



Instructions Manual

INSPECTIS© CAP Basics V7.2

Subscription and Unlimited Versions

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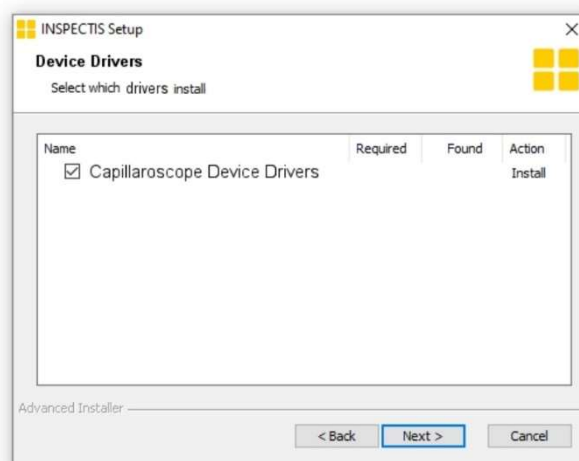
Installation and Setup

Installing INSPECTIS Software

- Installation shall be done with full administration privileges.
- You might need to disable antivirus system of your computer temporary during the installation.


To install INSPECTIS software:

1. Plug the provided software protection Dongle to a free USB port of your computer.
2. Run the setup file. The installation wizard will start and guide you through the installation.
3. **Capillaroscope** device Drivers are installed automatically by installation wizard. If Drivers are already installed in your computer, uncheck the Capillaroscope Device Driver.
No Driver is needed for **CapiScope** and **DigiScope** devices.




4. Follow on-screen instructions to complete the installation.
5. When the installation is complete click "Close" to exit the window.

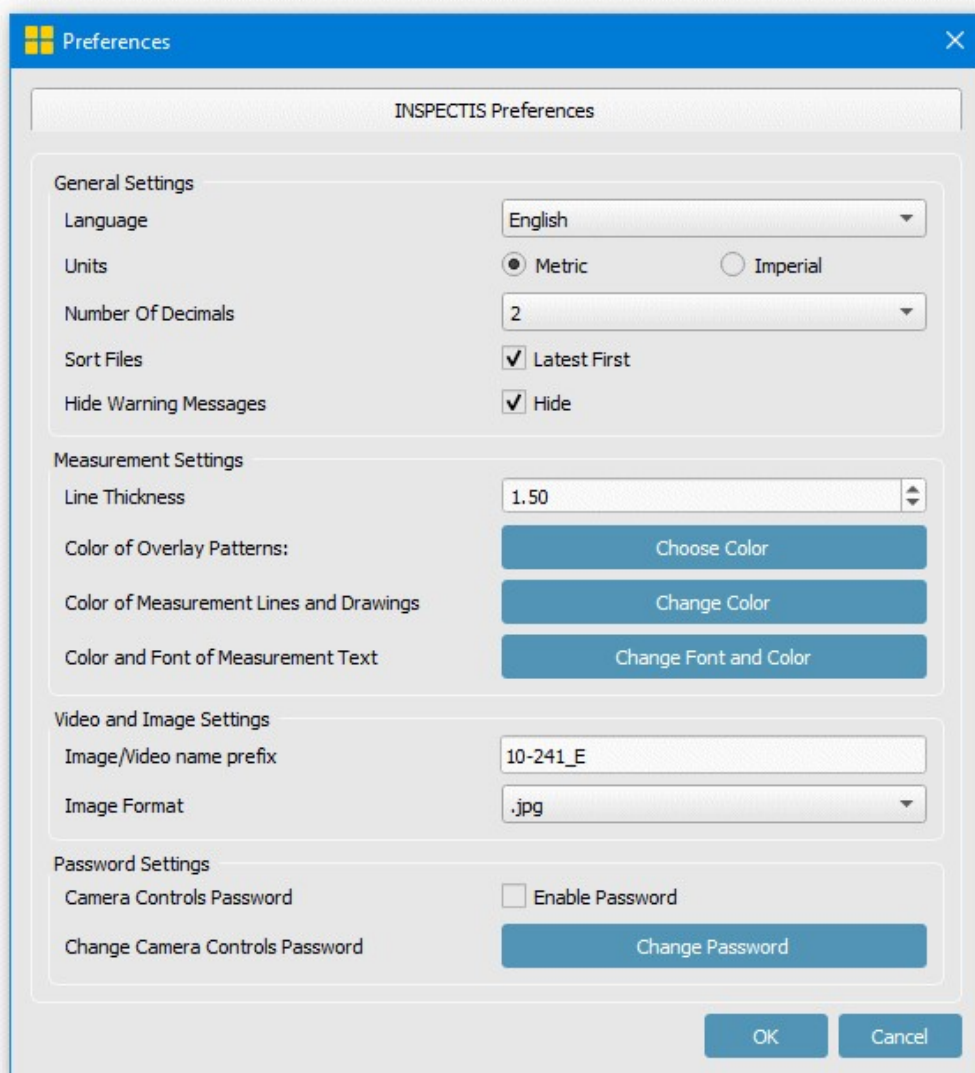
Running INSPECTIS for the First Time

1. Connect your Capillaroscope to a free USB3.0, USB3.1 or USB3.2 port of your computer.
Minimum 5Gbit/s data transmission is required.
2. Click on INSPECTIS  icon on your computer desktop and select **Run as Administrator** first time.
Running as Administrator will enable you to register and activate the software automatically over internet.
3. Select language from the list.

