of motion in a selected field of view.

**Lens:** F-Mount 80-200mm f/2.8 Zoom Lens. C-Mount Adapter and Other Lenses are available as optional accessories.

**Camera Power:** 10-30 VDC external power supply. 110/220 AC adapter and battery connection cables are provided.

**Controller Power:** Internal rechargeable battery for up to 12 hours operation. 110/220 AC charger/adapter is provided.

**System Components Provided:** BlastCam™ High Speed Camera with 80-200mm f/2.8 Zoom Lens, BlastCam™ Controller, BlastCam™ Control & Playback Software, ProAnalyst® TrackOne Edition Software which allows auto-tracking of one feature and/or manually tracking of up to 32 features and exporting to Microsoft Excel™ for further analysis and graphing, BlastCam™ Tripod, BlastCam™ Ethernet Cable, Power Adapters and cables for DC and AC operation, BlastCam™ Operations Manual, BlastCam™ Carry Case.

**Environmental:** Fully operational at +5 to 35 °C (+41 to +95 °F).

**Warranty:** MREL's 1 year Comprehensive Parts and Labour Warranty.

**Technical Support:** MREL's Unlimited Technical Support Program by secure customer portal, email, and telephone.

### ACCESSORIES:

**BLASTCAM™ C-MOUNT ADAPTER:** Allows the use of C-Mount lenses with the BlastCam™ High Speed Camera.

**OTHER LENSES:** A wide variety of F-Mount and C-Mount lenses to meet specific requirements.

**PWT™ PORTABLE WIRELESS TRIGGER:** To trigger the camera wirelessly from up to 500 m (1,640 ft.) distance.

**PROANALYST® PROFESSIONAL EDITION:** Includes all the analysis features and engines for auto-tracking objects in 1-D and 2-D, data reduction and report generation.

**PROANALYST® 3-D PROFESSIONAL EDITION:** Includes all the features of the Professional Edition, plus the 3-D Manager. Analyze events captured by multiple cameras to reconstruct and display motion in 3-D with accuracy.

**PROANALYST® IMAGE STABILIZATION:** A recommended toolkit for the ProAnalyst® Professional Editions which removes unwanted jitter and vibration from a video.