Nikon

Digital Microscope

COOLSCOPE II

New!

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.

Once the glass slide is loaded, simple mouse clicks do the rest

The microscope starts at just a push of the power switch. Neither equipment setup nor optical adjustment is necessary. Aperture and brightness are automatically adjusted, while stage movement, focusing, and magnification changeover are all digitally motorized, allowing them to be operated entirely with mouse or the optional ergonomic controller.

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.

New features!

Optional ergo controller enables operation like an actual microscope

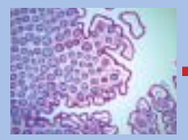
For the experienced operator, an ergonomic controller that provides an operational feel like that of an actual microscope is available. This ergo controller enables images to be moved around smoothly and continuously.

USB memory stick is usable for data storage

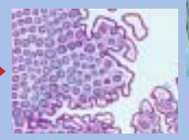
Images can be easily stored on a CompactFlash card or USB memory stick. Transferring them to another PC via the USB2.0 connection is also easy.

Uniform illumination

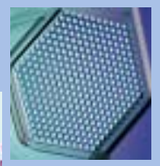
A revolutionary “fly-eye” lens array employed in the illumination system provides uniform illumination throughout the image.



Without fly-eye lens



With fly-eye lens



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.

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

A macro image covering the whole area of the specimen is displayed below the micro image, with the point of observation indicated by crosshairs.

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.

Click the point of interest on the micro image.

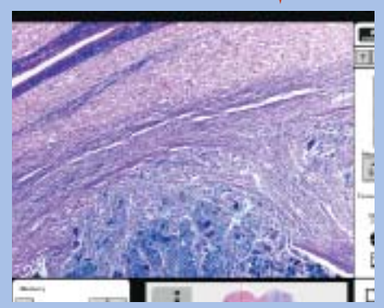
Click the point of interest on the macro image.

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.

Image of the observation point can be stored in memory (retaining its observation conditions) with a number imprinted on the macro image.

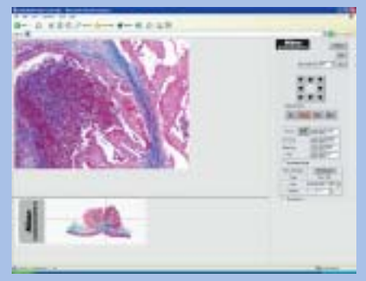
Click the numbered button.



The image of that point is recalled, retaining its original observation conditions.

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.



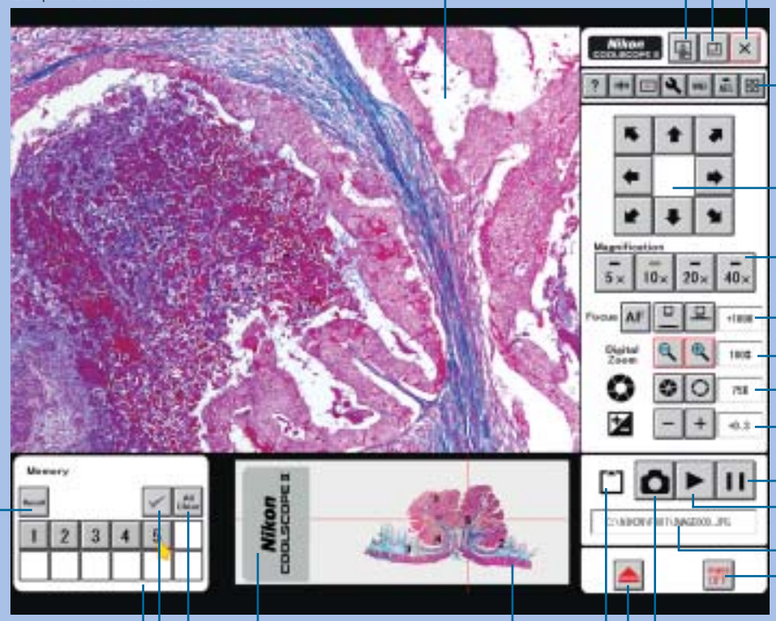
Operations that can be accessed via a web browser

