



ECLIPSENET



The perfect tool for image archiving and networking

EclipseNet

Multifunctional but user-friendly software for the capture, archiving or analyzing of images

EclipseNet is image archiving and networking software developed by Laboratory Imaging s.r.o. for Nikon digital cameras. With completely new user interface elements, including docking windows, predefined layouts, and customized workspaces, EclipseNet makes capturing, archiving and analyzing images easier than ever.

The main features of EclipseNet are:

- Selectable built-in layouts
- Multiple formats to view database
- The creation of very large images with the stitching method
- Various modes for Interactive Measurement
- A non-destructive vector layer on which it is possible to save and create text
- Computer network connectivity and simultaneous connectivity of multiple digital cameras
- Utilizes JPEG2000 as a native format

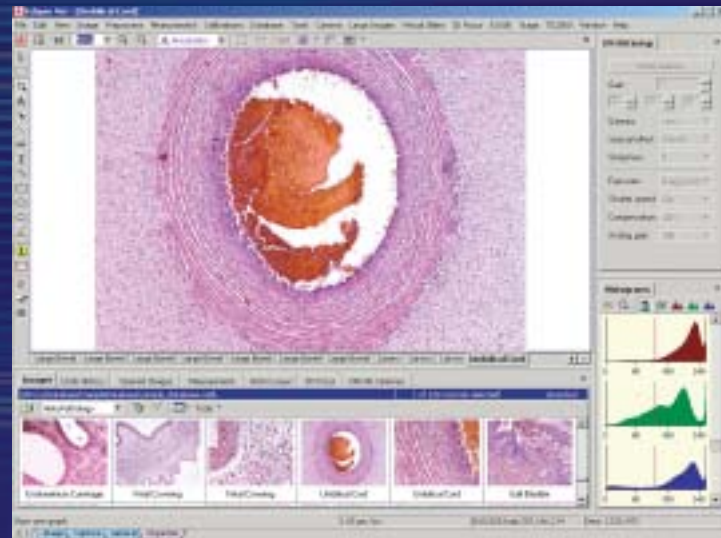
This software can be used for these Nikon digital cameras:



DXM1200F/DXM1200



Digital Sight DS-5M-L1/
DN100 Digital Network Camera

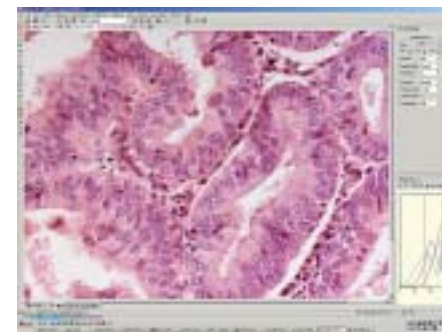


Selectable built-in layouts

EclipseNet comes with a variety of built-in layouts: General, Image Capture, Measurement, Pictures, Explorer, Organizer, Database, and DB+Explorer. Each layout is designed to accomplish a certain function. Capture layout offers easy image acquisition. Image layout best suits dedicated work with a specific image. Organizer layout increases archiving and organizing capacity. Measurement layout enables direct interactive measurements. It is also possible for users to design their original layouts by arranging the windows and toolbars and saving these settings as new layouts. Switching to another layout is achieved with a single mouse click.