4. From the "Software Version" selection window, select:
 - "INSPECTIS CAP Basics".
 - 15 days trial version for trying the software for 15 days. All software functions will be enabled for 15 days. Skip part 5 (license number).
5. Fill in license number (found in the package) and the other requested information.
6. If automatic on-line registrations is not possible, complete the Off-line Registration form and email it to info@inspect-is-com to get an software activation key.

Software Preferences

In Preferences, the user may change overall settings of the INSPECTIS software. Click on  icon to display the preferences window.



The screenshot shows the "INSPECTIS Preferences" dialog box. It has a blue title bar with a yellow icon and a close button. The main area is divided into several sections:

- General Settings:**
 - Language: English (dropdown)
 - Units: ☒ Metric, ☐ Imperial
 - Number Of Decimals: 2 (dropdown)
 - Sort Files: ☒ Latest First
 - Hide Warning Messages: ☒ Hide
- Measurement Settings:**
 - Line Thickness: 1.50 (spin box)
 - Color of Overlay Patterns: Choose Color (button)
 - Color of Measurement Lines and Drawings: Change Color (button)
 - Color and Font of Measurement Text: Change Font and Color (button)
- Video and Image Settings:**
 - Image/Video name prefix: 10-241_E (text box)
 - Image Format: .jpg (dropdown)
- Password Settings:**
 - Camera Controls Password: ☐ Enable Password
 - Change Camera Controls Password: Change Password (button)

At the bottom right are "OK" and "Cancel" buttons.

Device Settings

Selecting Device

The software normally finds the installed Inspectis device and automatically sets the optimal device settings when starting the program. INSPECTIS software displays available device names on the status bar:





Capillaroscope (older devices are displayed as **Inspectis USB3.0 DM**)

CapiScope

DigiScope is displayed as GENERAL - UVC

Should the software fail to indicate your Inspectis device select it manually.

To select a device manually from the list of available devices, click  under Device Settings group or right click **Device Name** on status bar of INSPECTIS as shown above. Right click on Device Name and select between available devices.

To automatically select your device, click  under Device Settings group. Software will search and select the available Inspectis device.

To restart your device while software is running, press F12 on your computer keyboard.

Device Resolution

Resolution and **Format** (aspect ratio) of the live image can be set according to below table.



Default resolution for Capillaroscope and CapiScope devices is **2000x1500 pixels**. For regular usage the default format is recommended.



Default resolution for DigiScope is 1280x720 pixels.

Selecting Magnifications

INSPECTIS CAP Basics software features pre-defined calibrations for all available lenses supplied with the Capillaroscopy devices. There is no need for manual calibration even if re-calibration is possible via

Magnification and Calibration tool  .

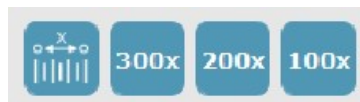
Since the Capillaroscope is supplied with the 200x lens as standard, default magnification is set to 200x. If the lens is changed to another type, the magnification must be set accordingly.

If no magnification is selected, the  icon is displayed. Left click on the icon and select  or other relevant magnification.

If your device is Capillaroscope the following pre-defined magnifications are available:



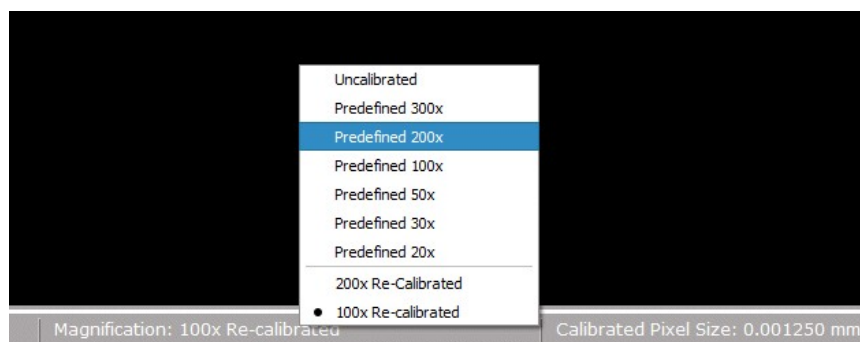
If your device is CapiScope the following pre-defined magnifications are available:



If your device is DigiScope the following pre-defined magnifications are available:




For quick selection of magnifications, right click on the **Magnification** on the INSPECTIS status bar and choose desired magnification.