- Moving the specimen's observation point
- Magnification changeover
- Auto focus/focus adjustment
- Electronic zoom
- Aperture adjustment
- Brightness adjustment
- Download of images
- White balance

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

COOLSCOPE II main screen and controller

Example of the multi screen

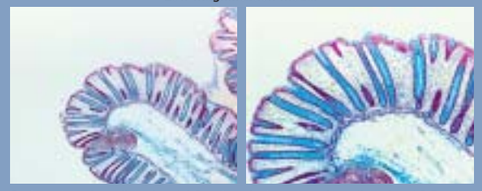


The COOLSCOPE II low magnification model allows observation of wider viewfield

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 on interest and enables faster observation.

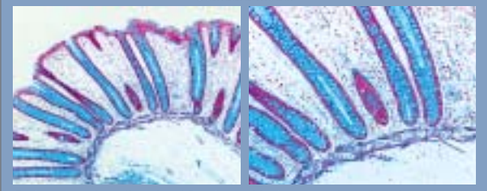
Examples of micro image display

Low magnification model



2x (actual specimen field size of 4.3mm) 4x (actual specimen field size of 2.5mm)

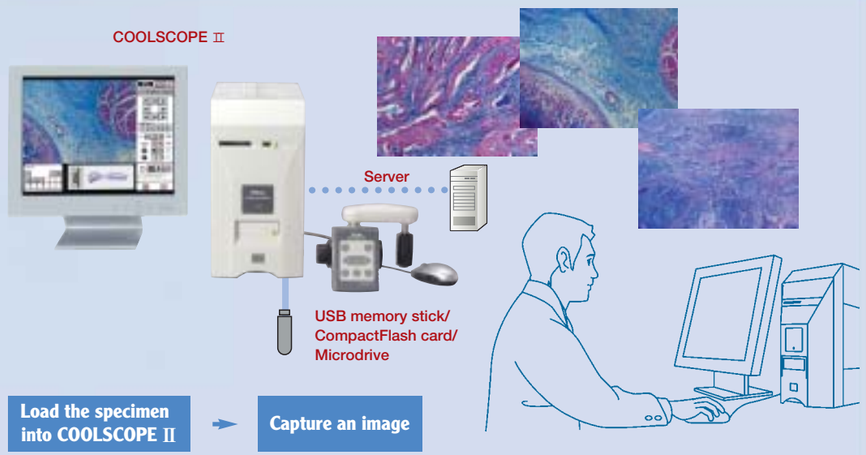
Standard model



5x (actual specimen field size of 2mm) 10x (actual specimen field size of 1mm)

COOLSCOPE II completely transforms the way a microscope is used

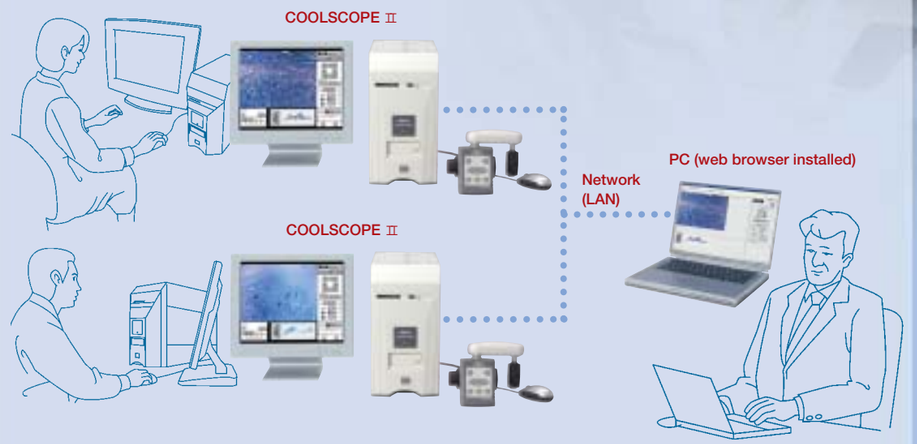
Collection of microscopic images



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.

