

MotionPro X3 and X3PLUS



Redlake's MotionPro® X3 high-speed motion camera combines excellent resolution to frame rate performance, along with the advanced features you require for accurate high-speed motion analysis on your PC or Mac laptop or desktop computer. The enhanced sensitivity of the MotionPro® X3 combined with 1000 fps at 1280 x 1024 is perfect for research and development laboratory environments. The NEW PLUS option (available on monochrome cameras only) uses SmartCapture technology to effectively double the frame rate to 2000 fps at full resolution while preserving the total length of record time.

The X3 and X3PLUS cameras feature uses the latest Gigabit ethernet along with USB2.0 for easy interface. They also feature live video for continuous monitoring.

With the MotionPro®, camera integration could not be simpler. Just install the software, connect one or more X series cameras to USB 2.0 or ethernet ports (or both), and you are ready to capture high-speed digital imagery. Control the camera with the feature-rich MotionPro® X software or use the LabVIEW™ or MATLAB® plug-in to integrate it into a larger experiment setup. To create your own control software, an SDK is included.

The extensive image processing algorithms include binning (2x2, 3x3, and 4x4), filtering, advanced color control, and programmable LUT enable you to maximize the image quality under various lighting conditions.

Flexible recording options allow the user to capture pre-selected number of frames before and/or after receiving a trigger. Double-exposure mode, with a 100 nanoseconds inter-frame time, is perfect for motion analysis on objects moving at very high speeds. Memory may be divided into multiple sessions with or without automatic download to assure no event is missed.

Applications: Microscopy, Ballistics and Munitions esting, Biomechanical research, Fluid dynamics research (PIV), Off-board vehicle impact testing

Features	Benefits
Up to 1280 x 1024 resolution color or mono	High resolution allows fine detail to be captured even at high frame rates
Fast frame rates from 1000 fps at full resolution to over 64,000 fps at reduced resolution	Perfect for capturing movies of fast dynamics of a process or event
NEW PLUS option to effectively double the frame rate and memory size (Mono only)	Allows twice the time resolution while preserving the total length of record time
Gigabit Ethernet and USB2.0	Operate camera from remote locations via Gigabit Ethernet while using USB 2.0 for local monitoring
100 nanosecond inter-frame time in double exposure mode	perform particle imaging velocimetry (PIV) measurements to study fast moving fluids
iPod and PDA compatibility	Store movies on to iPod (video) for quick review. Control the camera operation remotely and wirelessly via PDA interface

Sample Frame Rates (@ Max. Horizontal resolution of 1280)

Vertical Resolution	X3 (fps)	X3PLUS frame rate* (fps)
1024	1000	2000
768	>1300	>2600
512	2000	4000
256	4000	8000
128	8000	16,000
64	16,000	32,000
32	32,000	64,000
16	64,000	128,000

Note: Horizontal resolution does not affect frame rate performance. *PLUS option is available for monochrome versions only. Effective frame rate is shown for X3PLUS.

Accessories

X Timing Hub	8 independently adjustable CMOS level outputs, 2 inputs; USB interface
X Data Acquisition System	16 analog inputs and 4 analog outputs, USB interface
USB Repeater	For use up to 15m

Spectral Range