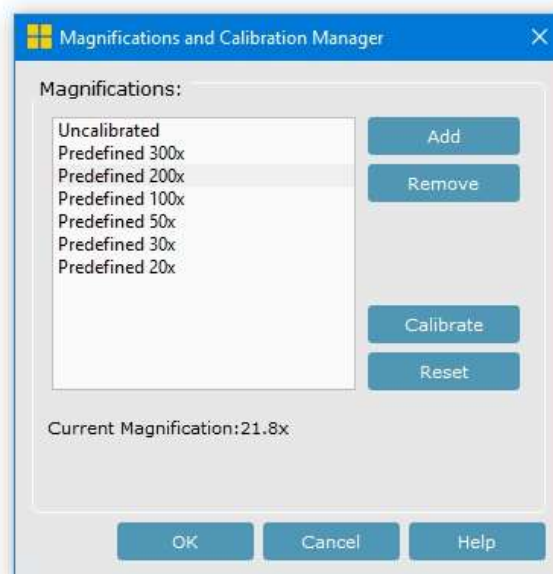


Calibrating Magnifications

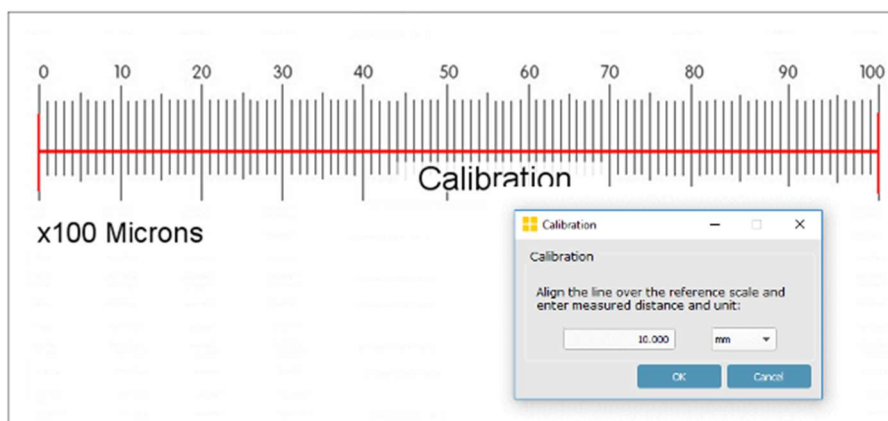
INSPECTIS CAP Basics software includes the pre-defined calibrations for all Capillaroscope devices and lenses. There is no need for manual calibration but re-calibration is possible under Magnification and Calibration tool if higher measurement accuracy is desired.

Before starting to calibrate a magnification, place an accurate ruler or micrometre scale under the

microscope and make sure the live image is on best focus. Click  under Magnifications icon group, select the desired magnification and click **Calibrate**.



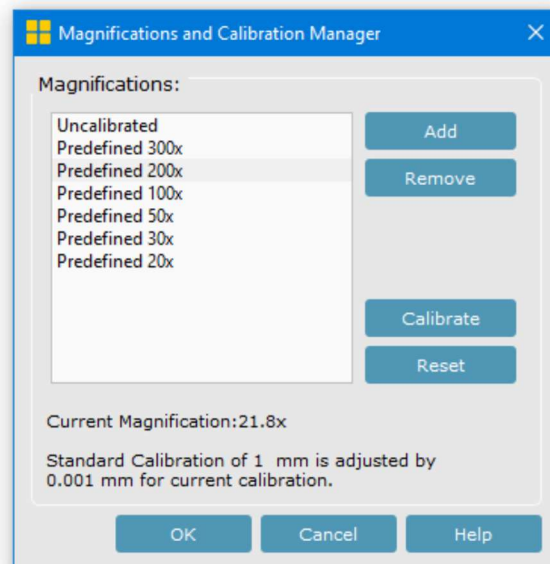
The live image will be frozen and calibration windows with a calibration line will appear.



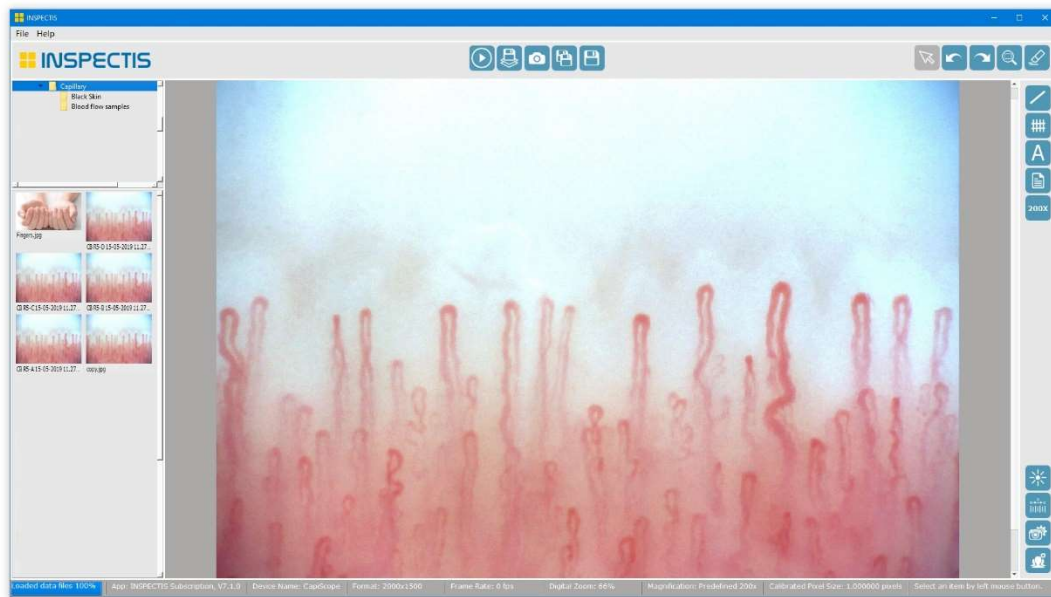
Select, drag, and align both ends of the calibration line to the matching lines on the reference image. Type in the distance and select the unit (**mm** or **µm**) in the calibration window. If imperial units are selected in Preferences, imperial units (**inch**, **mil**) will be shown in calibration window. Click OK to finish the calibration process.