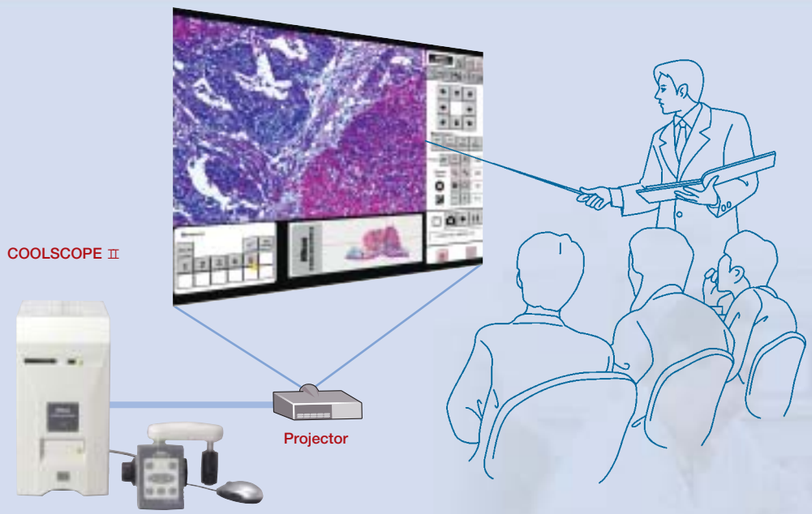
Sharing of images in classrooms



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.

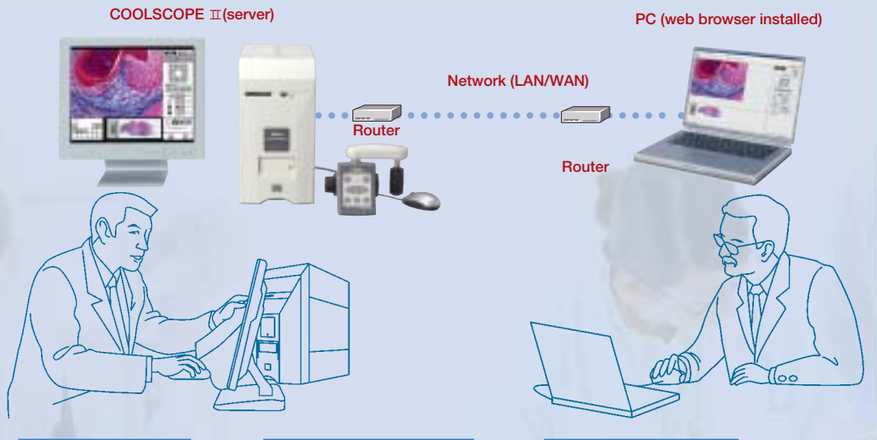
Projection and conferencing at scientific congresses and study groups



Connect the projector → Load 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

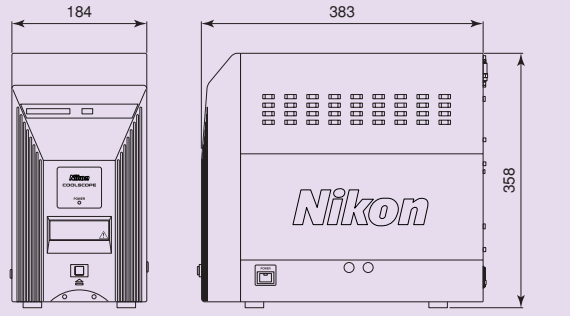
The same pathology specimen can be viewed on networked PCs in different locations, enabling consultation within a hospital or beyond it. Control of the image, e.g. changing of the magnification, is possible from remotely networked PCs.