General



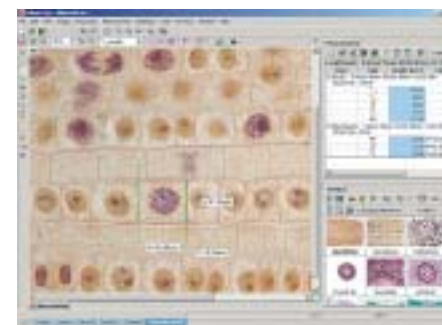
Image



Database



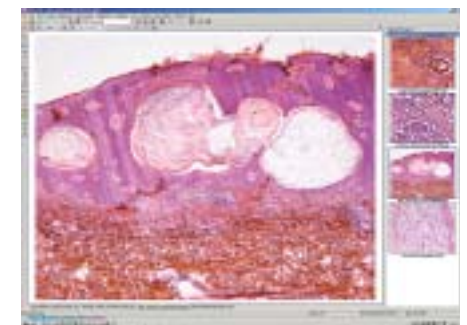
Database



Measurement

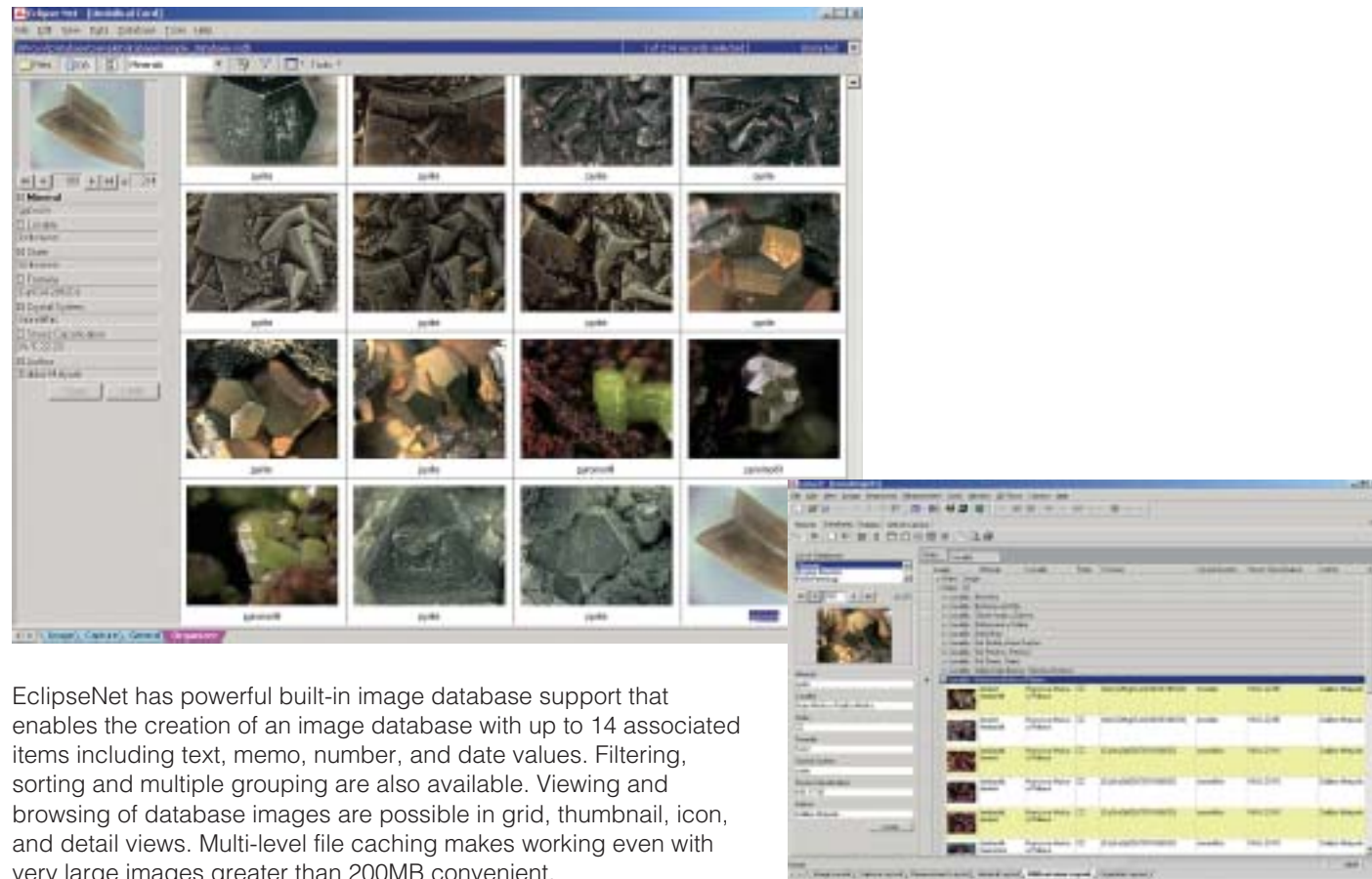


User layout



User layout

Databases



EclipseNet has powerful built-in image database support that enables the creation of an image database with up to 14 associated items including text, memo, number, and date values. Filtering, sorting and multiple grouping are also available. Viewing and browsing of database images are possible in grid, thumbnail, icon, and detail views. Multi-level file caching makes working even with very large images greater than 200MB convenient.

Camera support

EclipseNet facilitates the connection of more than one computer simultaneously to a Nikon digital camera. A private IP