

flexfeeder XQ

Step-by-Step Guide Product setup

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1 Requirements

The flexfeeder is ready for use, according to document "[Step-by-Step-Guide flexfeeder-Installation.pdf](#)". In addition, the Calibration process according to "[Step-by-Step-Guide flexfeeder-Calibration.pdf](#)" has been carried out successfully.

2 Product setup: Feeder Job

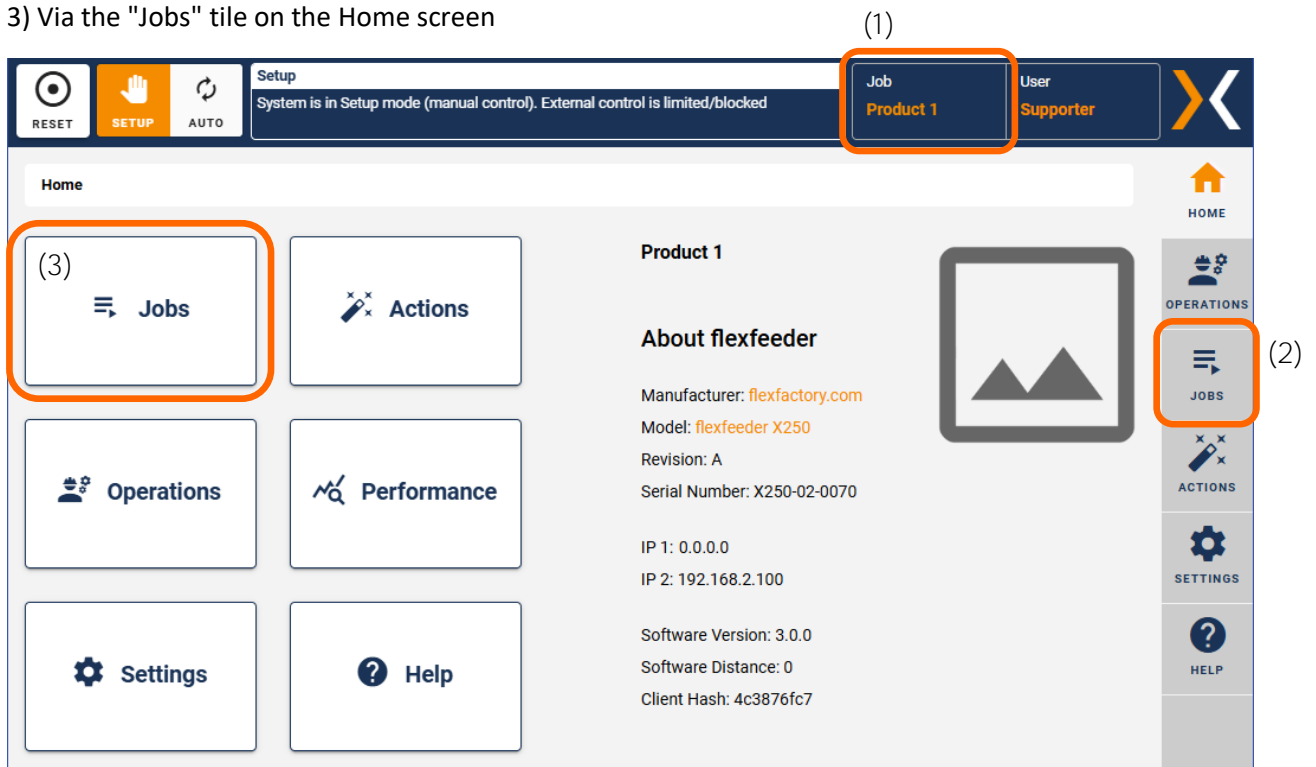
For each part (or "Product") a Feeder-job and a corresponding Camera-job must be created. This chapter describes how to set up the feeder job.

([Product setup: Camera job](#) – see chapter 3)

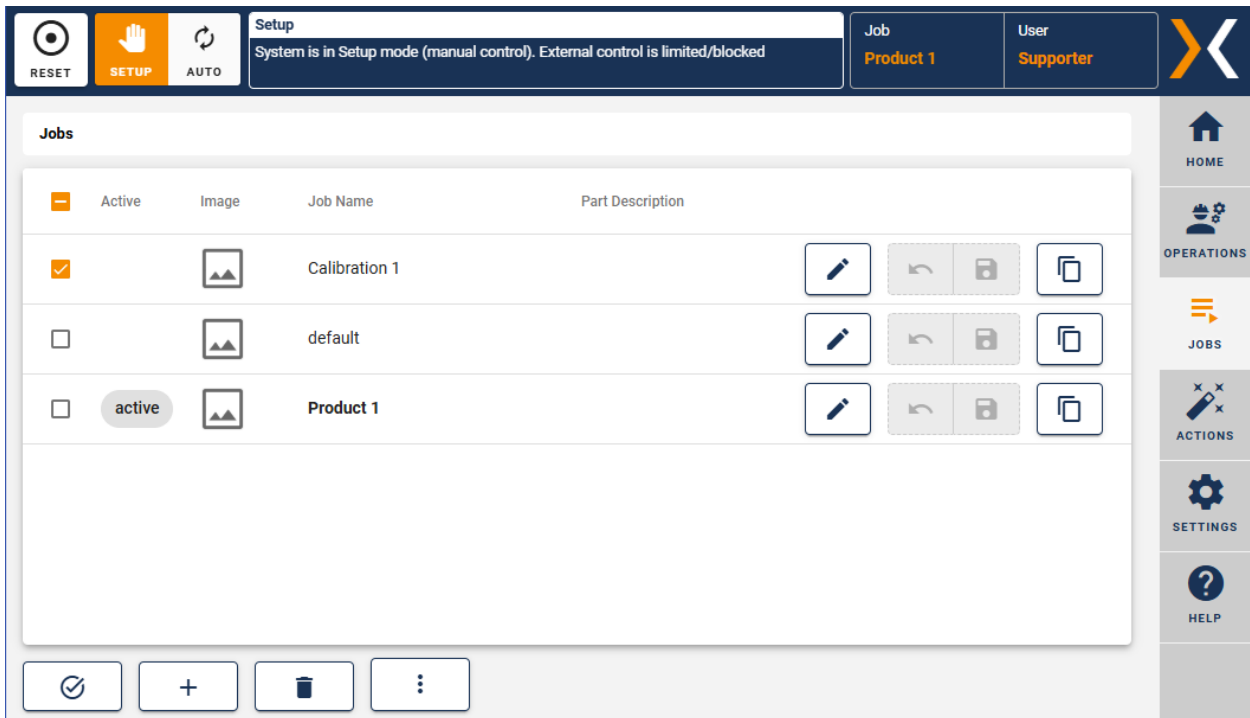
2.1 Job management

The feeder job management can be opened in different ways:

