pixera

Penguin 600CLM
5.8 Million Pixel MONOCHROME Digital Camera System
with COOLED CCD

Windows® & Mac® OS

5.8 Million Pixels[1] (0 Defect CCD)
Excellent Sensitivity, 0.002lux
High Signal-to-Noise Ratio 62dB
High Dynamic Range 60dB
Low Dark Current
COOLED CCD
Up to 15fps Viewfinder @ 640x480
Long Integration Exposure Up to 64min
Live Specimen Capture @ 1.5M Pixels

[1] *5.8 million pixels is achieved by patented DiRactor™ technology.*

Penguin 600CLM - Monochrome Digital Camera System with COOLED CCD

The Penguin 600CLM represents a new and unique combination of very high resolution and very high sensitivity in monochrome for low light applications in microscopy. This is achieved by combining Pixera's high-resolution DiRactor® technology, extremely efficient cooling and sophisticated image processing technology.

The "fanless" 4-stage thermoelectric Peltier cooling device reduces dark current noise by being attached to the fixed CCD's back plane. The heat is then transferred away from the CCD's silicon to the external enclosure surface. No parts are moving, inclusive of the CCD, which is important in order to achieve the greatest cooling and image quality results. The cooling device is extremely fast with quite operation and achieves it's target temperature within 2 minutes of switching on the system.

Other features include a high quality 1/2" B/W CCD, from Sony® with square pixels, long integration exposure, high dynamic range, high signal-to-noise ratio and a very easy to learn interface with simple yet powerful controls.

Unlike many other digital camera systems which increase the resolution using interpolation, the Penguin 600CLM allows for a true optical resolution of 5.8 million pixels using Pixera's proprietary DiRactor® light-swing opto-mechanical technology. The DiRactor® technology is extremely fast, reliable over time and doesn't need calibration. When you need the absolute highest image quality and resolution for archiving, publishing or digital zoom-in, the Penguin 600CLM with up to 5.8 million pixels is your best choice.

Options

In addition to the camera system, Pixera offer two practical accessories, hand switch Penguin/Pro-HS (included) and foot switch Penguin/Pro-FS for improved image capture control. See a quick description and pictures below of these two products and/or visit the product pages for each item on Pixera's web site. See also other options such as Penguin/Pro-CS camera switch for use with two cameras.

Penguin/Pro-HS

The 4-function Penguin/Pro-FS Hand Switch allow the user to remotely capture images without moving attention away from the microscope. Connects directly to Penguin PCI card, with 6ft (1.8m) Cable.

Penguin/Pro-FS

The Penguin/Pro-FS Foot Switch allows for hands free image capture while focusing your attention on microscope operation. Connects directly to Penguin PCI card, with 10ft (3m) Cable.

Included
- Camera System
- PCI Interface Card
- 10ft (3m) Cable
- Software
- Manual
- Customer Support
- Free driver downloads

Camera System Features
- Resolutions: 2776x2074, 1392x1040, 640x480
- Image Sensor: 1/2", 0 defect, 1.5M pixel Mono CCD
- Pixel Size: 4.65µmx4.65µm
- COOLED CCD for reduced dark current noise
- Sensitivity: 0.002lux
- S/N Ratio: 62dB
- Dynamic Range: 60dB
- Data Acquisition: 8-bits or 16-bits (65,536 gray levels)
- Image Processing Speed*: 5-20sec
- Viewfinder**: 15 fps @ 640 x 480 pixels
- Long Integration Exposure, up to 64 min***
- Sensitivity: ISO 200/400/800/1600
- Save & Preload Prior Image Capture Settings
- Spot Detection (Variable size and location)

COOLING System
- Type: 4 Stage Thermoelectric Peltier Device
- Cooling Temperature****: -20°C (±4°C) (Without cooling fan)
- Time to reach: 2min (±30sec)

Penguin/Pro Application Suite
Windows®:
- Pixera Viewfinder
- Pixera Studio
- TWAIN Viewfinder
Mac® OS:
- Pixera Studio
- Adobe® Photoshop® Plug-In

Options See separate datasheets for these items.
- Penguin/Pro-HS: Hand Switch (Remote Image Capture)
- Penguin/Pro-FS: Foot Switch (Hands Free Image Capture)
- Penguin/Pro-CS: Camera Switch
- Penguin/Pro-LC: L-Shaped Connector

Image Formats
- BMP, JPEG, TIFF, PICT, Flash Pix

System Requirements
- Windows® 95/98/Me/NT/2000/XP
- Mac® OS 9.0-9.2.x
- Interface: PCI slot for desktop PC
- CPU (Windows®): 300MHz or faster
- CPU (Mac® OS): Blue/White G3 or later
- RAM (Windows®): 128MB or more
- RAM (Mac® OS): 256MB or more
- HDD: 100MB of free space or more
- Monitor: 1024 x 768 pixels or more
- Color: 16 bits. 24bits or more recommended

* Including the processing time to display
** Maximum frame rate is system dependent
*** Maximum exposure time
**** 20°C below compared with a non-cooled condition