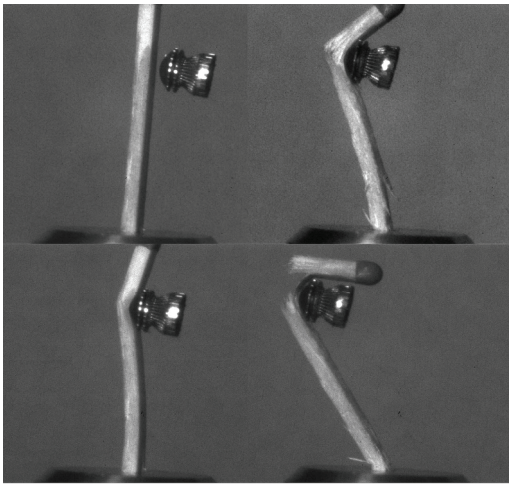
Photo-Sonics, Inc.

We have a way of looking at things!

The Multi-Channel Framing Camera, using ultra high-resolution image intensifiers and no-compromise optical design, takes image quality to the next level in ultra high-speed framing



The Multi-Channel Framing Camera offers the ultimate in ultra-high-speed imaging performance to scientists and engineers across all disciplines. The all-new custom optical design offers 4, 6, 8 or 16 separate optical channels without compromising on resolution, shading, or parallax. Individual ultra-high resolution intensified CCD sensors controlled by state-of-the-art electronics provide almost infinite control over gain and exposure to allow researchers total freedom to capture even the most difficult phenomena. The 8-channel version of this innovative imaging system also provides a secondary optical interface, which allows optical instruments (e.g. high-speed video, time resolved spectrometer, or streak camera) to share the camera's optical input making this the most versatile imaging system on the market. Full remote control using an Ethernet is offered as standard, while integral controls and video monitor allow easy local setup and focusing. Extensive triggering facilities, highly accurate timing control, and wide range of output signals, coupled with a comprehensive software package that includes full measurement and image enhancement features makes capturing quality images a simple process.

Features

- Up to 16 discrete intensified optical channels
- Images are free from lag or ghosting
- Hybrid beam splitter to overcome parallax and improve resolution
- Innovative supplementary optical port for additional imaging
- Instrumentation
- Customizable spectral response
- Ultra high resolution intensifiers
- 1360(H) x 1024(V) 12 bit images
- Computer controlled via standard ethernet link

• *Ballistics*	• *Combustion Research*	• *Failure Dynamics*
• *Medical Research and testing*	• *Spray and Particle Analysis*	• *Automotive testing*
• *Detonics*	• *Impact Studies*	
• *Nanotechnology and micromachines*		
• *Elasticity, Crack Propagation and Shock resistance*		

Photo-Sonics, Inc.
LEADERS IN HIGH-SPEED PHOTOGRAPHIC MOTION ANALYSIS SYSTEMS
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www.photosonics.com Request Information: mail@photosonics.com

Specifications

OPTICAL

Number of channels	4,6,8 or 16
	Single input beam splitting optics
Optical Input	Up to 16 channels
	Individual filters can be inserted in filter holders on each channel
Lenses	Nikon F-mount
System Aperture	*f*2.8
Shutter	Electro-mechanical
Distortion	Nominally zero
Channel registration	Within one pixel with software correction
Intensity variation	Better than 5% across the image
Auxiliary Optical Channel Interface	Nikon F-mount bayonet

INTENSIFIER / CCD

Image Sensor	ICX285AL
Active CCD Pixel	1360 (H) x 1024 (V)
Pixel Size	6.45µm (H) x 6.45µm(V)
Dynamic Range	12 bits
	18mm High resolution MCP
	Input window Fused Silica
Intensifier	Output Window Fiber Optic
	Photocathode S25, others on request
	Phosphor screen P43
Gain	variable up to 10,000
Dynamic resolution	>50 lp/mm

TIMING PARAMETERS

System Clock	200MHz,quartz crystal controlled.
Inherent Delay	<50ns
Exposure Mode (each image)	Single exposure or multiple exposures (Max. 8) per channel
Exposure Time	5ns - 10ms in 5ns steps independently variable
Interframe Time	0ns - 20ms in 5ns steps independently variable
Delay to 1st exposure	50ns - 10ms in 5ns steps independently variable
Flash outputs	5ns - 1ms in 5ns steps independently variable
Framing rates	100-200,000,000 fps
Separation Time *(Multiple exposures on same channel)*	30ns - 20ms in 5ns steps independently variable

ENVIRONMENTAL

Storage temperature	-10°C to +50°C
Operating temperature	-5°C to +40°C
Humidity	10 - 90% RH non condensing
Vibration shock	10 - 40Hz Max. 10g in any direction
EMC	Meets all EC harmonized standards

INPUT / OUTPUT SIGNALS

Trigger 1	Electrical signal (BNC connector)
	Threshold variable from 2-50V
	Positive or Negative polarity, Make/Break
	50Ω or 1KΩ termination
Re-Trigger	Electrical signal (BNC connector)
	Threshold variable from 2-50V
	Positive or Negative polarity, Make/Break
	50Ω or 1KΩ termination
Timing Monitor Pulses	Pulse width(min. 5ns) and position user programmable
	TTL into 50Ω
Flash Trigger Outputs	Pulse width(min. 5ns) and position user programmable
	TTL into 50Ω
Focus Monitor	Integral 8.4" TFT display monitor with keypad control
Camera Interface	Data and command transfer via 100Mbps ethernet
	Cable length 10m (standard), other lengths available
	100FX fiber optic ethernet link (up to 2Km) - optional
Software	Bespoke software compatible with windows 2000 and XP for camera control, image data archiving in various file format.

Specifications subject to change without notice.