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Pixera introduces the 120es – 1.2 million pixel, enhanced sensitivity digital camera system

First member of new family of digital camera systems specifically designed for use on light microscopes.

New features, including frame averaging, dynamic histogram functions and precision measuring tools, set new price/performance level in digital imaging.

Pixera Corporation, Los Gatos, CA - November 10, 1998
Pixera Corporation announced today the Pixera 120es, a new 1.2 million color digital camera system designed for biomedical & industrial applications, fluorescence, low contrast imaging and low light level imaging. Incorporating new, sophisticated image processing functions for frame averaging, dynamic histogram functions and precise measuring tools, the Pixera 120es delivers image quality previously attainable only with many cooled CCD cameras. Based on 2nd generation versions of Pixera's unique DiRactor™ (Diaphragm Refractor) light refracting optical technology and proprietary 100% software image processing, the new digital camera system includes the 120es Application Suite, a full suite of powerful imaging tools. The 120es is list priced at $4,995, supports Windows 95/98 and Windows NT desktop and notebook systems and is available now through Pixera Alliance Resellers and Distributors worldwide. A MacOS version of the 120es will be available in early 1999.

120es – Enhanced Image Processing, Increased Sensitivity, High Resolution
The Pixera 120es provides all the features and functions of the popular Pixera Professional 1.2 million pixel digital camera system, plus it includes a 2nd generation Enhanced Image Processing Engine. This new engine delivers up to 10x more sensitivity and up to 16x-increased S/N ratio compared to the Pixera Professional using these advanced image processing technologies:

Frame Averaging Captures from 1 to 256 frames, at any image resolution; accumulates the unprocessed/uncompressed pixel data in software and averages the accumulated pixel data by the number of frames captured. This increases the Signal-to-Noise Ratio in low-light images with no loss of definition (up to the camera's rated maximum of 52 dB). This also reduces the noise in low-light, low signal images and increases the sensitivity of the camera.

Histogram Equalization Performs histogram equalization on the 16-bit data (48-bit RGB) of accumulated frames. Only 2 accumulated frames are necessary to achieve greater than 8-bit precision. This function significantly enhances low light and low contrast images through an improved distribution of contrast.

Adjustable Contrast Expansion Performs expansion of the histogram, on the 16-bit data (48 bit RGB) of accumulated frames, centered on each color channel's mean value. This feature significantly increases and enhances the contrast of low light and/or low contrast images while preserving the color balance of the image.

Adjust Histogram Level Clips the highlight (bright) and shadow (dark) points of the histogram and expands the acquired image's contrast. This function significantly increases and enhances the contrast for high tonal separation in images with the limitation that this technique may slightly distort the color balance of the image.

120es Application Suite – Advanced Features for Biomedical and Industrial Markets
The 120es Application Suite offers a full set of powerful image capture and archiving tools. The integrated set of applications delivers professional quality, flexibility and functionality for capturing, analyzing, manipulating and archiving digital images with low noise, accurate colors, sharp edges and excellent detail. The 120es Application Suite contains the following:

Viewfinder Pro is the window into the advanced imaging capabilities of the 120es. Users access a powerful, flexible, yet easy to use interface for adjusting capture resolution, white balance calibration, contrast / brightness, color balance, as well as the new frame averagingand dynamic histogram functions - equalization, contrast expansion, and level adjustment. A Customize property lets users modify the viewfinder user interface and functionality with four tabs; Capture Processing, Sharpen, Capture Destination and Toolbars, to satisfy particular requirements. Pre-sets for brightness, contrast, RGB color balance and gamma levels remain constant during image preview and capture procedures, so "what you see is what you get…". An easy-to-use "Focus Indicator" features a unique color-coded digital display that tells you when you are focused and ready to capture a perfect image on the first try.

TWAIN Viewfinder Pro provides the same set of features and capabilities of Viewfinder Pro to users who want to capture images directly into popular 3rd party image analysis or image editing programs. TWAIN Viewfinder Pro works with any TWAIN Version 1.6, 32-bit driver interface.

Studio Pro provides sophisticated image manipulation and analysis tools required for many scientific and industrial applications. A wide variety of functions and filters for modifying and enhancing images are included. . New Precision Measurement tools include; Line and Perimeter Trace functions calculate distances, Angle measurement, and a Centroid Function displays the area and center of gravity of a specified area. A new Histogram Tool graphically displays the contrast distribution of any image. Studio Pro supports the most popular image formats; BMP, JPG, TIFF, FLASHPIX, and DIB.

Pixera Album provides a rich set of features for archiving, sorting, and searching images directly captured from Viewfinder, processed in Studio Pro or recorded in Pixera Motion. A multi-level hierarchy may be created for storing and retrieving images by category and displayed as thumbnail images. A Windows database file is created which stores a variety of information about each Album or motion sequence as well as specific file locations. A Query function allows images to be retrieved based on keyword combinations or properties.

Pixera Motion allow low to medium resolution motion sequences to be recorded from the camera and stored in AVI format. Audio may be recorded together with the video and time lapse, stop motion and delayed recording (start and end time) settings are also available.

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About Pixera

Pixera Corporation, founded in 1995 is the premier developer of high-resolution digital and innovative analog & digital cameras. Engineered with world's most advanced technologies for camera design and image processing software, our products deliver unequaled image quality, price / performance and reliability. Pixera targets the Professional markets in Security / Surveillance / CCTV, Scientific Imaging and Video Conferencing through a worldwide network of distributors, system integrators, resellers and OEM's. Pixera also offer customized solutions for special needs. The Pixera URL is www.pixera.com