TriggerView

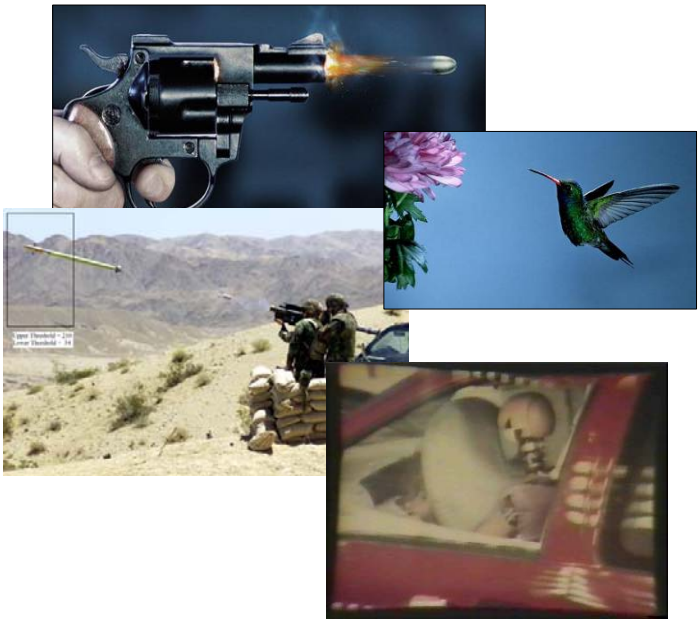
Image-based High-Speed Triggering Device

Never miss a critical event again

TriggerView is a highly-reliable, low-latency triggering device for third-party cameras, recording devices, metrology equipment, or PLCs. As such, it replaces infrared, motion, proximity, or other sensors. The unique qualities of high-speed imagery enable "smart" triggering decisions. This unique technology, called *Image-Cued Triggering*, lets you feel confident that no critical event will be missed – even if it's not the event you are expecting. Timing is everything in many of today's high-speed video applications, such as ballistics, bio-analysis, ordnance characterization, wildlife photography, and automotive crash testing. Don't miss that once-in-a-lifetime event with TriggerView.

Applications

- **Ballistics**
- **Crash Testing**
- **Sports Analysis**
- **Weapons Testing**
- **Bio-Analysis**



Features

- **640 x 480 image size**
- **1,000 fps at full resolution**
- **500,000 fps max rate**
- **Auto-exposure**
- **Digital video playback for trigger verification**
- **Easy-to-use software**

Implementation

Just tell TriggerView where to look and event recognition is automatic. Two user-defined windows can be identified within the field-of-view (FOV) that tell TriggerView where to look for motion or intensity fluctuations. Each image is then sampled and processed at frame-rates up to 500-kHz for motion or intensity changes within these two windows. Once the event is recognized, TriggerView generates a 5V TTL trigger before the next frame arrives. Additionally, a delay can be set between the two windows to eliminate false positives in the image-cued trigger. For example, by setting an

Southern Vision Systems, Inc.

8215 Madison Blvd, Suite 150

Madison, AL 35758

Phone: (256) 461-7143 ◆ Fax: (256) 461-7145

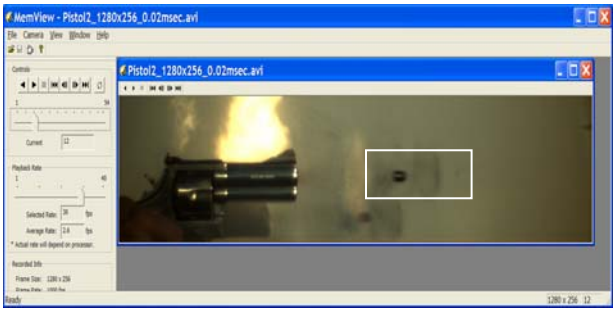
www.southernvisionsystems.com

email: info@southernvisionsystems.com

appropriate delay between window #1 and window #2, TriggerView can discriminate between an object entering the FOV from the right versus the left.

Auto-exposure

TriggerView's auto-exposure mode dynamically adjusts for changing light conditions. During set-up, a target frame is recorded under the appropriate lighting conditions and auto-exposure enabled. If clouds move in or the sun changes position in the sky while waiting for an event, TriggerView automatically changes the exposure over 2000x to keep the image histogram at that of the target frame. By adjusting to slowly varying light levels with auto-exposure, the image-cued trigger reduces false positives by detecting rapidly varying intensity fluctuations as the event-of-interest.



Disconnect Mode

A host computer is required to set-up the TriggerView image-cued trigger function. However, in situations where the host computer cannot easily be left connected, enabling TriggerView's disconnect mode allows the computer to be disconnected and powered off for safe removal. TriggerView will continue to process imagery at high frame-rates looking for the event-of-interest and outputting analog video for stand-alone monitoring purposes. When the event-of-interest is identified, TriggerView generates a trigger and stores the relevant imagery. Once the event is over, the user reconnects to the device and downloads the trigger information.

SPECIFICATIONS

Imager:	640x480 monochrome CMOS
Frame Rate:	1-kHz at 640x480
	500-kHz at 1280x1
Lens:	1" C-mount
Shutter speed:	1-µsec to 300-msec
Auto-exposure:	standard
Image-cued Trigger:	2 user-defined windows with adjustable delay
Trigger Out:	5V TTL (generated by on-board image processing)
Trigger Out Latency:	1/frame-rate
Analog Video:	RS-170 w/ text overlay
Frame Storage:	Maximum of 12 frames centered on trigger event
Pre-/Post-frames:	50% pre- and 50% post-trigger
Power:	+5V @ 1A max
Weight:	2-lbs
Volume:	3"x3.5"x4"