- 1) Via the "Job" field in the information bar at the top (the currently active job is displayed there)
- 2) Via the "Jobs" tab in the navigation bar on the right
- 3) Via the "Jobs" tile on the Home screen



On the "Jobs" page, feeder jobs can be created, copied, deleted, edited and activated:

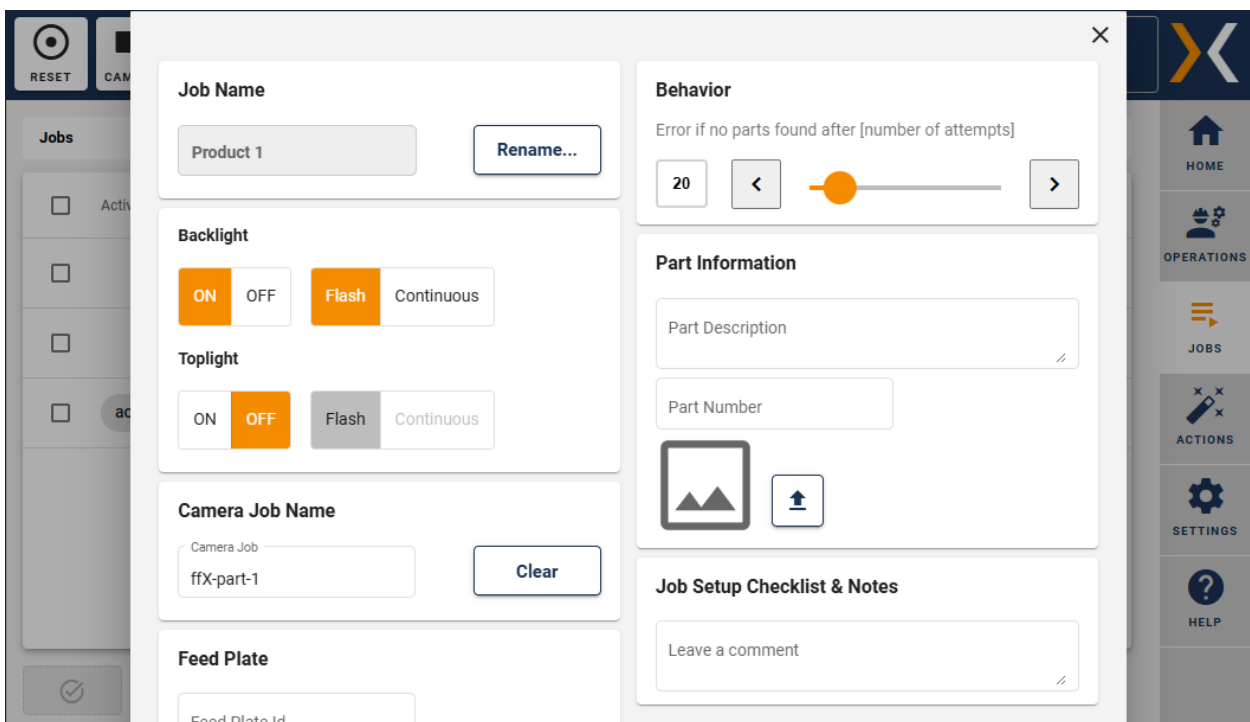


2.2 Job settings

The basic settings of a job can be adjusted using the pen symbol on the job page.

These settings are particularly important:

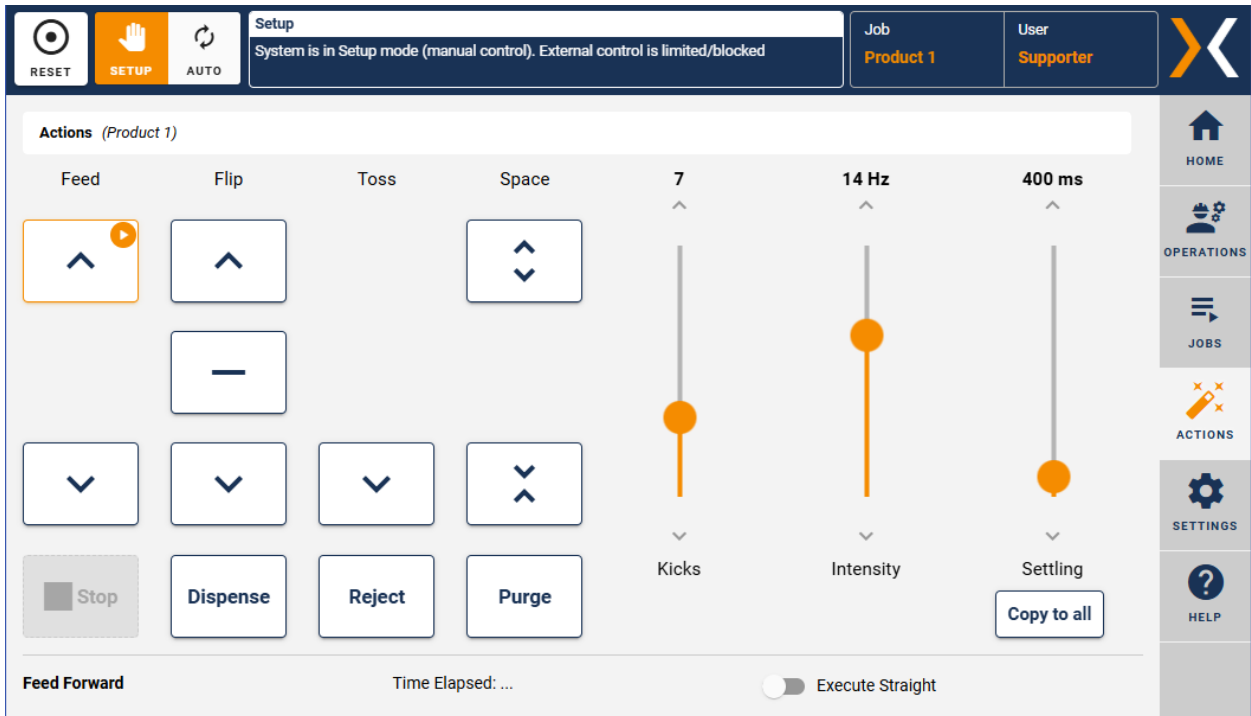
- Light Settings (correct lighting for the proper part recognition)
- Camera Job Name (assignment of the Cognex camera-job to the feeder-job on the flexfeeder)



2.3 Action parameters

In addition to the basic settings, the action parameters also belong to a feeder job. These parameters can be set for the active job on the 'Actions' tab and can also be executed there:

1. Select Action → orange play symbol and the corresponding values are displayed
2. Another click on a selected action executes this feeder action

