Digital Microscope COOLSCOPE II

COOLSCOPE II — Continuing the Revolution in Microscopes

Try our virtual demo at:
www.coolscope.com
The upgraded COOLSCOPE II is an all-in-one digital microscope with an ergonomic controller and a mouse as operating options that offers superior usability.

The COOLSCOPE II digital microscope incorporates a microscope, a digital camera and web server capabilities in a complete all-in-one-box package. Everything, from observation through image capturing up to data communications over the network, is operated by a series of simple mouse clicks. For the experienced operator, an optional ergonomic controller that provides an operational feel similar to that of an actual microscope has been developed, making the COOLSCOPE II more convenient and easier to use. COOLSCOPE II has improved macro image illumination as well as faster display update frame rate. Improved color rendition, especially in the reds, provides more naturally colored microscopic images.

**Simple configuration with just the tower main unit and monitor**

In an all-in-one design, the COOLSCOPE II combines the functions of a digital microscope, a digital camera and a web server into one single integrated unit. Brightfield observation of the glass slide, high-definition image capture and image share via the network are all possible with this unit.

**On-screen observation and operation**

The COOLSCOPE II delivers high-definition SXGA-quality images that are easily viewed on the monitor screen or through a projector. It is thus suitable for multiperson observation, joint discussion and case reviews.

**Network capable**

With a network interface and web server function, the COOLSCOPE II can be operated from a PC in a different location within the network. Special software is not necessary to transfer images and share them.

**Uniform illumination**

A revolutionary "fly-eye" lens array employed in the illumination system provides uniform illumination throughout the image.

**PictBridge printer compatible**

Direct connection to a printer without going through a PC simplifies image printing.

**Display of glass slide label**

The label of a glass slide being observed is clearly viewable in macro image.

**Optional ergo controller enables operation like an actual microscope**

For the experienced operator, an ergonomic controller that provides an operational feel like that of an actual microscope is available. This ergo controller enables images to be moved around smoothly and continuously.

**USB memory stick is usable for data storage**

Images can be easily stored on a CompactFlash card or USB memory stick. Transferring them to another PC via the USB2.0 connection is also easy.
The unique features of the COOLSCOPE II transcend those of a traditional microscope

Macro/micro image display enables a view of both the whole specimen and the observation point

Image of previous observation points is instantly recalled with a click

When you click the memory (•) button during observation, the image of the point you are viewing at that time is stored in memory (retaining its magnification, aperture, and brightness), and a number is imprinted on the macro image. Therefore, previous observation data is easily recalled by clicking the numbered button even if you change the point of observation and other conditions. The microscope data stored on a CompactFlash card or USB memory stick can be recalled anytime, even if you turn off the power or change the specimen.

Point of interest is centered with a click on the mouse

Either in micro or macro image, you can quickly move your point of interest to the center of the screen—just by moving the cursor and clicking on it.

Images can be observed and equipment controlled remotely via a web browser

It is possible to observe the images and operate the COOLSCOPE II from a networked PC via a standard web browser.

Intuitive GUI enables comfortable operation of all controls; from observation, image capturing and even image sharing

Examples of micro image display

The COOLSCOPE II low magnification model allows observation of wider viewfield

The low magnification model (2x, 4x, 20x, 40x) with a wider field of view than the standard model (5x, 10x, 20x, 40x) makes it easy to focus on the point of interest and enables faster observation.

Examples of micro image display
COOLSCOPE II completely transforms the way a microscope is used.

Collection of microscopic images

- Load the specimen into COOLSCOPE II
- Capture an image

Observation of microscopic images and saving them are easily performed with a single unit of the COOLSCOPE II. Saving the images on CompactFlash cards or USB memory stick and transferring them to other networked PCs is also easily done.

Sharing of images in classrooms

- Students load the specimen into COOLSCOPE II
- Connect COOLSCOPE II to the network
- Teacher checks the image on a PC

Sharing of images during lectures or practice lab sessions is easy. The memory function allows for a simple, accurate confirmation of the observation point on the specimen.

Projection and conferencing at scientific congresses and study groups

- Connect the projector
- Lead the specimen into COOLSCOPE II
- Project the images for all to see

The time and trouble of adjusting the microscope and manipulating various settings are dramatically eliminated. Changing the specimen is also fast and easy.

