

ColorView II



www.soft-imaging.net

A carnival of color!

Soft Imaging System's **ColorView II** is a 3.3 MegaPixel color camera for the light-microscopy field. This color camera uses FireWire™ (IEEE 1394) technology and offers distinguishing features such as extremely high resolution, Peltier cooling, high frame rate, partial read-out and a black-and-white acquisition mode. The **ColorView II** yields images rich in detail and contrast, of the highest quality and at the same time with extraordinarily low noise.

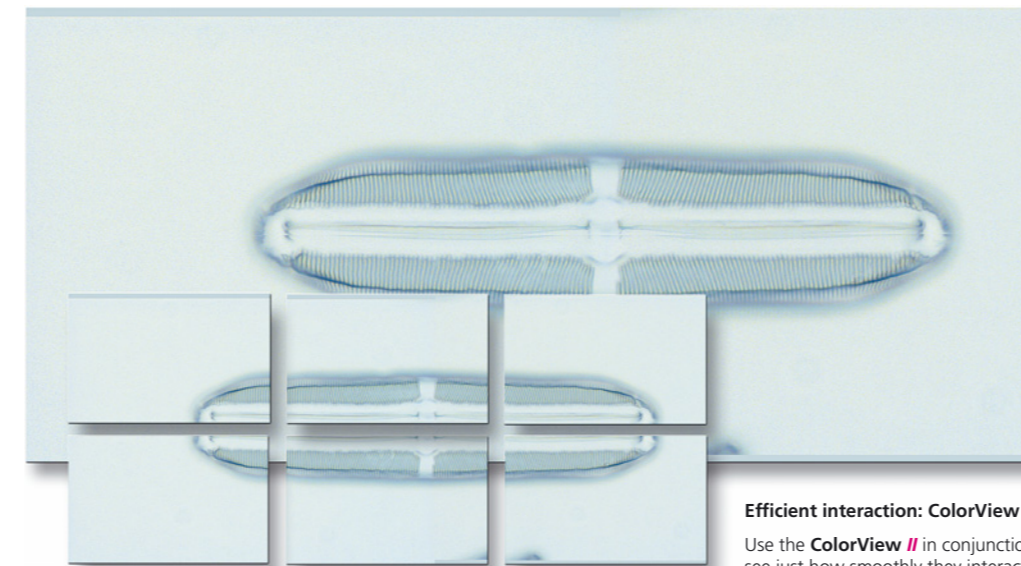
Fully integrated into the **analySIS**® image-analytical software, this camera is equally convincing for applications in both the biomedical and materials science fields.

A growing family!
Digital cameras by Soft Imaging System



Efficient interaction: ColorView II and mia

Use the **ColorView II** in conjunction with the **mia analySIS**® module and see just how smoothly they interact. **mia** is for obtaining single, high-resolution, large-area images via the automatic montage of component images. This is tremendously useful in the following situation. You're working with a big object and you want to capture all of it at high resolution within one single image. However, the microscope is only capable of showing a portion of it at the resolution desired. No problem. All you need to do is define image size and resolution. And **analySIS**® and **mia** take care of the rest.



Specifications

- Resolution: 2048 x 1536 pixels
1024 x 768 pixels (BW mode)
- Dynamic range: 12 bits x 3 (RGB)
12 bits (b/w mode)
- Exposure times: 100 µs to 160 sec.
- Frame rates*: up to 25 frames/sec. in the search mode,
up to 14 frames/sec. in focus mode,
5 frames/sec. in high-resolution mode
- Cooling: Peltier cooling, chip temperature: 10° C @ 25° C
ambient temperature
- Temperature control: CCD chip & housing
- Temperature stability: Yes, ± 0.5° C
- Color binning: 2x2, 3x3
- Supports partial read out
- Supports focus control
- PC interface: FireWire™ (IEEE 1394)
- Pixel clock rate: 20 MHz
- Noise reduction: Correlated Double Sampling
- Active element: 3.45 x 3.45 µm
- Active area: 7.1 x 5.3 mm (1/1.8")
- Dimensions: 100 x 85 x 50 mm
- Weight: 570 g
- Camera mount: Standard C-Mount
- Firmware: Flash EEPROM
- Software control of all camera functions
- Supports multi-threading on multi-CPU PC's