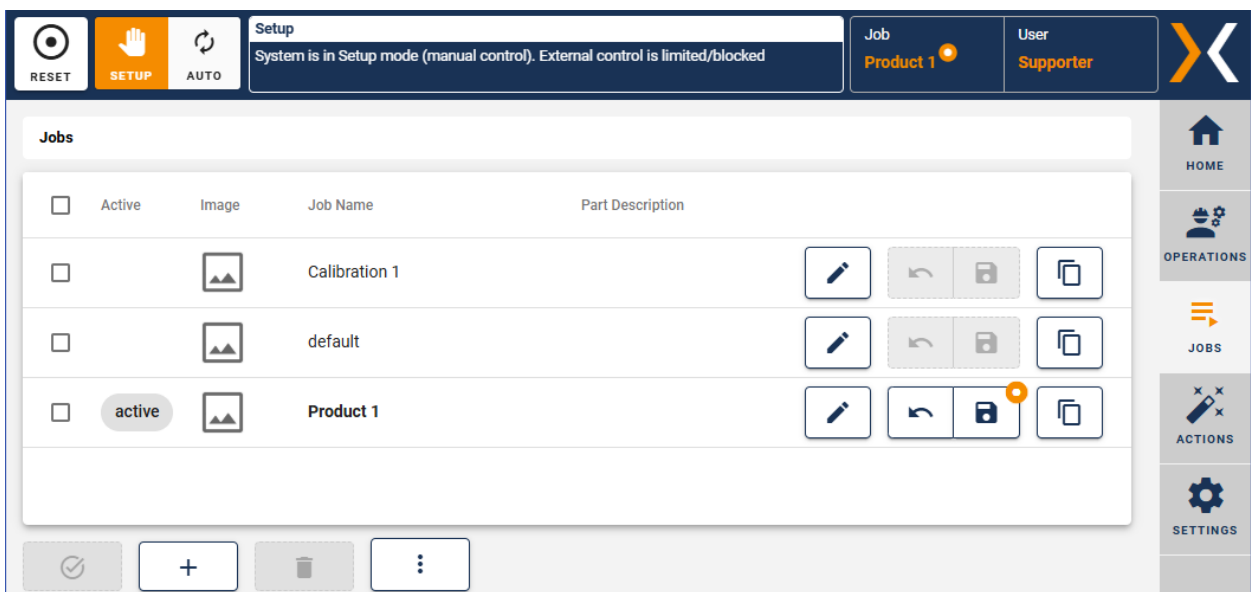


2.4 Save Feeder job

Whenever changes to an active feeder job are made, it is indicated by an orange dot next to the job name in the title bar:



On the job page, an orange dot near the disk symbol also indicates that changes have been made to the job. Here the changes can be saved or undone:



3 Product setup: Camera job

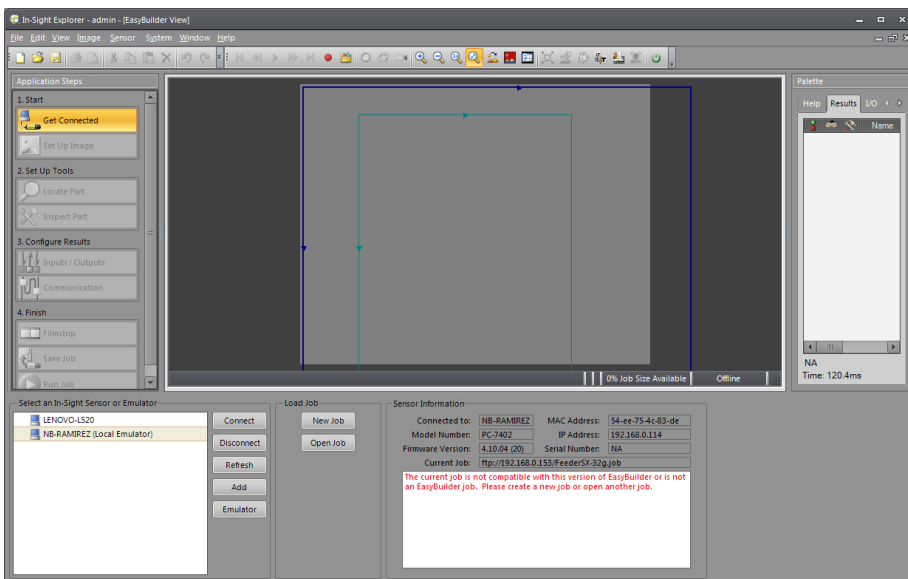
To set up the part recognition in the camera, you must first establish a connection between your computer and the camera/the image processing system. This requires the “In-Sight Explorer” software from Cognex, which can be downloaded free of charge under the following link:

<https://support.cognex.com/downloads/download/4064/1033>

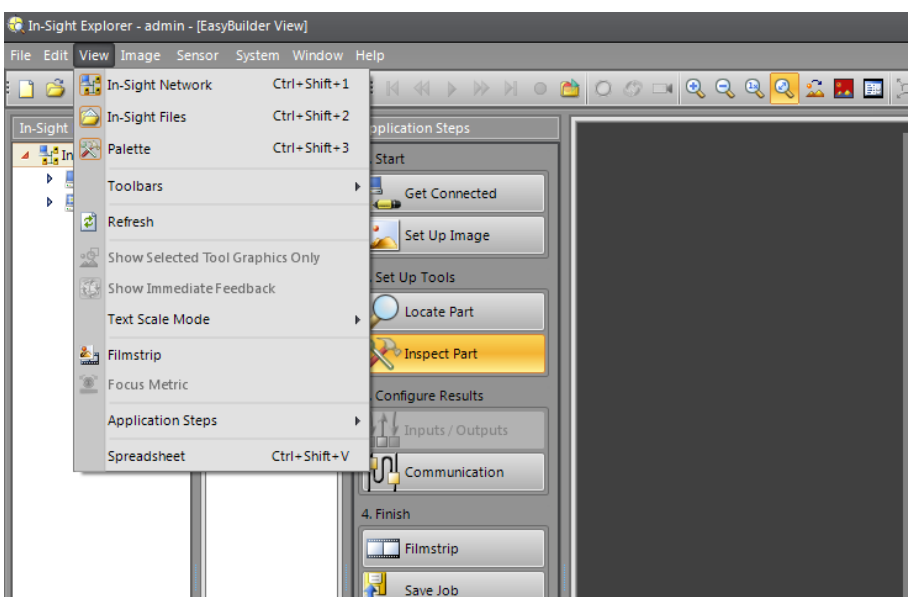
3.1 In-Sight Explorer configuration

After installing the In-Sight Explorer software, the program environment must be set up correctly in order to work with the feedWare recognition job. Please follow the steps below:

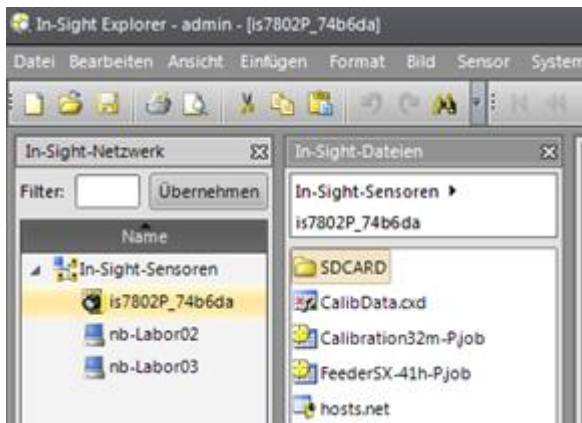
1. When you first start the In-Sight Explorer, the 'Easy-Builder' view is displayed, which we don't use (we need the 'Spreadsheet' view). So you see the following screen:



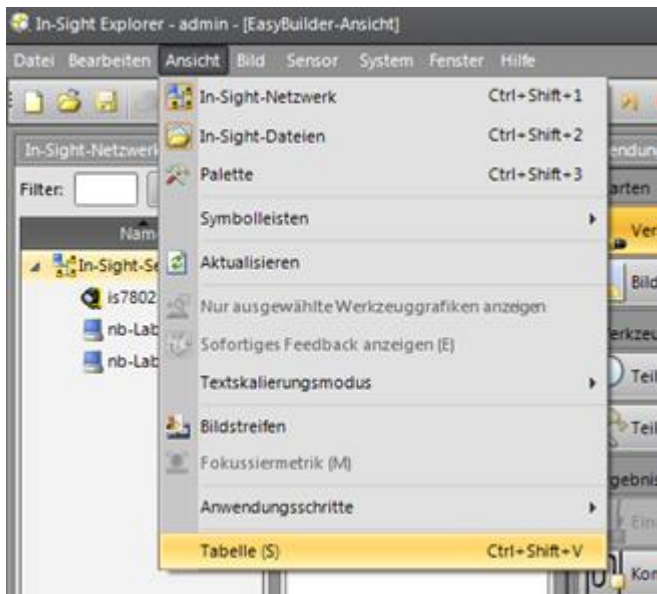
2. Go to «View» in the Menu bar and activate / deactivate the following items:
 - activate «In-Sight Network» (Ctrl+Shift+1)
 - activate «In-Sight Files» (Ctrl+Shift+2)
 - deactivate «Palette» (Ctrl+Shift+3)



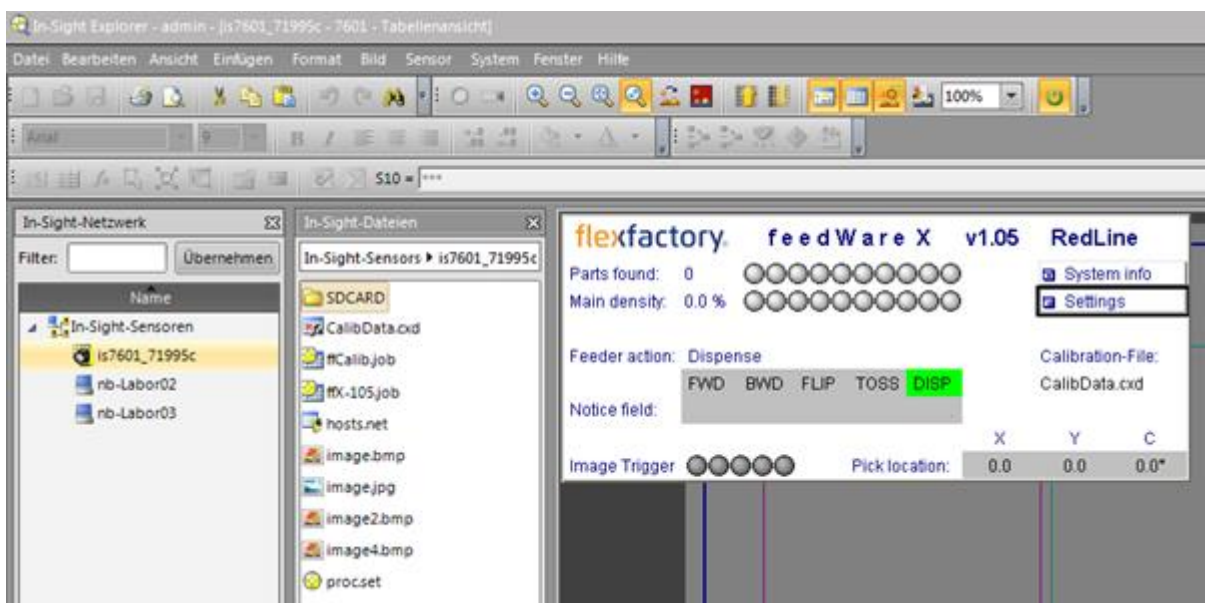
- Now double-click on the camera in the area «In-Sight Network» in order to connect to it.



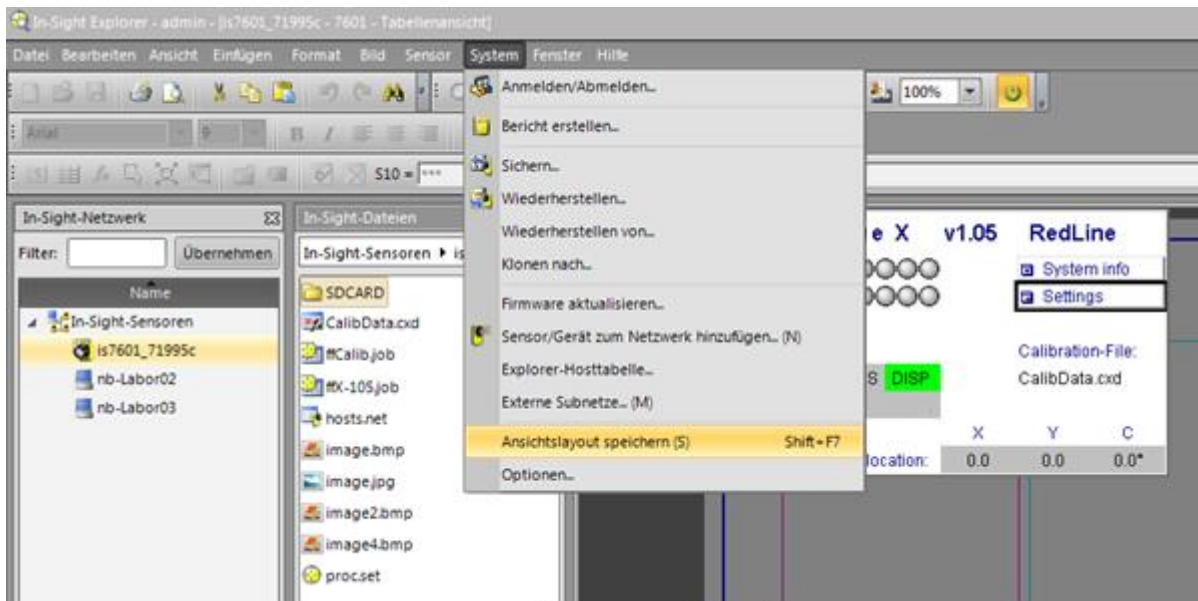
- Go again to the «View» menu und select «Spreadsheet» at the bottom of the drop-down menu:



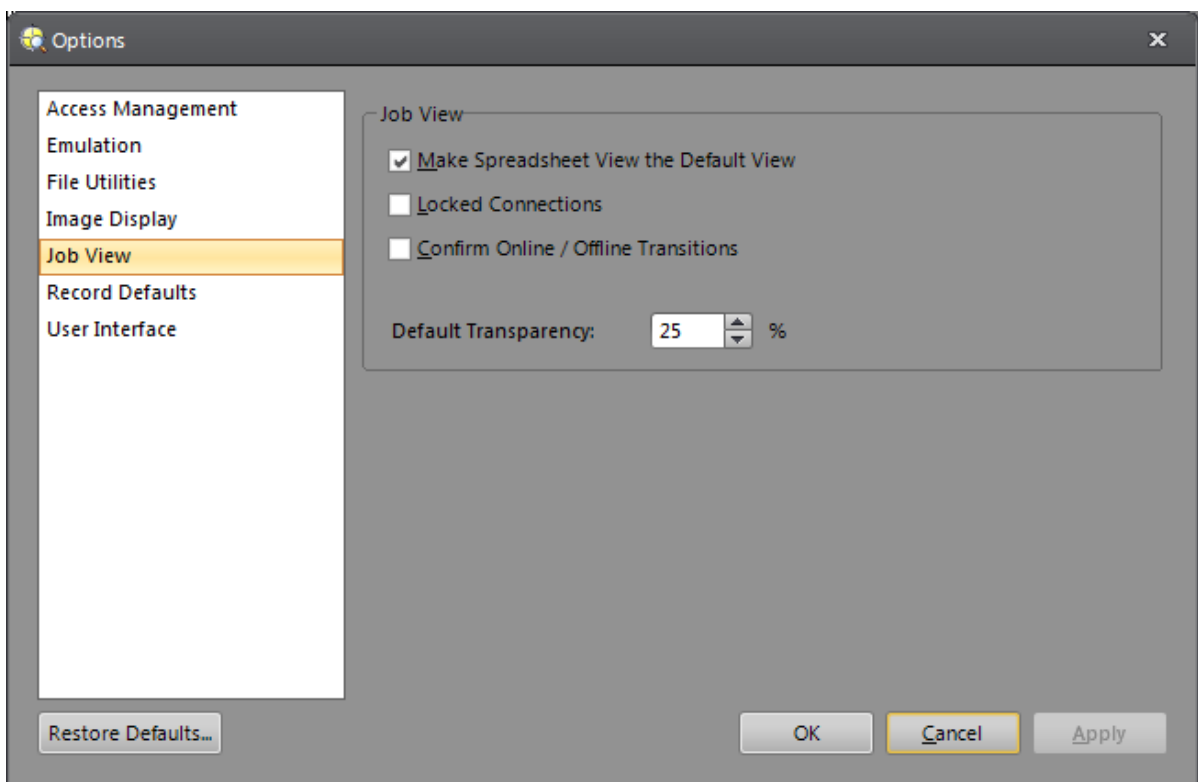
- Now you should see the following view with the feedWare user interface and the camera-jobs in the «In-Sight Files» section:



6. Save this view in the menu «System», «Save view layout (S)»:



7. Finally go to menu «System», «Options...» und there to the «Job view» section. Activate the option «Set spreadsheet view as default view» and deactivate 'Confirm Online/Offline':

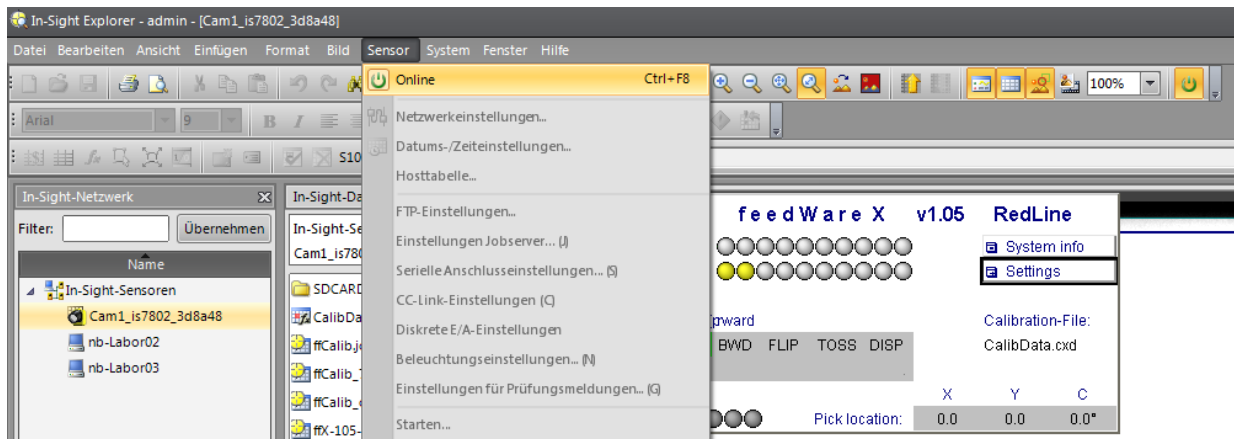


Note:

If there are problems with the connection to the camera or if the files on the camera are not displayed in the “In-Sight Files” area, this may be due to the computer’s firewall. Set the firewall so that your computer or the “In-Sight Explorer” program has unrestricted access to the camera.