COOLSCOPE Ⅱ

Specifications

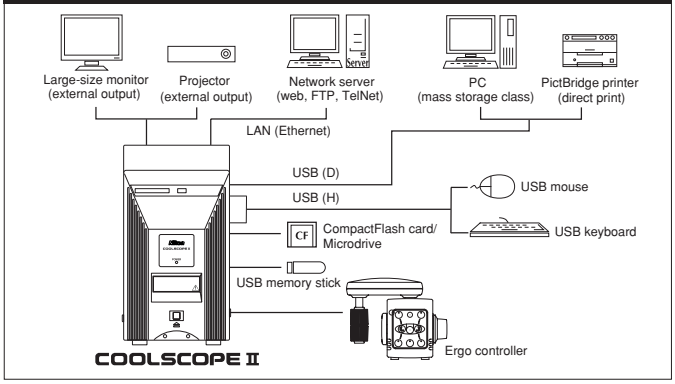
Samples observable	1 slide glass preparation (up to 1.7mm total thickness including slide glass and specimen)
Compatible slide glass	Up to 1.2mm in thickness, 26mm in width, 76mm in length (ISO 8037 compliant)
Compatible cover glass	Up to 0.17mm (No.1) or 0.18mm (No. 1.5) in thickness (ISO 8255 compliant)
Observation method	Transmitted brightfield
Observable 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
Focusing	Auto-focus and Manual
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 (motorized)	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), γ correction (4 steps), shading correction
Aperture setting	Auto and Manual
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 (TypeⅠ, Type Ⅲ), 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
Weight	COOLSCOPE Ⅱ unit: approx. 18.5kg
Operating environment	Temperature: 0–40°C, humidity: 85% RH max.
Standard configuration	COOLSCOPE Ⅱ unit, power cord, CompactFlash card (32MB)

Dimensional diagram



(Unit：mm)

System diagram



Dedicated Website: www.coolscope.com

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

⚠ WARNING	TO ENSURE CORRECT USAGE, READ THE CORRESPONDING MANUALS CAREFULLY BEFORE USING YOUR EQUIPMENT.

* Monitor images are simulated.

ISO 9001 Certified
NIKON CORPORATION
Instruments Company

ISO 14001 Certified
NIKON CORPORATION
Yokohama Plant

NIKON CORPORATION
Parale Mitsui Bldg., 8, Higashida-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 INSTRUMENTS INC.
1300 Walt Whitman Road, Melville, N.Y. 11747-3064, U.S.A.
phone: +1-631-547-8500; +1-800-52-NIKON (within the U.S.A.only)
fax: +1-631-547-0306
http://www.nikonusa.com/

NIKON INSTRUMENTS EUROPE B.V.
P.O. Box 222, 1170 AE Badhoevedorp, The Netherlands
phone: +31-20-44-96-222 fax: +31-20-44-96-298
http://www.nikon-instruments.com/

NIKON INSTRUMENTS (SHANGHAI) CO., LTD.
CHINA phone: +86-21-5836-0050 fax: +86-21-5836-0030
(Beijing office) phone: +86-10-5869-2255 fax: +86-10-5869-2277
(Guangzhou office) phone: +86-20-3882-0552 fax: +86-20-3882-0580

NIKON SINGAPORE PTE LTD
SINGAPORE phone: +65-6559-3618 fax: +65-6559-3668

NIKON MALAYSIA SDN. BHD.
MALAYSIA phone: +60-3-78763887 fax: +60-3-78763387

NIKON INSTRUMENTS KOREA CO., LTD.
KOREA phone: +82-2-2186-8410 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: +49-211-9414-0 fax: +49-211-9414-322

NIKON INSTRUMENTS S.p.A.
ITALY phone: + 39-55-3009601 fax: + 39-55-300993

NIKON AG
SWITZERLAND phone: +41-43-277-2860 fax: +41-43-277-2861

NIKON UK LTD.
UNITED KINGDOM phone: +44-20-8541-4440 fax: +44-20-8541-4584

NIKON GMBH AUSTRIA
AUSTRIA phone: +43-1-972-6111-00 fax: +43-1-972-6111-40

NIKON BELUX
BELGIUM phone: +32-2-705-56-65 fax: +32-2-726-66-45

Printed in Japan (0701-00)T

Code No. 2CE-MRUH-1

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

En