When you re-calibrate a factory-set Magnification, the new calibration will override the Standard Calibration. Information about how much the Standard Calibration is adjusted for this magnification is displayed below the magnification list on Magnification and Calibration Manager dialogue.


You may restore a custom-made re-calibration to factory set Standard Calibration any time by using **Reset** button.



Working with INSPECTIS Software



Live Video and Still Images

INSPECTIS software automatically shows the live image on start. To pause the live image, click  or SPACE BAR.

To start the live image again click  icon or press SPACE BAR.

Zooming

Both live and still images can be zoomed in and out digitally. Zoom functions are accessed by clicking following icons:



Zoom In [Shortcut Key: F4]




Zoom Out [Shortcut Key: F3]



Zoom to Fit Screen [Shortcut Key: F5]



Full Screen [Shortcut Key: F6]. To close the full screen view, press ESC or press the  icon.

Digital zoom-in and zoom-out can also be done by the wheel of the computer mouse. Mouse cursor defines centre of the zoomed area.

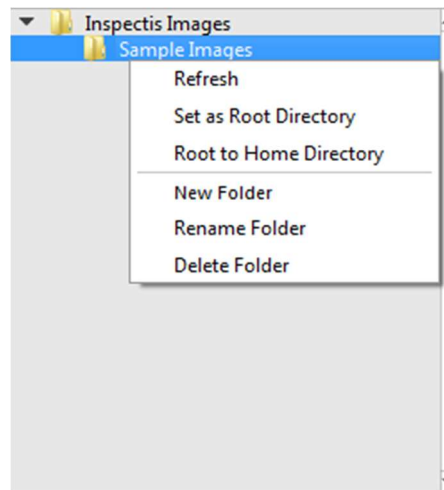
To pan the image when zoomed-in, press and hold the middle button of the mouse and drag the image.

Folder Structure and Thumbnail View

Folder Structure

Right click on the folder structure and choose the working folder to be used for saving the images and files. Working folder can be also selected via **"File Menu -> Select Folder"**. Images and other files in the working folder are displayed as thumbnails in the Thumbnail View beneath the folder structure.

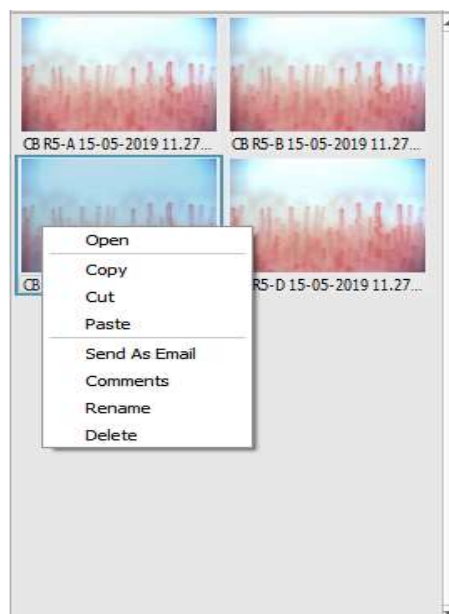
By right clicking on the file structure below folder functions can be accessed:



By clicking **"Set as Root Directory"**, other folders except for the selected working folder will be hidden. Clicking **"Root to Home Directory"** will display all folders.

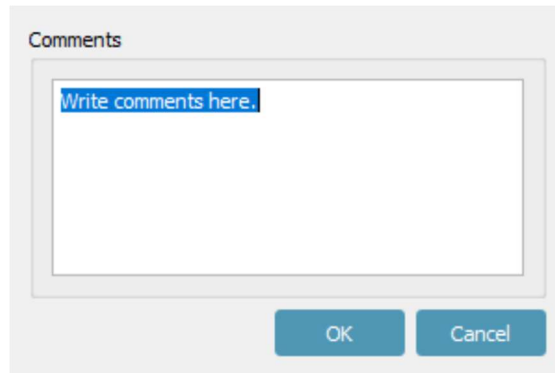
Thumbnails and Image Functions

By right-clicking on a saved image thumbnail, image functions are displayed



You can select one or multiple images at a time to **Copy, Cut, Paste, E-mail or Delete**.

Comments will be saved to the selected image file. Comments will also be automatically printed on the **Report** when you attach the image to the report.



Saving Images


There are four options for saving an image:



Save Averaged Images [Shortcut Key: F9]. Captures multiple images and combines them before saving the final image. Results in a clearer image with less noise.



Capture Live Image [Shortcut Key: F11]. Captures a still image from live video and saves it under current working folder as .jpg (default) or .png. Image will be automatically labelled with date and serial number.

If the live image is paused and there are measurements and overlays on it,  will only save the image without overlays and measurements.



Save Image As [Shortcut Key: Ctrl+A]. Saves the image with user specified name and folder.




Save Image [Shortcut Key: F10]. Saves the image together with measurements and overlays under the current working folder. Image will be automatically labelled with date and serial number with "*_measured*" suffix.