3.2 Manual image acquisition

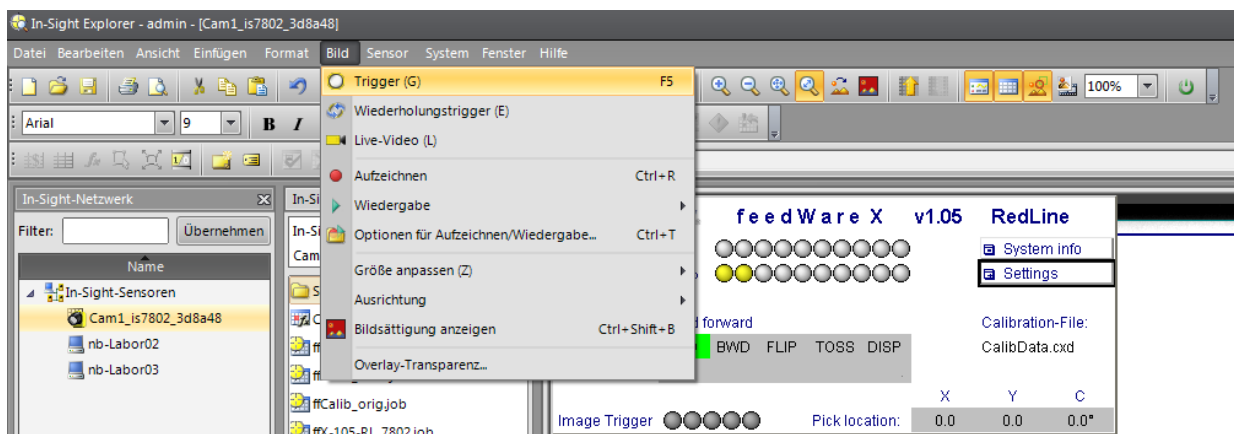
To manually trigger an image acquisition, you must switch the camera offline. This can be done via the menu «Sensor», «Online» or with the corresponding icon in the toolbar:



The On-/Offline State of the camera is displayed in the bottom right corner of the In-Sight Explorer:

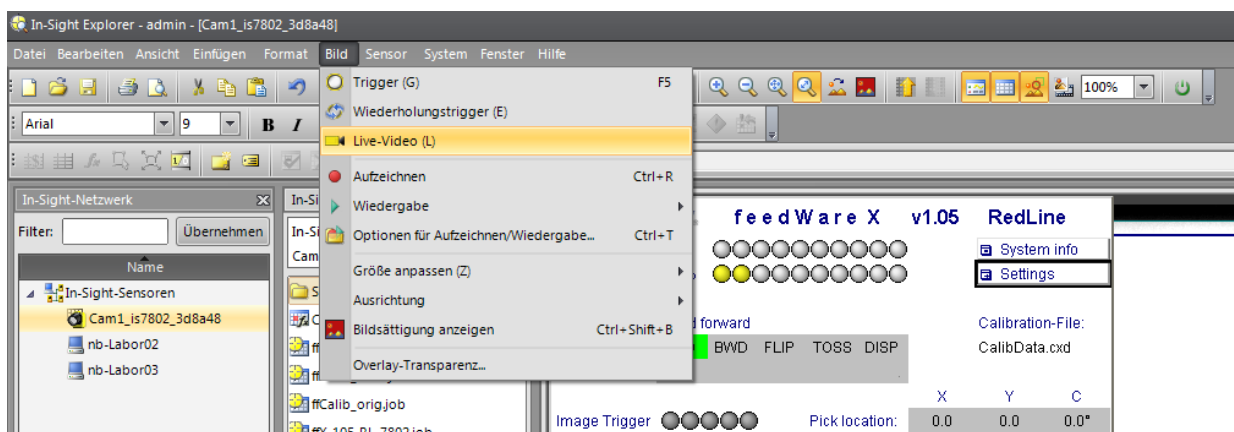


The image acquisition can now be triggered via the menu «Image», «Trigger» or via the corresponding icon in der toolbar:



3.3 Live-Video

To adjust the focus of the lens i.e. the sharpness of the image, set the camera to 'Live' mode. In this mode the camera continuously takes pictures so that you have visual feedback when you change the focus on the lens. The Live-mode can be started via the menu «Image», «Live-Video» or via the corresponding icon in der toolbar:



3.4 Load camera job

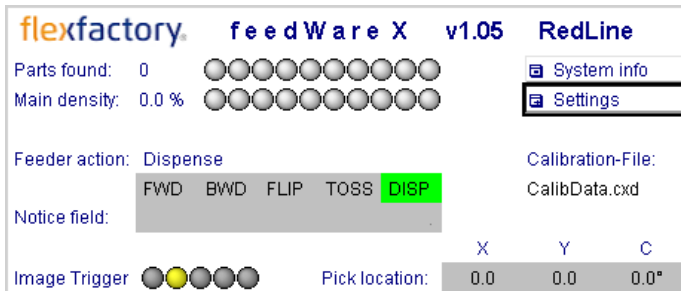
Select the desired Camera job and drag it into the image area with the mouse. Please note that the camera must be switched to "Offline" for this step. You should then see the user interface 'feedWare X', as shown in the next section.

Note that the camera jobs for production are different from the calibration job (ffCalib).

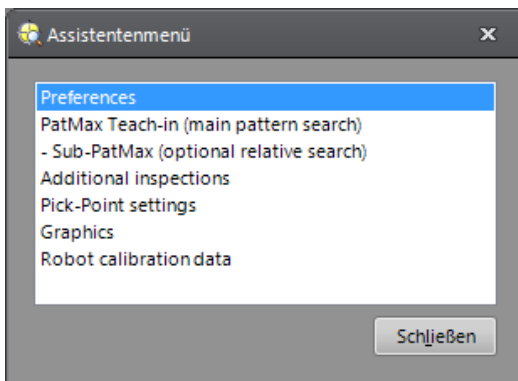
3.5 Adjust exposure time

The brightness of the image i.e. the exposure time is set via the feedWare camera job.

To do this, click on the «Settings» button:

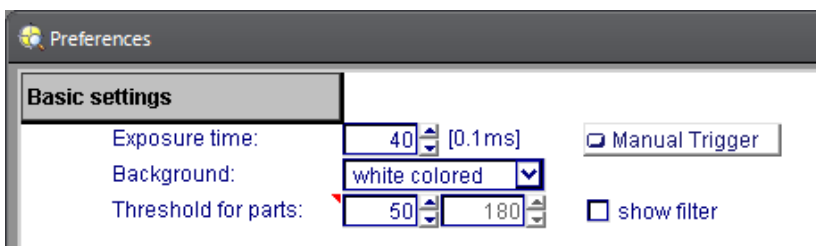


...and select «Preferences» from the sub-menu:



The exposure time can be adjusted in the «Preferences» menu at the top.