address is assigned to the camera*, which is connected to a network. Additional computers running the EclipseNet software can then access this camera simultaneously through its private IP address. More cameras can be connected to the computer network as well.

*The DS-5M-L1 and DN100 only.

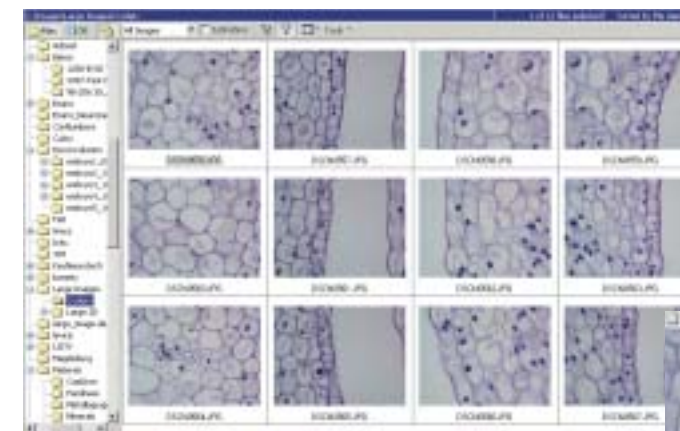


Image stitching

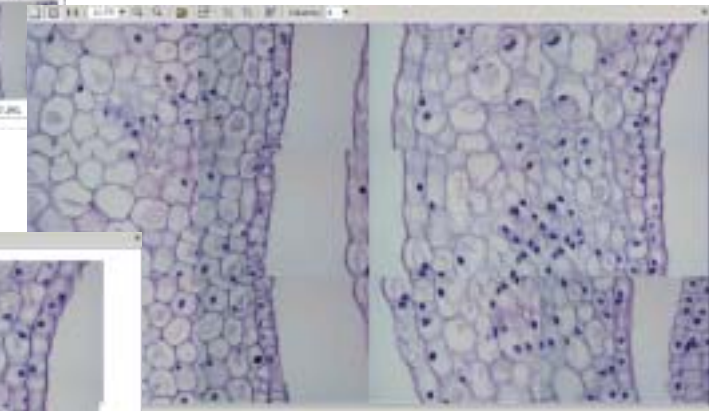
Ultra high-resolution images can be stitched automatically from multiple frames using EclipseNet. The system uses special algorithms to assure the maximal accuracy during the stitching. The size of the stitched images is limited only by the system capacity (usually large images require hundreds of MB). A stitched image can be zoomed in to view more details and zoomed out to overview the whole specimen.