Included with certain **analySIS**® expansion levels and cameras:

- real-time autogain
- white balance
- real-time histogram

*Camera test conducted on a typical Dual CPU PC configuration with 2x binning at 12 bit resolution and real-time automatic contrast control. The camera resolution setting and the speed of the PC used will directly affect the frame rate.

Europe
Soft Imaging System GmbH
Johann-Krane-Weg 39
48149 Münster
Germany
Phone: +49 (251) 798000
Fax: +49 (251) 7980099

North America
Soft Imaging System Corp.
12596 W. Bayaud Ave., Suite 300
Lakewood, CO 80228, USA
Phone: +1 (303) 234-9270
and (888) FIND SIS
Fax: +1 (303) 234-9271

Asia / Pacific
Soft Imaging System Sdn Bhd
Jalan Usahawan
510E, 2nd Floor,
2320 Century Square
63000 Cyberjaya, Malaysia
Phone: +60 (3) 8318-1400
Fax: +60 (3) 8318-1411

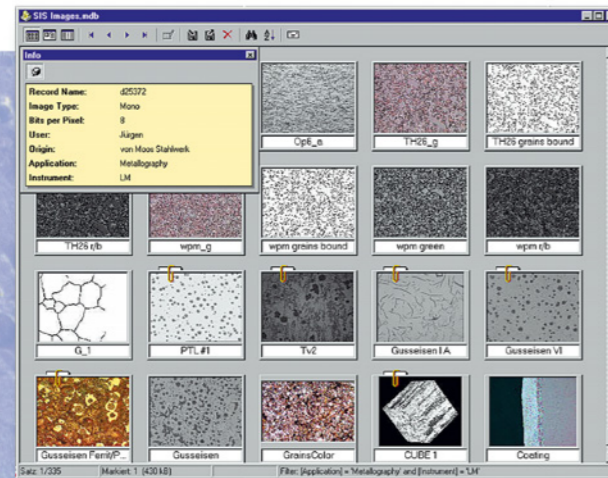
Online email:
info@soft-imaging.de

Website:
www.soft-imaging.net



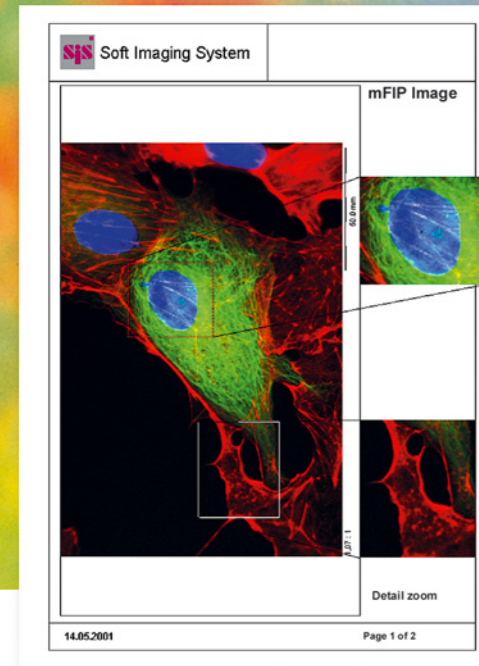
Archiving

A high-performance, networkable, MS-Access-compatible image database is integrated into **analySIS**®. All data relevant to image acquisition and documentation is saved along with the images themselves. Texts, sheets, diagrams or additional images can be saved along with images. The entire database structure is user definable (without the user having to be an expert in computer programming). **analySIS**® has an extensive range of text, graphic and editing functions for labeling your images.