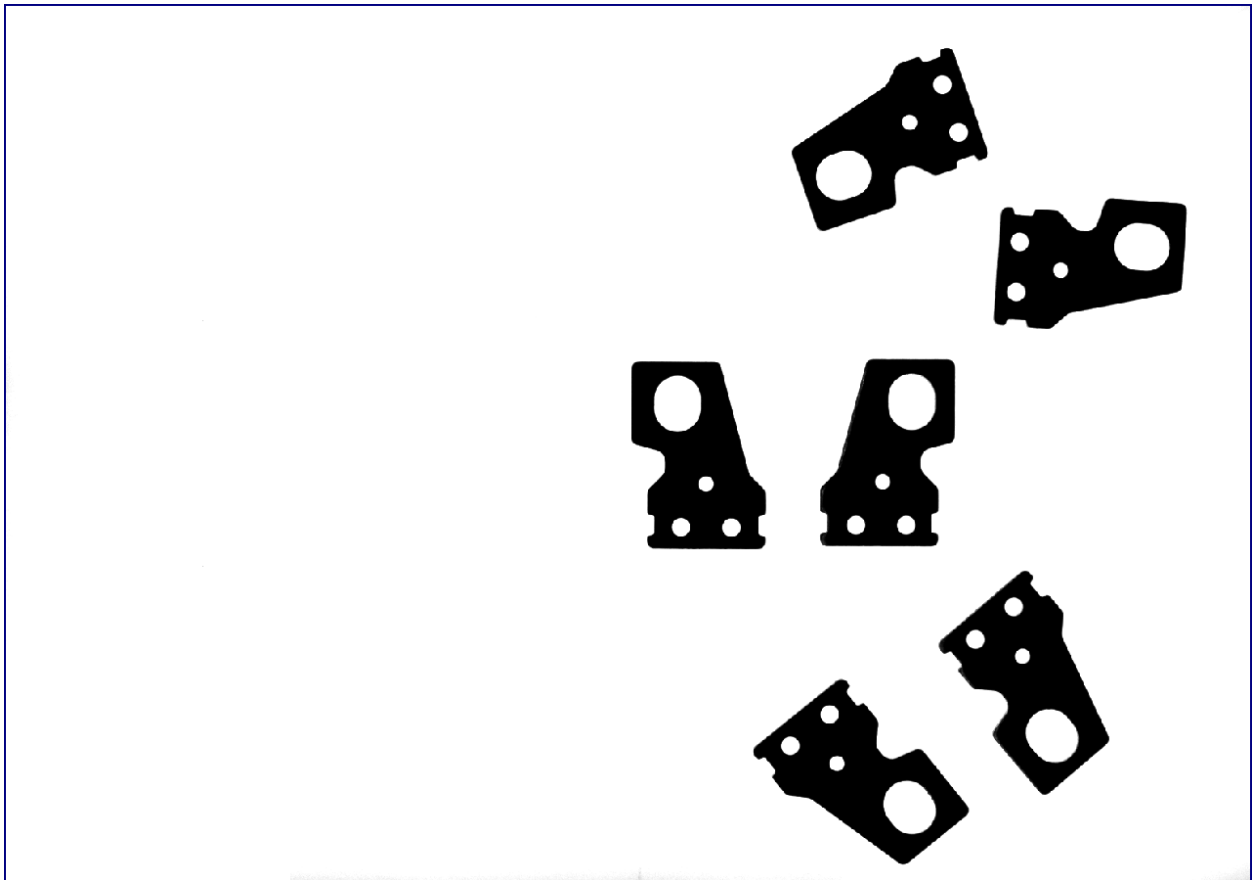
Use the button 'Manual Trigger' for image acquisition to check the setting of exposure time:



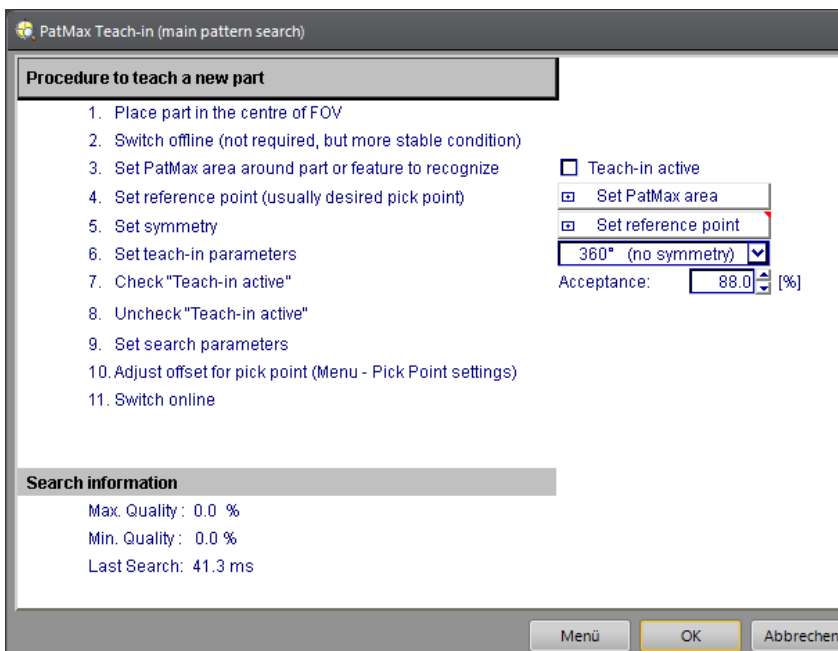
If the brightness of the image is correct, close this menu by clicking OK.

3.6 Recognition setup (Teach-in)

Once the image setting has been completed, you can start the teach-in of the part. First place the part in the center of the image (additional parts can be placed in the rear area so that the recognition can be checked in the same image). Then execute an image acquisition and save this image as a reference on the camera's SDCARD. To do this, go to menu «File» and select «Save Image As...»

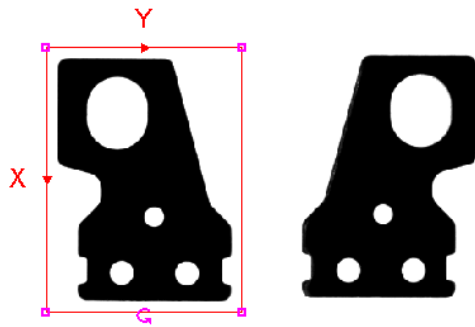


Next, go to «Settings» and select the second entry «PatMax Teach-in»

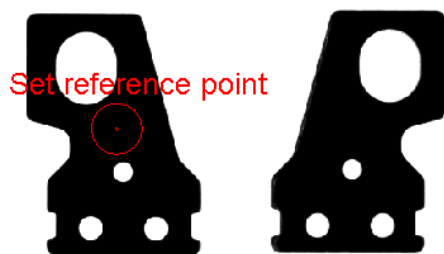


Click the button «Set PatMax area» and draw the rectangle around the part.
Acknowledge the setting with <Enter> or double-click.