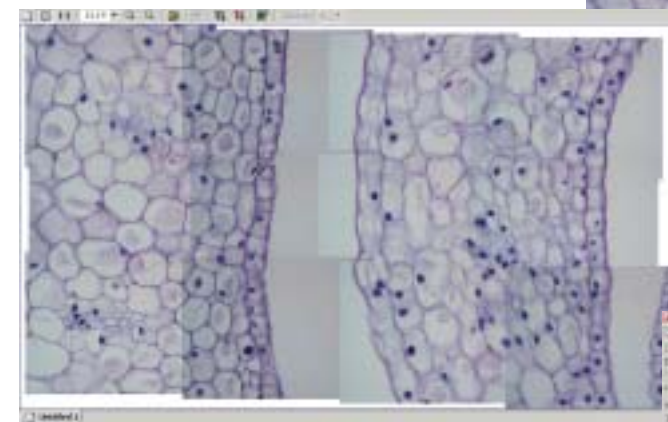
Stitched image example



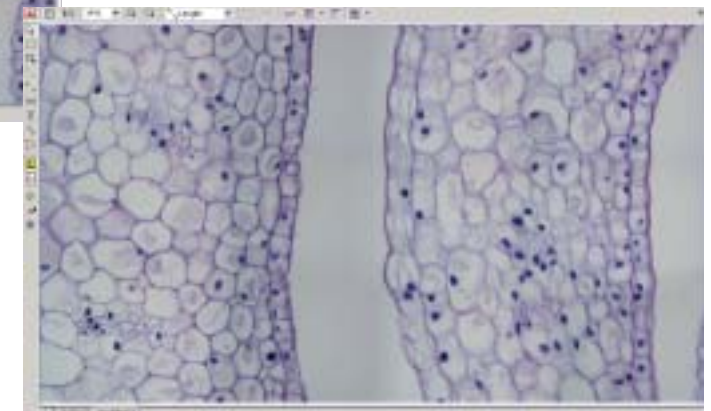
Step 1



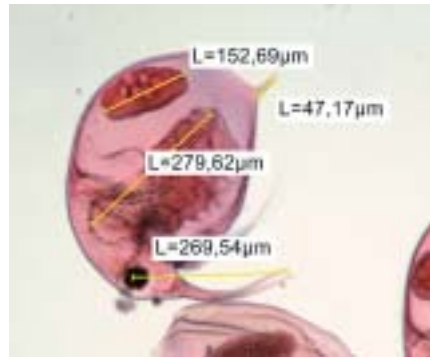
Step 2



Step 3

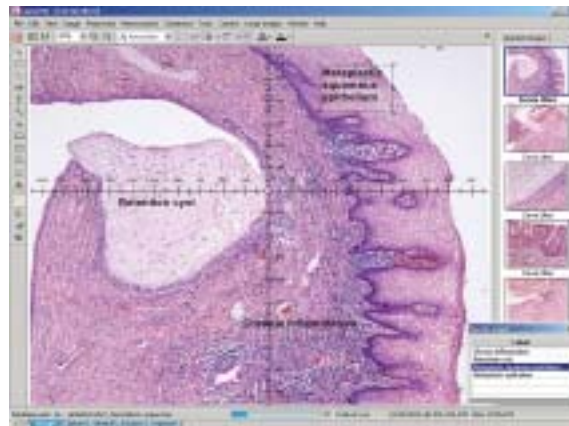


Step 4

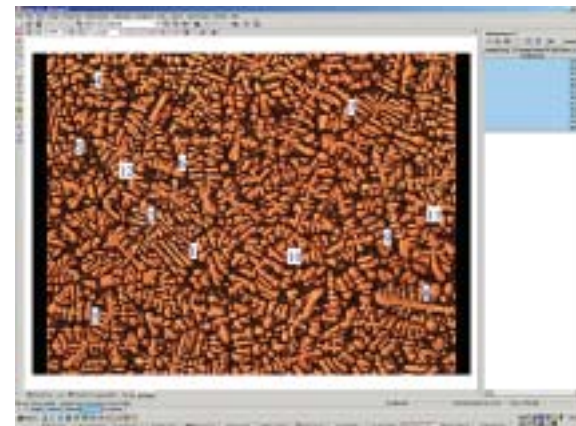


Interactive measurement

EclipseNet offers various modes for interactive measurement. All basic geometric shapes including line, poly line, ellipse, circle, rectangle, markers and angles can be drawn in several different ways. With the attribute toolbar you can quickly modify the measured objects' features such as line thickness, ellipse color, text background color, etc. Quick and rough measurement rulers or graticules can be used. Export to clipboard or file enables further statistical analysis in, for example, MS Excel. The objects to be measured are drawn in the vector layer. This approach enables later reviewing or modifying of the measured objects.



