

GUIDE | DXF OVERLAY APP

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Import a DXF file and add it as an overlay on top of your live image. A mouse and keyboard are required to use this application.

Creating DXF files

For best user experience with the DXF Overlay app, we recommend exporting DXF files directly from CAD data when possible.

It is not recommended to export DXF files from Gerber/CAM data as these are likely to be all vector based. This will increase the import and rendering time and prevent the app from performing a text search (see section 4).

An alternative to Gerber/CAM data is LibreCad which is a free drawing tool that can read and write DXF files. A reasonable priced alternative is QCAD.

When exporting the DXF file, make sure that it is in scale 1:1. If the file has been downsized during export, it will not match the size of the sample displayed on the microscope.

It is also recommended to only export the template you want to use as an overlay and to exclude drawing headers, production specifications, etc from the export.

Importing DXF files

NB: When importing DXF files to the microscope, make sure to specify which lens is currently mounted on the TAGARNO microscope in the microscope Camera settings. This allows the app to align the DXF file and sample at any magnification level.

The application provides two options for importing individual and/or folders with DXF files:

• Via USB

Insert a FAT32-formatted USB memory stick into the microscope containing as many DXF files or folders with DXF files as you want.

• Use internal storage of the microscope

Before importing DXF files to the internal storage of the microscope, activate file share mode in the microscope General settings. You should also make sure that the computer is on the same network as your microscope and that the Ethernet cable is connected correctly. Then, follow the steps below to import DXF files to the microscope:

Transfer DXF files to the microscope

NB: The serial number is available on the system label and via the System information window in the microscope Info menu.

Transfer files with Windows operation system:

- Open the File Explorer and type: \\tagarno-snxxxxx

Transfer files with mac operation system:

- Open the Connect to server window and type: smb://tagarno-snxxxxx/
- Press connect

In both cases, a window will appear and you can type:

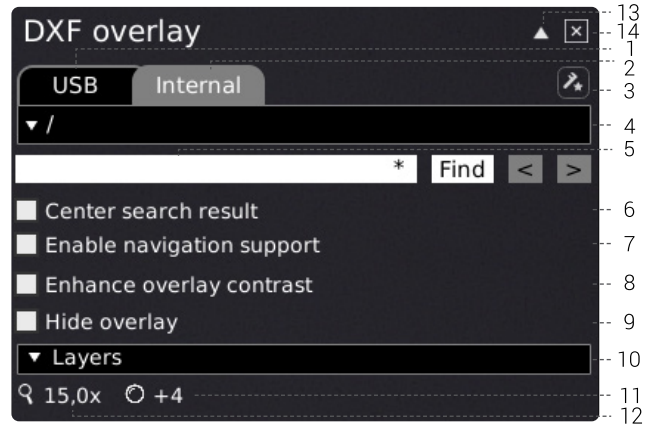
- User name: public (Windows) or public (MAC)
- Password: pub1234

Double click the images folder and you will be able to move DXF files and/or folders with DXF files to the microscope.

Remove DXF files from the microscope

To remove DXF files from the microscope, follow the same procedure as above. But instead of adding DXF files to the images folder, remove them.

Using the DXF Overlay app



1. USB

Select this file destination if you have inserted a USB memory stick containing DXF files to the microscope.

2. Internal

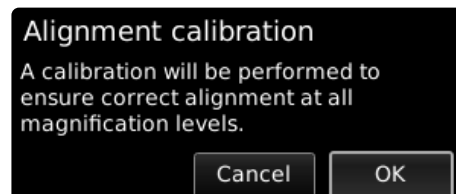
Select this file destination if you have transferred DXF files to the internal storage of the microscope.

NB: To access pictures transferred to the microscope, make sure that File share mode is enabled in the microscope General settings. Otherwise, you will see the text below.



3. Alignment calibration

When opening the app for the first time, perform an Alignment calibration by following the on-screen instructions.