Set PatMax area

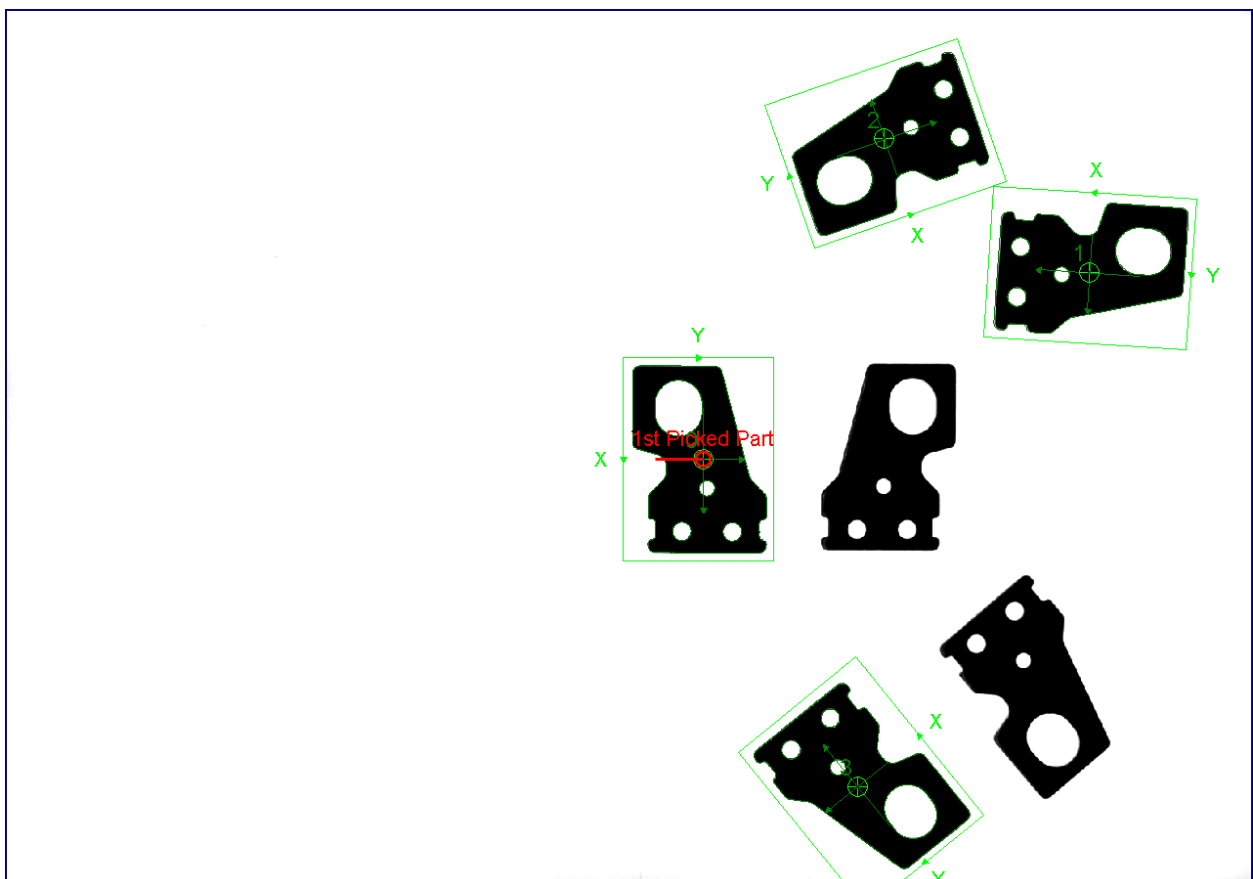


Then click the button «Set reference point» and set the point (the center of the two circles) roughly where the gripper center will be. This setting does not have to be accurate. Acknowledge with <Enter> or double-click.



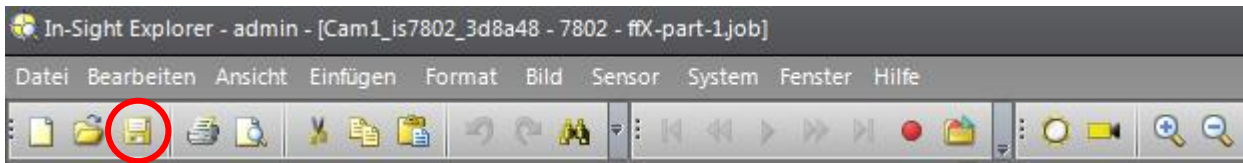
Now select the checkbox Teach-in active and deactivate it again immediately.

This teaches the pattern, i.e. the geometry of the part, as a reference and it is immediately searched for it in the image. Found parts are marked with a green rectangle:

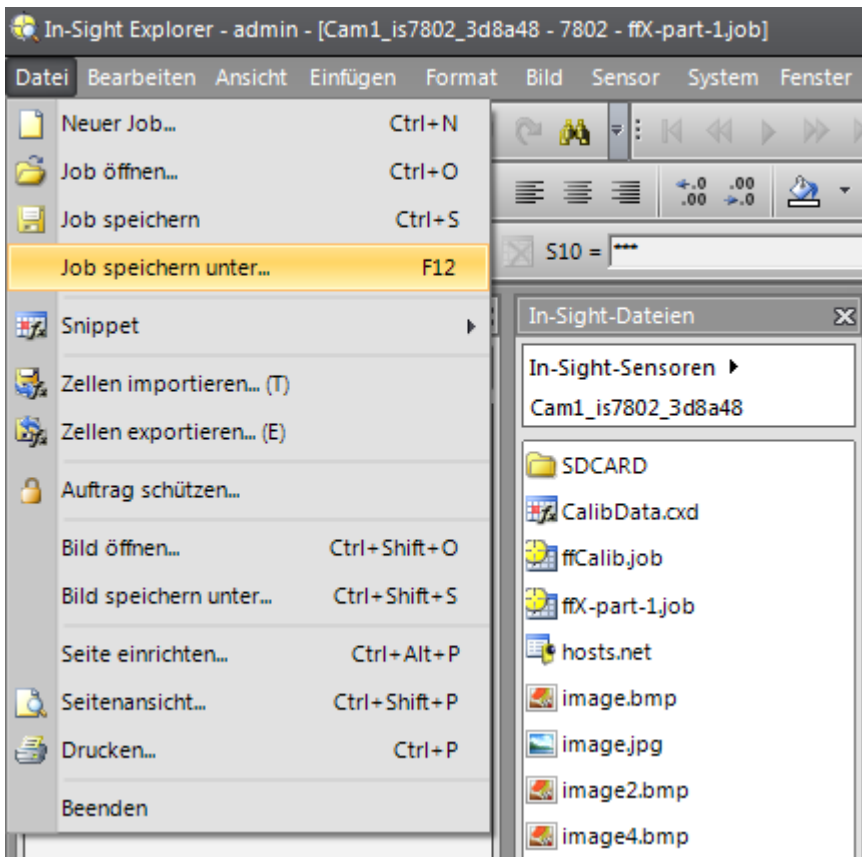


3.7 Save the camera job

To save the camera job, click on the disk icon in the toolbar on the left:



Or go to menu «**File**», «**Save Job As...**» if the job should be saved under a different name than the currently loaded job (displayed in the title bar of the In-Sight Explorer).



After the job has been saved, switch the camera "Online" again.