Loading Images

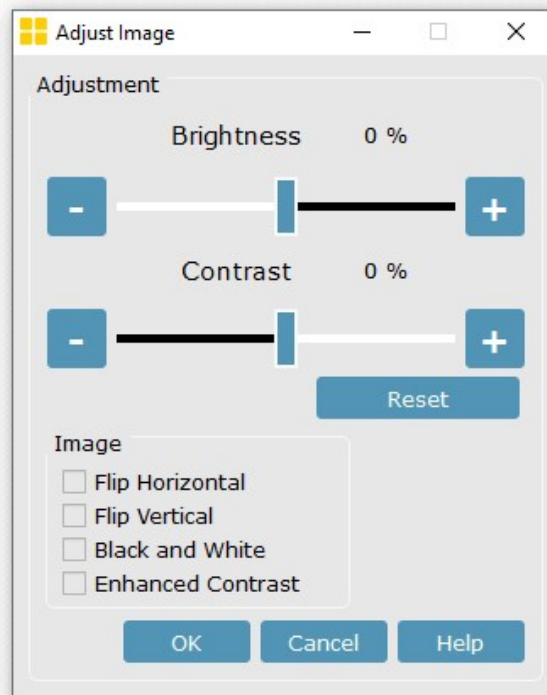
To load a thumbnail image or a document from the working folder, left click on it or right click and choose open. If the image contains measurement objects, the measurement results will also be loaded to the measurement table.

To load an image from another location, click "**File -> Open Image**", then select the image to be opened.

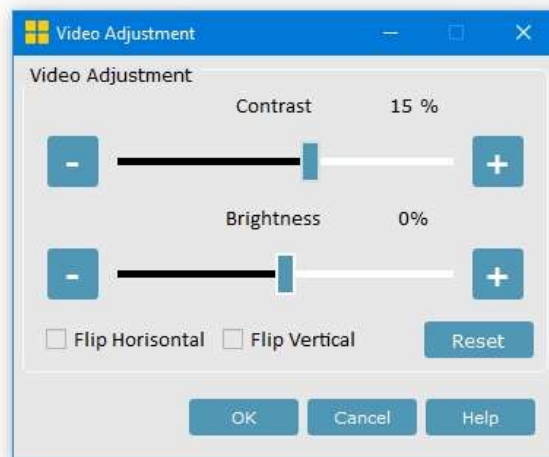
Image Manipulation

To manipulate the image, click  icon. Depending on whether the image is live or still, different adjustment windows will appear.

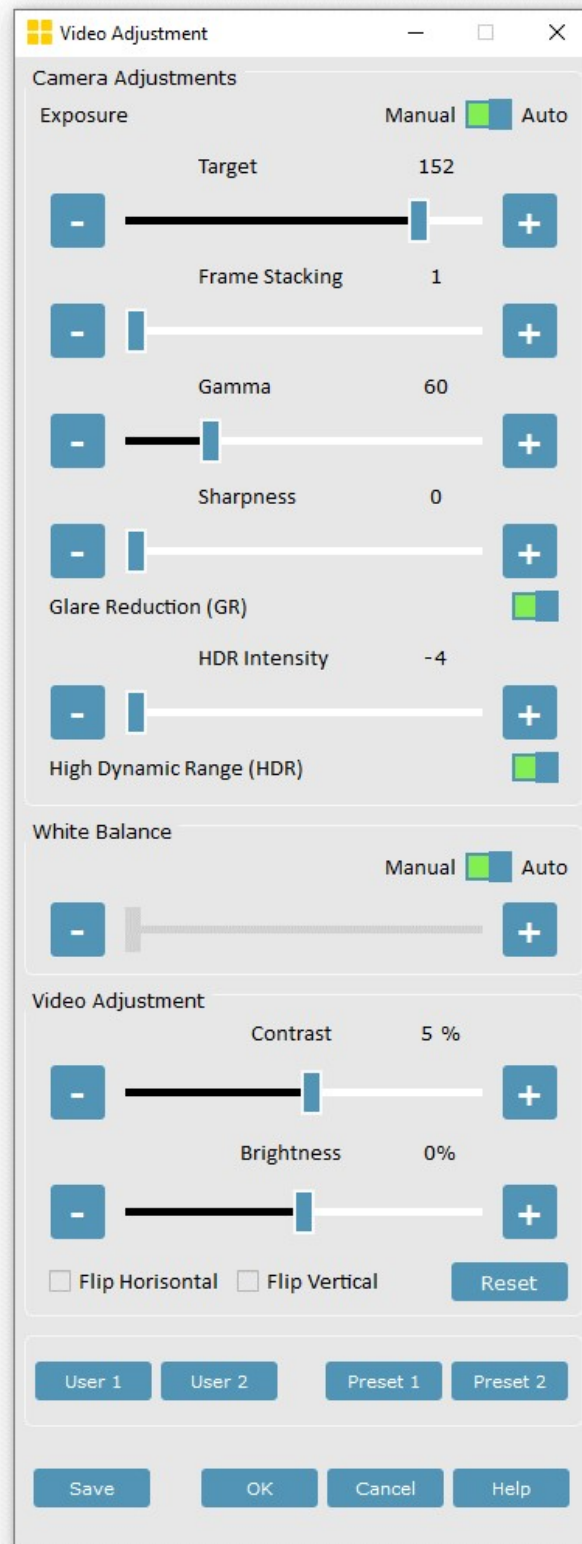
If the image is still, **Brightness** and **Contrast** adjustments will be available. In addition, **Black and White** and **Enhanced Contrast** can also be applied to still images.