Automatic report generation

This means quick and efficient generation of single- or multi-page reports of your results – using the images you've acquired. All you do is select the images you need from your database or from the image manager and drag and drop them onto your report template. Then your report is completed. Along with the image itself, all information contained in database fields is automatically inserted into the corresponding fields of the template. Reports are generated based on templates that you create yourself according to your own personal preferences and/or according to company guidelines. The report generator provides you with a broad range of tools for designing your template(s). All documents supported by the docu expansion version of **analySIS**® can be inserted into the templates – ie, sheets, diagrams, graphs and images. In addition, automatic image scaling, standard magnifications and exporting reports via RTF format are all supported. And then the completed report can be conveniently e-mailed directly within **analySIS**®.



Compact design

The **ColorView II**'s elegantly designed housing is compact and can be mounted onto any light microscope with a C-mount. No additional interfaces or adaptors are necessary.

ColorView II's integration into **analySIS**® provides numerous advantages.

Real-time functions

ColorView II's own impressive velocity along with the speed of today's CPU's mean that a whole range of real-time functions are available within **analySIS**®. One of these is automatic contrast enhancement. Others include automatic white and black balance, focus control and histogram display.

Image analysis

An extensive range of text, graphic and editing functions is available for labeling your images. For more extensive

examination of images there are specialized filters and professional particle analysis. This ensures that it is easy for you to obtain your results fast and flexibly – and those results are reproducible.

The dark room is history

Get printouts of photographic quality immediately following image acquisition. The need for a dark room or all those film-developing chemicals has gone the way of the horse-drawn carriage.

As opposed to using conventional film, you obtain printouts of your acquisitions within minutes – and of photographic quality.

ColorView II und analySIS®

Tools of tomorrow for meeting today's challenges!

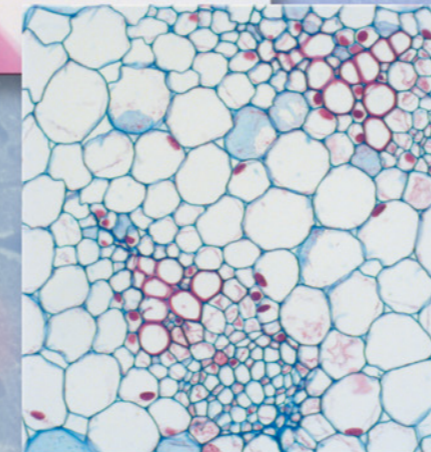
Digital Solutions for Imaging and Microscopy
Soft Imaging System 