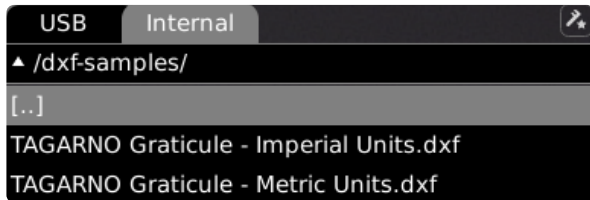


If needed, click the icon in the app menu to perform a new calibration if the previous calibration was performed incorrectly.

NB: Once a calibration has been performed, it will be stored and saved for any future use of the app.

4. Select DXF file

Choose a DXF file or folder from the dropdown menu. A folder is displayed with "< >" signs around the folder name. In the folder, click on the top option ("<...>") to go one step back.



Refresh

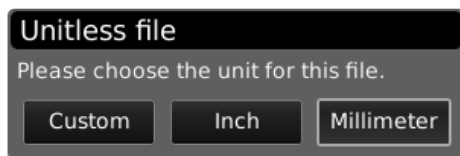
If the DXF files on the inserted USB memory stick or in the internal storage do not appear from the dropdown menu, click the tab with the file source (USB or Internal) to refresh.

The chosen DXF file will appear as an overlay and in the top left corner of the monitor to display where the overlay is positioned in the field of view.

NB: For larger files, a file loading process will start when you choose the DXF file. This is to let you know something is in progress. We recommend erasing all unnecessary information when creating your DXF file to shorten the loading time.

Unitless file

If a selected DXF file does not contain units, a dialogue box will ask you to choose the units used in the file.



Once the overlay has loaded, click and drag the overlay with the mouse to position it where needed.

It is also possible to right click the mouse anywhere on the monitor to center the overlay.

NB: If the DXF file does not align with the sample, adjust the working height. You should also check that the lens mounted on the microscope is specified in the microscope Camera settings.

5. Search

Enter a component name from your DXF file. To search for several components simultaneously, type in the first few characters of the component names and finish with a star. Example: C2*. You can also use more than one search words by separating them with a semicolon.

NB: The search feature is lower and upper case sensitive.

Click the "Find" button and the app will highlight all the results in the DXF file. These will also appear on the DXF overview in the top left corner.

Click the navigation arrows to skip between all search results. Alternatively, use an attached foot switch to skip back and forth in the search result. Once you start skipping through the results, only the currently highlighted result will be displayed on the DXF overview. This makes it easy to see where the search result is located on your object.

NB: As a shortcut, use the Page Up button on the keyboard to display the next results and Page Down button to display the previous result.

6. Center search result

Selecting this feature ensures that the currently highlighted search result will be centered on the monitor.

7. Enable navigation support

If using magnification levels that makes the overlay exceed the visible screen area, select this feature before using the search bar.

The given search result will then be centered on the monitor and the app will assist the user in moving the inspected object to match the overlay by showing which direction the object should be moved to.

8. Enhance overlay contrast

Select this option to enhance contrast between the live image and DXF overlay for improved visibility.

9. Hide overlay (F3)

Hide/show the chosen overlay without exiting the app.

10. Layers

If the DXF file contains more than one layer, each layer can be hidden or color overridden separately. Choose from 24 different colors to override the original colors in the DXF file and improve visibility or select the crossed out square at the bottom of the color menu to display the original colors in the DXF file.

11. Magnification level

Displays magnification level currently used.

12. Mounted lens

Shows current lens mounted on microscope

13. Activate annotation menu bar

Activate or deactivate the annotation menu bar. The menu bar is still accessible with a small icon in the top right corner of the monitor.

You can also use CTRL + ↑ to close the window and CTRL + ↓ to reopen it.

14. Close

Use this function or hold center button down for a few seconds to close the application.

Shortcut F1

Hide/show the search bar with this shortcut.