If your connected device is Inspectis **CapiScope** or **DigiScope**, and the image is live, video adjustment window will be according to the below picture. Presets and user defined camera setups are not available for CapiScope or DigiScope.



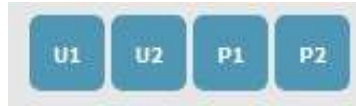
If your connected device is Inspectis **Capillaroscope**, and the image is live, video adjustment dialogue will be according to the below picture:



Two user-defined camera setups **User 1** and **User 2** are available. Camera attributes such as exposure, image stacking, gamma, high dynamic range, contrast and brightness can be adjusted and saved under User 1 or User 2 at any time for future use.

Two factory-set camera settings **Preset 1** and **Preset 2** are also available. These Presets are factory defined and cannot be changed.

If your device is Capillaroscope, **User 1**, **User 2**, **Preset 1** and **Preset 2** settings will be available as **U1**, **U2**, **P1** and **P2** quick-access buttons on top-right of the INSPECTIS main window.





Measurement and Analysis Tools

INSPECTIS CAP Basics provides a simple calibrated distance measurement tool. All Inspectis devices are pre-calibrated but manual calibration of magnifications is possible if re-calibration is required to ensure high accuracy distance measurements.

If you select an uncalibrated image, measurement results will be presented in pixels.

Distance Measurement


Measure Distance: : Measure a linear distance. Press and hold the left mouse button, drag to draw a line from A to B on the image and release the button to finish. Select  automatically activates after each measurement to fine-tune the measurement line if necessary.



To fine-tune the start and end position of the measurement line:


- Click and drag the ends of the measurement line to change the distance.
- Click and drag the measurement line to move the line.
- Click and drag the text box to move it to another position.

Press and hold **Ctrl** key on computer keyboard before drawing the measurement line to make **Horizontal** or **Vertical Distance** measurements.

Thickness and **Colour** of measurement lines as well as **Font Size** and **Colour** of the text can be changed in [Preferences](#).


To modify, move or delete a measurement activate the **Select Tool**  and right-click on the specific measurement line.

All measurements can be undone or redone using **Undo**  and **Redo**  respectively.


To delete and clear all items, click on .

Saving and Exporting Measurements

Measurement results as well as calibration information are always saved together with the picture as described in Saving Images section. All the saved measurements are part of the image and cannot be changed as they are burned into the image.

Measurement results are also displayed under Measurement Table field on INSPECTIS and can be exported  to Excel or other CSV file compatible software.

Reference Tools

To select a reference tool right click on the current icon  on the right menu bar. **Reference** tool group will pop-up.



Left click on the desired tool to activate/deactivate. Last selected tool will be displayed as the menu icon.



Crosshair: Left click to display Cross-hair on the live image.

Thickness and colour of the crosshair can be changed in [Preferences](#).



Grid: Left click to display the grid on the screen. Right-click to open the **Grid Size** definition dialogue.

To move the grid, left click on it and drag to the desired location. To restore position of the grid to the centre of image field, right click and select **Reset Grid**. Colour of the grid can be changed via **Colour of Overlay Patterns** in [Preferences](#).



Rectangle: Left click to display a rectangle on the screen. Right click on the rectangle icon to open the **Rectangle Size** definition dialogue. To move the rectangle, click on it and drag to the desired location. To restore position of the rectangle to centre of the image field right click and **Reset Rectangle**. Colour of the rectangle can be changed via **Colour of Overlay Patterns** in [Preferences](#).



Reference Scale: Left click to display a calibrated **Reference Bar** on bottom-right of the image field. Colour of reference scale bar can be changed via **Colour of Overlay Patterns** in [Preferences](#).


Annotation Tools

To select an Annotation tool right click on  or  icon on the right menu bar. Annotation tool menu will pop-up.



Annotation with Line: Draw a line and a text window will appear. Write in the text field or leave it blank to just draw an arrowhead line. To insert a text without line, just click on the image field instead of



drawing a line. Select  is automatically activated when annotation is completed to let you adjust position of the line and text box! Select the annotation line or text box by left click and right-click your mouse button to delete all or to rename annotation text.