Consultation via the network

- Load the specimen into COOLSCOPE II
- Connect COOLSCOPE II to the network
- Check images on PCs in different locations

The same pathology specimen can be viewed on networked PCs in different locations, enabling consultation within a hospital or beyond it. Control of the image, e.g. changing of the magnification, is possible from remotely networked PCs.
Specifications

Samples observable: 1 slide glass preparation (up to 1.7mm total thickness including slide glass and specimen).

Compatible slide glass: Up to 1.2mm in thickness, 26mm in width, 76mm in length (ISO 8037 compliant).

Compatible cover glass: Up to 0.17mm (No.1) or 0.18mm (No. 1.5) in thickness (ISO 8255 compliant).

Observation method: Transmitted brightfield.

Observe area: Entire area of a slide glass preparation (26 x 76mm).

Image display mode: Macro (full slide glass preparation area) and Micro images (partial enlargement).

Optics: CF corrected infinity optics (CFI60 system).

Illumination: White LED.


CCD: 2/3-in., CCD (total number of pixels: 5.24-mega pixels; effective 5.07-mega pixels).

CCD sensitivity: 2400 lx, f5.6 or greater (equivalent to ISO 260).

A/D conversion: 12bit.

Magnification changeover: On CCD, 5x, 10x, 20x, 40x (standard model, micro image), 2x, 4x, 20x, 40x (low magnification model, micro image).

Electronic zoom: During full-screen display, 1.4x, 2x, 2.8x, 4x, 16x (micro image).

Exposure control: Program AE with AE Lock.

Metering: Average and Peak-hold.

Image correction: White balance (method of setting color balance), y correction (4 steps), shading correction.


Output to external monitors: Analog RGB: SXGA (1280 x 1024, 60 Hz).

Live image display: 1.3M progressive mode (12 frames/sec. max.), 5M interlaced mode (5.9 frames/sec. max.).

Image size: 2560 x 1920 pixels or 1280 x 960 pixels.

Image file format: BMP, JPEG compliant (3 compression rates selectable).

Recording media: CompactFlash card (Type I, Type II), Microdrive, USB memory stick.

Network: Ethernet (10/100Base-TX), HTTP server, TelNet server, FTP server, FTP client.

Interface: USB host port (USB mouse, USB keyboard), USB device port (printer, mass storage class compliant).

External controller: Ergo controller (option).

Power source: AC 100-240V, 50/60 Hz.

Power consumption: 120VA.

Operating environment: Temperature: 0–40 °C, humidity: 85% RH max.

Weight: COOLSCOPE II unit: approx. 18.9kg.

Standard configuration: COOLSCOPE II unit, power cord, CompactFlash card (32MB).

Dimensions: (Unit: mm)

184
383
398

System diagram

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. January 2007.

NIKON CORPORATION
Parale Mitsui Bldg., B, Higahida-cho, Kawasaki-ku, Kawasaki, Kanagawa 210-0005, Japan
phone: +81-44-223-2167  fax: +81-44-223-2182
http://www.nikon-instruments.jp/eng/

NIKON SINGAPORE PTE LTD
SINGAPORE phone: +65-659-3618  fax: +65-659-3668
NIKON MALAYSIA SDN. BHD.
MALAYSIA phone: +60-3-78763887  fax: +60-3-78763887
NIKON INSTRUMENTS KOREA CO., LTD.
KOREA phone: +82-2-218-8410  fax: +82-2-555-4415
NIKON CANADA INC.
CANADA phone: +1-905-625-9910  fax: +1-905-625-0103
NIKON FRANCE S.A.S.
FRANCE phone: +33-1-45-16-45-16  fax: +33-1-45-16-00-33
NIKON GMBH
GERMANY phone: +49-211-9414-00  fax: +49-211-9414-0103
NIKON GMBH
AUSTRIA phone: +43-1-972-6111-00  fax: +43-1-972-6111-40
NIKON BELUX
NIKON UK LTD.
UNITED KINGDOM phone: +44-20-8541-4440  fax: +44-20-8541-4584
NIKON GMBH

Dedicated Website: www.coolscope.com

This brochure is printed on recycled paper made from 40% used material.

En