

V4.1 Specifications



IMAGER

Standard features include:
High-g configuration
High speed image capture
Continuous recording
Pre-trigger recording
Post-trigger recording
On chip shutter
Auto exposure
Strobe sync
Integral image memory*
Continuous video output
IRIG-B timing capture
FireWire™ digital interface
for local or remote system control
of multiple cameras

Sensor:

512 x 512 pixel, SR-CMOS color
or monochrome array

Pictures per Second (PPS): Full sensor:
to 1000 PPS

Allocated formats: to 32,000 PPS

Exposure Time:

Variable, independent of sample rate
(PPS), to 10 microsecond

Post Trigger:

Continuously variable

Imager Controls:

Via FireWire™ digital interface, or
optional RS232 serial interface

Viewfinder and Focusing:

Via continuous video output, or laptop
S-VGA monitor

Lens Mounts:

1" C-Mount standard.
Many other lens mounts available,
including Nikon and Photo-Sonics
Hi-G lens mounts

INPUTS (via integrated quick-release
connector*):

Start Trigger: TTL pulse, or switch
closure.

Sync Image: TTL pulse

IRIG-B Timing: IRIG-B code

Power: 28VDC/1 Amp.

OUTPUTS: (via integrated quick-
release connector unless other wise
noted*):

Strobe Sync: TTL pulse.

Network: Via FireWire™ digital
interface (IEEE 1394)

Display: Continuous video output
RS170/CCIR

MEMORY

Standard: 256 Megabytes integral
image memory. Records 1,024 images
for 1 second of continuous recording
at 1000 PPS, full format. Longer
recording times for lower sample rates
and allocated formats. (example: 10
seconds at 100 PPS)

Optional: 1 gigabyte integral image
memory. Records 4048 images for 4.0
seconds continuous recording at 1000
PPS, full format. Longer recording times
for lower sample rates and allocated
formats. (example: 40 seconds at 100
PPS)

Optional: Non-Volatile Flash Memory,
up to 1 gigabyte (recommended for all
high-g applications)

ENVIRONMENTAL

100g up to 10 millisecond
50g up to 100 millisecond
Three axis

SOFTWARE

*Phantom® operates in a Windows™
environment with familiar commands
found in familiar places. Standard
functions include:*

Acquisition: Image capture, IRIG-B
timing capture & standard time
annotation. Field of view & focus.
Sample rate & aspect ratio selection.
Shutter speed. Histogram. Brightness &
contrast adjust. Trigger modes. Con-
tinuous record. Save & recall setups.

Analytical playback: Immediate
playback of ciné. Variable playback
speeds in forward or reverse, including
freeze frame & endless loop. Random
Go-to-Image. View single images at
random from any cine¹. Tile/cascade
multiple images on one screen. Timing
data displayed with each image. Ciné
editor.

Measurements: Linear or angular
measurements. Displacement. Velocity.
RPMs. 100 data points per image.
English and metric units. Generate
measurement reports. Report files &
images are compatible with spread-
sheet software, and image analysis
software such as TrackEye® or Image
Express®.

Image processing: Smooth, sharpen,
pseudocolor, negative image, and edge
detection. Brightness, contrast &
gamma adjust. 3x3 and 5x5 filter
matrix for custom image processing.
Unprocessed original ciné is saved as a
separate file.

File management: Organize, save,
compress and export cinés, or single
images. File formats are compatible
with most word processing, desktop
publishing, and presentation software.

DIMENSIONS

Size: 4x3x8 inch (HWD)
(10x7.5x20 cm) (HWD)

Weight: 4.5 lbs (2.0kg)

Power: 28VDC/ 1Amp

Mounting: 1/4-20 inch and four 10-32
threaded hole pattern in base and top*

Mounting Axis: Any position

Material & Finish: Painted aluminum
housing.

Country of Origin: The United States of
America

STANDARD ACCESSORIES

Phantom® software. Single user
license*

256 Megabyte integral image memory

FireWire® digital interface. Sync output
pulse. Sync Image input.

110/220VAC-28VDC International
Power Adapter. 12 foot (3.7 m) power
cord

Integrated electronic help documenta-
tion. One year warranty.

QUESTIONS?

For technical assistance, systems
integration, custom options, or
information on imaging techniques,
please call us toll free: 1 .800.RESOLU-
TION (USA & Canada 1.800.737.6588)

For the most up-to-date information,
specifications and options, please visit
our website:

www. visiblesolutions.com

vision
R E S E A R C H

(*Other options available.) Phantom is manufactured in the USA under US patent Number 5625412. Phantom® is a registered trademark of Vision Research Inc. FireWire® and the FireWire Logo are registered trademarks of Apple Computer Inc. Windows™ and the Windows logo are trademarks of MicroSoft Corporation.

Vision Research, Inc. • 190 Parish Drive • Wayne, New Jersey 07470 USA • (973) 696-4500 Fax (973) 696-0560

Rev. 3/1/01