ColorView II

3.3 MegaPixel CCD camera

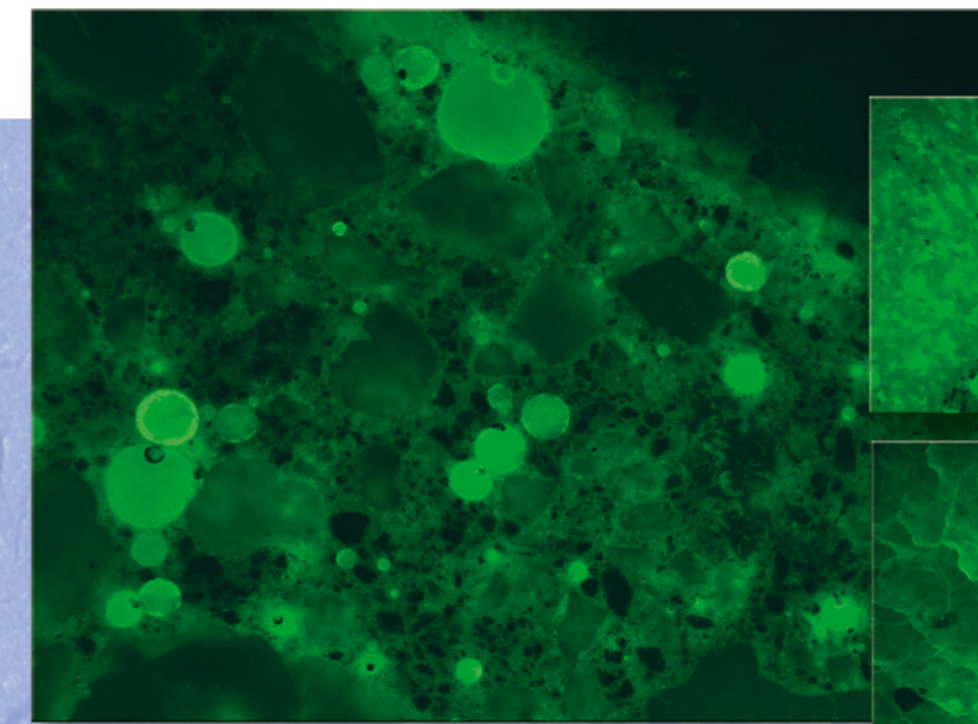
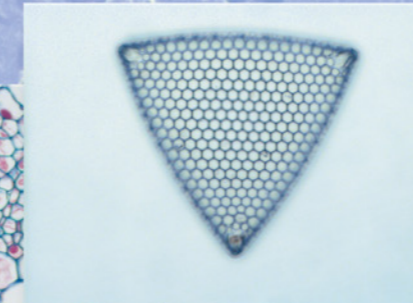


- **Object shown:** eye of guinea pig (cross section)
- **Segment:** iris with cornea and lens in frontal part of eye
- **Staining:** hematoxyline-eosin (HE)
- **Source:** Institute of Anatomy, University of Essen. With the kind permission of Prof. Hans-Werner Denker
- **Resolution:** 2048 x 1536 pixels x 12 bits

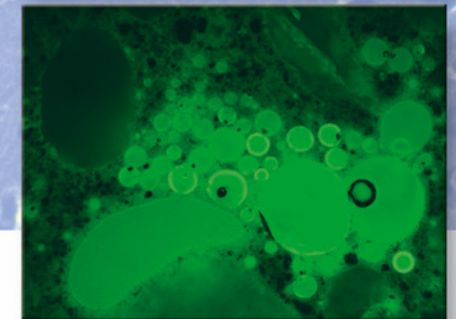
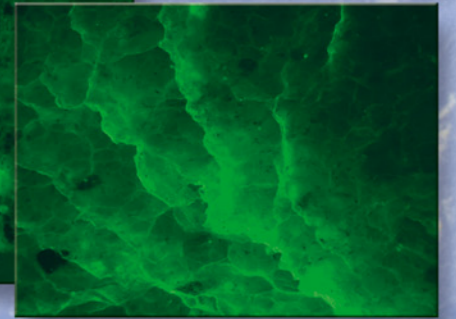
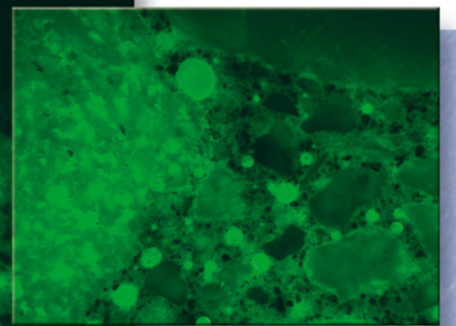


- **Object shown:** stem axis of tulipa gesneriana (garden tulip), vascular bundle in parenchymatous pith (of stem)
- **Staining:** astra blue-safranin – non-lignified cell walls are blue; lignified cell walls are red
- **Source:** E. Saake, Bochum, Germany
- **Resolution:** 2048 x 1536 pixels x 12 bits

- **Object shown:** shell of the triceratium favus diatom
- **Source:** J. Lieder, Laboratorium für Mikroskopische Präparate (Eng: Laboratory for Microscopic Preparations), Verlag für Diapositive und Transparente (Eng: Slides and Transparencies Publishing House), Ludwigsburg, Germany
- **Resolution:** 2048 x 1536 pixels x 24 bits



- **Sample:** Fluorescence acquisition of concrete
- **Resolution:** 2048 x 1536 x 12 bits



Digital solutions - Developed to be exceptional!