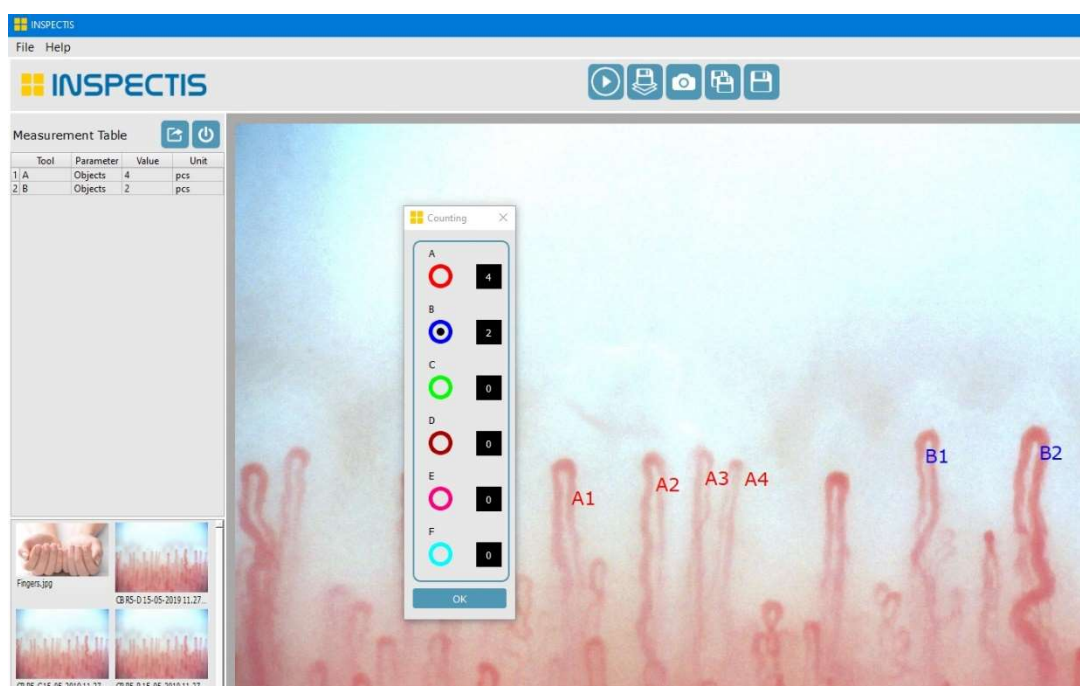
123

Counting Objects: Check the desired category A-F from the counting window and count the objects on the image by left clicking on each item. The counted object will be mark with the first letter of the selected category followed with the current count.

Counting results as well as distance measurements are saved with the picture.

The results are also displayed under Measurement Table field on INSPECTIS and can be exported to Excel or other programs in CSV file format.

After finishing counting objects, click **OK** to close category window.



Font Size and **Colour** of the categories A-F can be changed in [Preferences](#).

Shortcut key list (Hot-keys)

Following quick-access shortcut keys (Hot-keys) are available in INSPECTIS CAP Basics:



Save Image [Shortcut Key: **F10**].



Save Image As [Shortcut Key: **F8**].



Capture Live Image [Shortcut Key: **F11**].



Play/Pause Video [Shortcut Key: **Space**].



Zoom In [Shortcut Key: **F4**].



Zoom Out [Shortcut Key: **F3**].



Zoom to Fit Screen [Shortcut Key: **F5**].



Full Screen [Shortcut Key: **F6**].



Clear all Items [Shortcut Key: **Ctrl+Del**].



Undo [Shortcut Key: **Ctrl+Z**].



Redo [Shortcut Key: **Ctrl+Shift+Z**].

Camera setups:




User 1, 2 [Shortcut Key: **1, 2**].



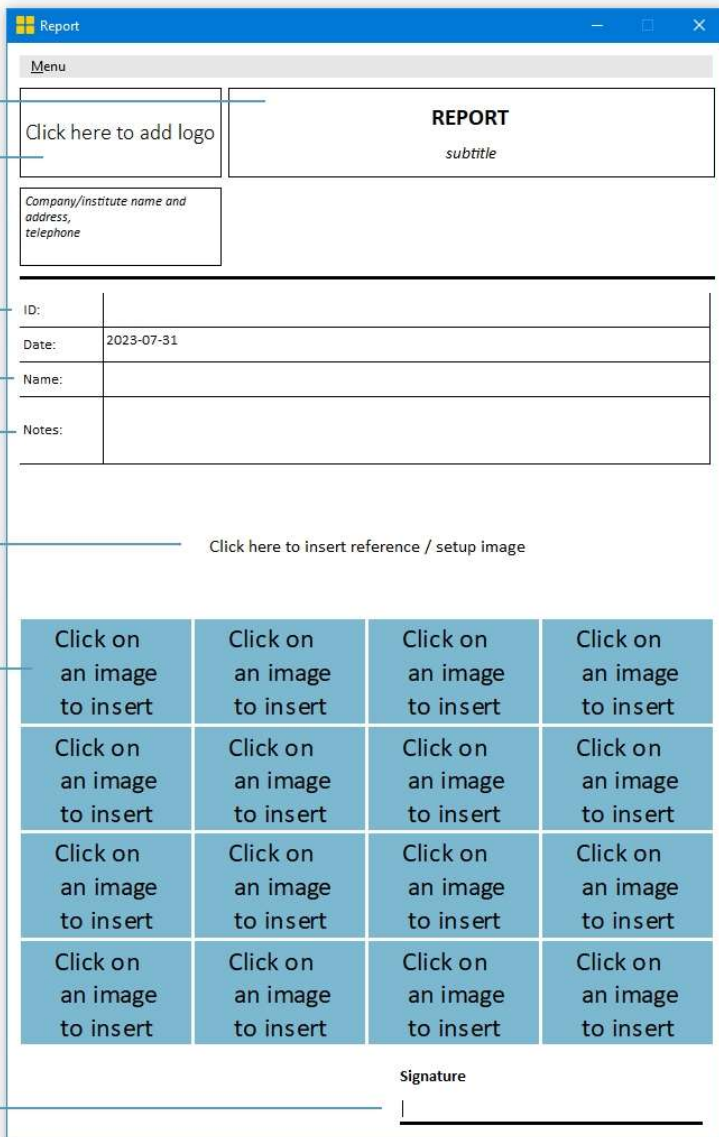
Preset 1, 2 [Shortcut Key: **3, 4**].

