Kron Technologies Chronos 1.4 High-Speed Camera

Chronos 1.4 Highlights:

High-Definition 1280x1024 (1.3MP)

21,600fps Max Frame Rate

2μs Exposures (1/500,000sec)

Stand-Alone Operation

High Light Sensitivity
   Color   320-5120 ISO
   Mono   740-11840 ISO

Chronos 1.4 Features:

- **1280x1024 CMOS sensor with 6.6μm pixel size, 12 bit image depth, dynamic range of 56.7dB, and adjustable resolution.**

- **Up to 1,057 frames per second at full 1280x1024 resolution and up to 21,649 frames per second at 640x96 resolution.**

- **CS Lens mount with included C-mount adapter. Backfocus is field adjustable. Many C-mount adapters exist for manual control of popular lens types such as Nikon, Canon, and more.**

- **Exposures as fast as 2 microseconds with global electronic shutter.**

- **8GB or 16GB high-speed internal RAM. Captured video non-recoverable after powering down.**

- **Black reference calibration for optimal image quality.**

- **On-camera push-button triggering or external trigger input options. Trigger level is adjustable (Zero to 6.6V) as well as trigger delay for customized trigger events. Debounce and pull-up settings are available.**

- **Commonly available EN-EL4a battery provides 1.75 hours of run time. Charge time (0-80%) is 2 hours with in-camera charger.**

Chronos 1.4 Common Resolutions:

Resolution	Frame Rate	8GB*	16GB*
1280x1024	1,057fps	4.13s	8.26s
1280x720	1,502fps	4.13s	8.27s
1024x768	1,771fps	4.11s	8.22s
800x600	2,873fps	4.15s	8.30s
800x480	3,587fps	4.15s	8.31s
640x480	4,436fps	4.20s	8.40s
640x360	5,903fps	4.21s	8.42s
640x120	17,424fps	4.28s	8.56s
640x96	21,649fps	4.30s	8.61s

*Maximum record time in seconds for 8GB and 16GB models.

Chronos 1.4 Features (Continued):

- **Touchscreen controls with 5 inch, 800x480 capacitive touchscreen display.**

- **Focus peaking highlights sharp edges to aid focusing.**

- **Focus aid zooms-in to allow easier focusing.**

- **Zebra lines, rolling diagonal lines, indicate overexposed areas of the image.**

- **SD card slot, USB port and USB mini-B host ports.**

- **eSATA 3G**

- **Saves in compressed H.264 (MP4) video file format at bitrates up to 60Mbps.**

- **Active cooling with variable seed fan.**

- **Anodized aluminum body in either black or silver finish.**

- **User removable 650nm IR filter.**

- **Power Input 17-22V, 40W 5.5/2.5mm barrel jack (tip +). Power supply included.**

- **Weight: 2.34 lbs without lens.**

- **Dimensions: 6.11 x 3.78 x 2.65 inches without lens.**

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Schlieren image captured with Vision Research Phantom v611 camera.
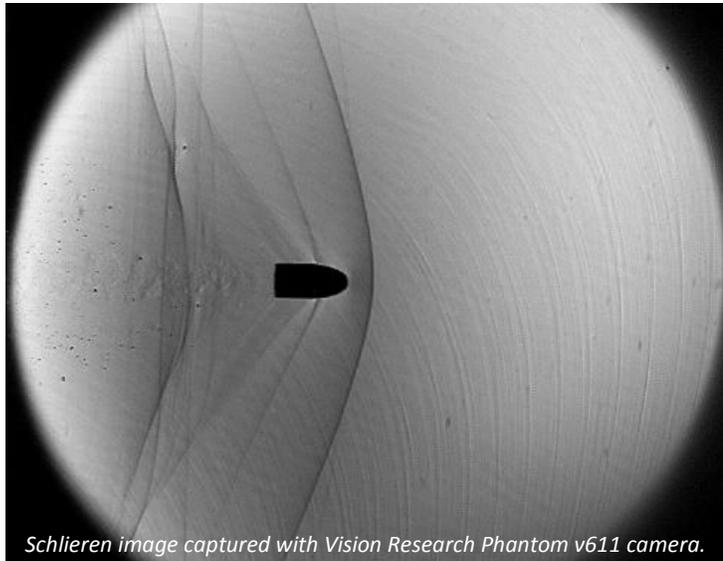
Aimed Research Capability Highlights:

High-Speed Camera Rentals At Industry-Low Prices

Multi-Camera Synchronization

High-Speed Schlieren Imaging Of Invisible Gradients

Sensor Data Acquisition Correlated To Frame Exposures

Aimed Research Specific Capabilities:

- **VariMag system available for adapting to various microscopes.**
- **Multiple Phantom v611 cameras available for synchronization.**
- **Beamsplitter optical setup available with limited applications for 180˚ out-of-phase frame capture. This would allow the combined images to be reviewed or stacked into a new image sequence resulting in double the frame rate for a given resolution compared to a single camera.**
- **High-speed schlieren setups available with 6in, 8in, or 12in optics for viewing invisible phenomena like shock waves and other pressure, heat, or chemical gradients, and various turbulent flows. Aimed Research's setups may provide increased depth of field at f/11 to f/16 while operating at sub-microsecond exposures (as fast as 285 nanoseconds).**
- **USB-based data acquisition systems available for sensor data capture correlated with instant of frame exposure.**

This Chronos 1.4 data sheet is for reference only. For detail-critical applications, please discuss the specification details directly with the manufacturer, Kron Technologies.