Soft Imaging System's digital cameras meet the steadily rising expectations being placed on digital acquisition. The 12-bit, Peltier-cooled **ColorView II** – equipped with FireWire™ technology (IEEE 1394) – is the newest product of this series and is for use in the field of light microscopy.

The **ColorView II** makes it possible to acquire high-resolution color and black-and-white images, rich in detail and contrast with astoundingly low noise. And the truly astonishing thing is how easy this high-performance camera is to use – just as easy as any regular video camera.

All camera functions are fully operable via the **analysIS®** image-analytical software. No matter what the actual acquisition conditions, real-time functions ensure that the entire dynamic range is exploited.

This ensures optimally balanced contrast and superior image quality.

The **ColorView II**'s full integration into the **analysIS®** software provides all capabilities and advantages of Soft Imaging System's innovative solutions to all challenges of image processing and analysis, ranging from image labeling on to image archiving, report generation and e-mailing and including photo-realistic printouts – all without any need for a darkroom.

■ High resolution

The **ColorView II**'s CCD chip has a 2048 x 1536 pixel resolution. This is more than seven times greater than what a regular video camera can provide. The user sees more and measurements can be carried out with even greater precision.

■ High dynamic range

The **ColorView II**'s 12-bit dynamic range provides images of 4096 gray values (or 4096 gray values per RGB channel). So what does that mean? It means that images can be acquired that have either very bright or very pale areas. Ultimately, this higher depth of data reflects a greater depth of information overall.

■ High frame rate

This camera supports three different frame rates. The special "search mode" with a frame rate of more than 25 images per second at 688 x 512 pixels makes finding suitable areas of a sample directly on the PC screen especially convenient. The "focus mode" provides 15 images per second at 1024 x 768 pixels. And thirdly, at the highest resolution – 2048 x 1536 pixels – you're still getting 5 images per second.

This means your focusing can be done in real time and upon image acquisition, you have images of temptingly persuasive quality.

■ Partial-read out

The **ColorView II** supports partial read-out. This mode is for setting an ROI which is smaller than the whole image. This means you get a fast preview of this area

■ Color binning

In the search and focus mode, the **ColorView II** uses either triple or double true-color binning. This ensures that the user sees the entire image segment in color while searching or focusing. This guarantees that the user is able to view all images in color independent of the resolution.

■ FireWire™ interface (IEEE 1394)

FireWire™ technology guarantees that the **ColorView II** can be easily and conveniently installed on any PC or laptop equipped with a FireWire™ port. No extra frame grabber is necessary. This also means the user has the enviable option of using more than one camera with the same PC.

■ Low noise and cooled

A highly efficient read-out technology (Correlated Double Sampling) in conjunction with Peltier cooling of the chip provides images with an optimal signal-to-noise ratio. Chip temperature is maintained at 10° C via Peltier elements. This makes for very low noise, which in turn means that greater detail is visible.

■ High sensitivity

The highly sensitive CCD elements make it possible to detect even very weak signals. The electronic shutter offers exposure times ranging up to 160 seconds. The **ColorView II** offers exposure time ranging from 100 µs to 160 sec. Details of your sample that had been impossible to see, become readily identifiable. This is just as true for low-intensity applications as well!

■ Black-and-white acquisition mode

Furthermore, the **ColorView II** offers a black-and-white acquisition mode. The resolution of this special mode is restricted to 1024 x 768 pixels. This means you are able to acquire monochrome fluorescence images without having to use a second camera, for example.