

MotionPro X4™ INTENSIFIED

- 512x512 Resolution at 10,000 frames/sec
- High-Speed digital USB-2 camera system (Monochrome or Color)
- 100 nanosecond inter-frame time
- Plug and play with USB-2 interface
- 4GB On-Board Memory



IDT's digital cameras are designed for use in scientific and industrial applications. We provide a full series of camera products for demanding applications requiring either very high resolution or very high framing rate. The cameras, featuring CMOS and CCD image sensors, use standard USB 2.0, IEEE-1394, and Gigabit network interfaces for easy connectivity and do not require a framegrabber. These interfaces are fully supported in laptops and are multi-platform compatible for maximum portability.



<http://www.idtvision.com>



National Instruments



The MathWorks

FEATURES LIST

CMOS image sensor

The X4 delivers the ultimate combination of frame rate and resolution with 512x512 array and 10,000 frames per second.

Short-interframe time

Double-exposure mode utilizes a 100 nanosecond interframe time making this the perfect Particle Image Velocimetry (PIV) camera.

USB2 communication interface

Standard communication between the computer and camera is done via USB2. Optional Gigabit Ethernet is available for increased download speeds and use over networks.

Configurable ROI

By reducing the number of horizontal lines in the Region of Interest, the X4 camera is capable of increasing the frame rate to 30,000 fps in gated mode of operation.

Software Compatibility

MotionPro X Studio includes National Instruments Labview VIs, Matlab plugins, TWAIN, and a C++ SDK.

Live Preview

Full time, live preview on a monitor lets you see what the camera sees.

Flexible Triggering

Frame-Sync, Trigger-In, and Sync-In connectors onboard camera.

X4 SENSOR SPECIFICATIONS:

Image Intensifier Specifications

**specifications are approximate and subject to change.*

Photocathode Sensitivity

| | |
|---------------------------------|---------------------------------------|
| Luminous Sensitivity | 795 $\mu\text{A}/\text{lm}$ (minimum) |
| Quantum Efficiency | 35-40% |
| Wavelength for Peak Sensitivity | 500-550 nm |
| Spectral response | 450-900 nm |

Photocathode

| | |
|-----------------------|------------|
| Window material | 7052 Glass |
| Photocathode material | GaAs |
| Phosphor material | P-46 |
| Effective output size | 18 mm |

| | |
|---------------------|---|
| Stage of MCP | Single |
| Luminous Gain | 20,000 FL/FC |
| EBI | 2.2×10^{-11} lm/cm^2 |
| Limiting resolution | 50 line pairs/mm |
| Image magnification | 1 |

Gate Signal Characteristics

| | |
|--|--|
| Gate repetition rate | 10 KHz single pulse mode, 20 KHz dual pulse mode |
| Level | Positive TTL |
| Impedance | 50 Ω |
| Minimum separation between consecutive gate events | 2 μsecond |
| Minimum Gate duration | 50 nanosecond |
| Delay ON time | 100 nanosecond |
| ON rise time | 40 nanosecond |
| Delay OFF time | 100 nanosecond |
| OFF fall time | 40 nanosecond |



WINDOWS XP



FULLY COMPATIBLE