Reset and Restart Camera [Shortcut Key: **F12**].

Report Tool

To start creating a report click .

Under **Menu** you can create a **New Template** including 16 or 32 pictures or open an existing report template. Click on saved picture thumbnails to insert them into the report template. When the report is completed **Save it as PDF** in your computer or directly **Send it as Email**.



The screenshot shows the 'Report' window with the following fields and labels:

- Report Title**: Points to the 'Menu' dropdown.
- Logo**: Points to the 'Click here to add logo' button.
- Patient ID number**: Points to the 'ID:' field.
- Patient name**: Points to the 'Name:' field.
- Anamnesis and notes**: Points to the 'Notes:' field.
- Reference picture**: Points to the 'Click here to insert reference / setup image' button.
- Capillary images**: Points to the grid of 16 'Click on an image to insert' buttons.
- Physician name**: Points to the 'Signature' field.

Logo area: Left-click to add a logo in JPG or PNG format.

Report name and Subtitle area: Add title/subtitle to the report by clicking on the respective area.

Company/Institute details: Editable field to update organisation details. "Menu/Save Template" also saves company details.

ID/name and Notes: Editable field to insert patient details.

Signature: Editable field to text physician name or signature.

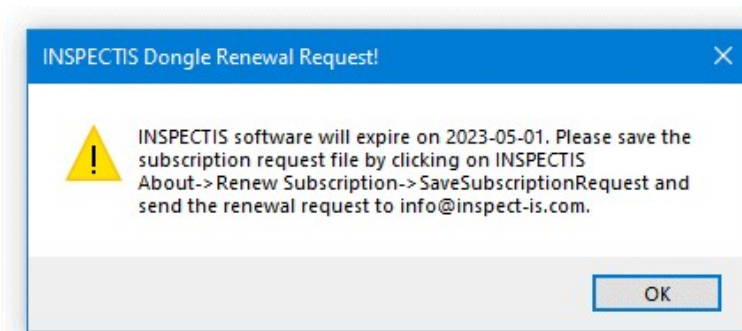
Select **Menu** -> **Save** Template to save a template for future use. Institute details, logotype and other

common information will be saved into the new template.

Subscription Renewal

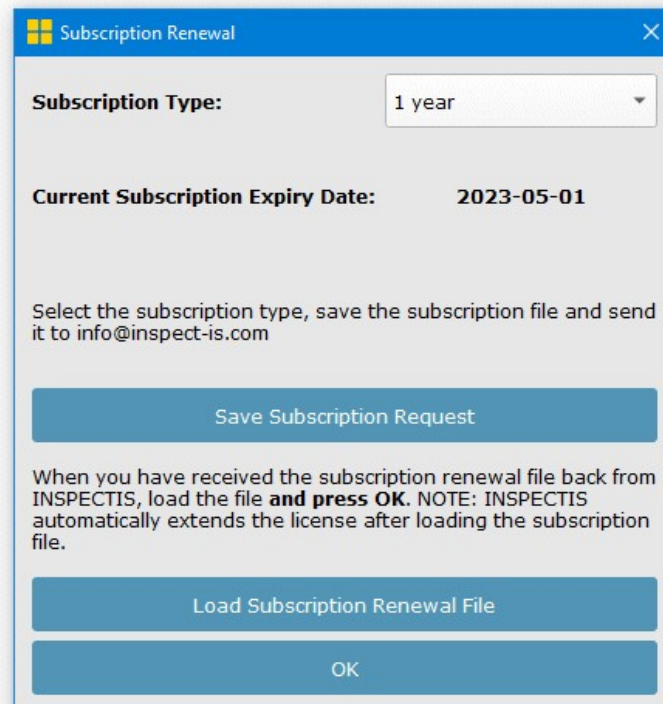
INSPECTIS Basics Subscription comes with one year's free subscription. If you intend to continue using the Software, you must order a new 1-year, 3-year, or 5-year subscription option.

A pop-up window warns of subscription renewal when the expiration time is approaching.



For renewing your subscription click **Help -> Subscription Renewal**. Select the subscription length, (1-year, 3-years, or 5-years) and click Save Subscription Request. Email the Subscription File to info@inspect-is.com.

After processing your order, you will receive a Subscription Renewal File from Inspectis. Load the Subscription file and press OK to activate.



Your Subscription Expiration Date is shown under About INSPECTIS.



Notes

System Requirements

Minimum System requirements:

| Component | Minimum specification |
|------------------|---|
| CPU | Intel Core i5, CPU @ 2.4 GHz or faster |
| Operating System | Windows 10/11 (x64 version Professional, Enterprise) |
| Memory | 8 GB of RAM |
| Hard disk | 200 GB of Free Space |
| Display | Laptop: 15.6" / 1920 x 1080 (Full HD) PC: 24"-27" / 3840 x 2160 (4K) |
| Ports | One USB 3.0 or USB3.1 or USB3.2 port (5Gbit/s) Two USB 2.0 port |

Recommended computers by Inspectis:

- **Station:** DELL Precision Workstation, Intel Core i7, 16 GB RAM
- **Laptop:** DELL Latitude, Intel Core i7, @ 5.0 GHz, 8 GB RAM 15.6", Full HD
HP EliteBook, Intel Core i7, 16 GB RAM 15.6", Full HD

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