Ruler



Marker

Vector Layer

Annotations, all temporary drawings, and measured outputs are stored in the non-destructive vector layer. This layer can be switched on or off. You can create text or draw arrows and basic geometric shapes in this layer. The vector layer is stored separately, so the captured raster data are not affected. You can save the image in the SVG picture format. There is an SVG plug-in for common Internet browsers. All of your colleagues can view your annotations even without EclipseNet.



Image annotations can be placed in the non-destructive overlay and saved with the picture

Utilizes JPEG2000 as native format

EclipseNet reads/writes all common file formats like JPEG2000, BMP, GIF, TIF and PNG, JPG and proprietary LIM. JPEG2000 was selected as the native format for EclipseNet, because JPEG2000 provides high compression with image quality superior for all existing standard encoding techniques.

Specifications

Optical configurations

- With EclipseNet it is now possible to connect objective lens calibrations with camera setting and optical parameters like optimal Z focus steps

Layout Management

- The graphical user interface (GUI) can be customized

Database

- Data base structure can be customized
- Automatic back up scheduler integrated

Camera

- Camera input control (gain, offset, exp. time, RGB signal histograms)
DXM1200F/1200, DS-5M and DN100
- Auto exposure
- Live windows
EclipseNet has a feature for operating several cameras at the same time (DS-5M-L1 and DN100 only)
- Shading correction

Image input and output

- Image open (file formats JPEG2000, TIFF, BMP, LIM, PNG, AVI, VSL)
- Image save (file formats JPEG2000 TIFF, BMP, LIM, PNG, AVI, VSL)
- Image Albums
- Create/Play AVI
- Print image, print size selection

Image edit

- Copy, Paste, Copy/Paste selection, Paste keep aspect, Enlarge selection
- Rotate, flip, clear, Accepted area
- Audit trail, Save image manipulations and the original image

Image enhancement

- Contrast
- White Balance
- RGB, HSI transformations
- Smooth
- Median Filter
- Open, Close, Erode, Dilate

- Sharpen
- Detect Edges
- Gradient Morphology
- Relief

Manual measurements

- Scan objects, fields, measure single objects
- Measured data statistics, Histograms

Interactive measurements

- Length
- Area
- Angle
- Taxonomy
- Annotate image with measured values
- Profile measurements

Calibrations

- Length calibration (nm, µm, mm, cm, m, km)
- Horizontal, Vertical scale
- Graticules
- Cooperation with a scanning stage (Auto calibration)

Annotations

- Non-destructive annotations
- Insert text, arrow, and scale
- Annotations drawing

Image stitching

- Large image capture (create a large image by stitching the multiple captured images)
- Cooperation with a scanning stage
- Save images in VSL image format (with unlimited file size)

Microscope control

(Motorized accessories are necessary)

- Nikon Inverted Microscope ECLIPSE TE2000
- Nikon Upright Microscope ECLIPSE E1000

Scanning stage control

- Prior
- Marzhauser

Optional plugins

- Virtual slides
- Extended Depth of Focus

PC operating requirements

• Recommended

For customers who work with large amounts of data, we recommend the following PC specifications.

CPU	Intel P4 2GHz and higher
RAM	1GB RIMMs
Mother Board	Intel motherboard D850MV MaryVille 2
Hard disk	80GB and higher
Graphic card	VGA card Matrox Millennium G550 32MB DDR
OS	Windows 2000, XP

• Minimum

EclipseNet can run under these specifications.

CPU	Intel PIII 500 MHz
RAM	256 MB RAM SDRAM
Mother Board	Intel motherboard based on BX chipset or on 815 chipset
Hard disk	4GB
OS	Windows 2000, XP

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer.
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	WARNING	TO ENSURE CORRECT USAGE, READ THE CORRESPONDING MANUALS CAREFULLY BEFORE USING YOUR EQUIPMENT.
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