EN

DNNF024

Software wenglor weHub

Operating Instructions

Subject to change without notice
Available as PDF file only
Version 1.0.0
Revision level: 27.08.2025
www.wenglor.com

1. Table of Contents

1. General

1.1 Information Concerning these Instructions

- These instructions enable safe and efficient use of DNNF024.
- These instructions are an integral part of the product and must be kept on hand for the entire duration of its service life.
- Local accident prevention regulations and national work safety regulations must be complied with as well.
- The product is subject to further technical development, and thus the information contained in these operating instructions may also be subject to change. The current version can be found at www.wenglor.com in the product's separate download area.

NOTE!
The operating instructions must be read carefully before using the product and must be kept on hand for later reference.

1.2 Explanations of Symbols

- Safety precautions and warnings are emphasized by means of symbols and attention-getting words.
- Safe use of the product is only possible if these safety precautions and warnings are adhered to.

The safety precautions and warnings are laid out in accordance with the following principle:

ATTENTION-GETTING WORD!
Type and Source of Danger!
Possible consequences in the event that the hazard is disregarded.
- Measures for averting the hazard.

The meanings of the attention-getting words, as well as the scope of the associated hazards, are listed below:

DANGER!
This word indicates a hazard with a high degree of risk which, if not avoided, results in death or severe injury.

WARNING!
This word indicates a hazard with a medium degree of risk which, if not avoided, may result in death or severe injury.

CAUTION!
This word indicates a hazard with a low degree of risk which, if not avoided, may result in minor or moderate injury.

ATTENTION!
This word draws attention to a potentially hazardous situation which, if not avoided, may result in property damage.

NOTE!
A note draws attention to useful tips and suggestions, as well as information regarding efficient, error-free use.

1.3 Limitation of Liability

- The product has been developed taking into account the state of the art as well as the applicable standards and guidelines.
- We reserve the right to make technical changes.
- A valid declaration of conformity can be found at www.wenglor.com in the download area of the product.
- wenglor sensoric elektronische Geräte GmbH (hereinafter „wenglor“) accepts no liability for:
  - » Failure to observe the operating manual,
  - » Unsuitable or improper use of the product,
  - » Excessive use, incorrect or negligent treatment of the product,
  - » Incorrect installation or commissioning,
  - » Use of untrained personnel,
  - » Use of unauthorized spare parts or
  - » Improper or unauthorized changes, modifications or repair work to the products.
- This operating manual does not contain any guarantees/warrantees from wenglor with regard to the processes described or certain product properties.
- wenglor assumes no liability with regard to printing errors or other inaccuracies contained in this operating manual, unless it can be proven that wenglor was aware of the errors at the time the operating manual was created.

1.4 Copyrights

- The contents of these instructions are protected by copyright law.
- All rights are reserved by wenglor.
- Commercial reproduction or any other commercial use of the provided content and information, in particular graphics and images, is not permitted without previous written consent from wenglor.

2. For Your Safety

2.1 Use for Intended Purpose

The software wenglor weHub is a software to search and find machine vision devices in the network. It enables to adjust the network configuration of the devices so that it fits to the network configuration of the machine or the PC. Furthermore, it is an entry point to handle several machine vision devices in the same network and to access the device website in an easy way.

Supported Machine Vision devices:
- B60 Smart Camera
- 3D Sensor ShapeDrive MLxSx1x
- MVC Machine Vision Controller

Additionally, the software allows direct and seamless communication between the Machine Vision Device and AI Lab (https://ai-lab.wenglor.com/) for uploading of data (e.g. images) to AI Lab and for downloading of models to the Machine Vision Device. This functionality is only supported by the B60 Smart Camera and the MVC Machine Vision Controller. For details, see section „6.9 AI Loop to AI Lab“.

2.2 General Safety Precautions

NOTE!
- These instructions are an integral part of the product and must be kept on hand for the entire duration of its service life.
- In the event of possible changes, the respectively current version of the operating instructions can be accessed at www.wenglor.com in the product's download area.
- Read the operating instructions carefully before using the product.

3. Technical Data

Technical data	DNNF024
General data	
Use	• For B60 • For MLASx1x • For MLBSx1x • For MVC
Version	1.0.0
Language	DE, EN, FR, IT, ES, TR, ZH
Licensing model	Freeware
Function	
Configuration software	Yes
Diagnostics software	Yes
System requirements	
Processor (minimum)	Intel Core i3 (6th generation)
RAM (minimum)	2 GB RAM
Free hard disc space	500 MB
Minimum resolution	1024 x 768 Pixel
Maximum resolution	4096 x 2160 Pixel
Minimum browser versions	• Chrome 108 • Chromium 111 • Firefox 108 • Microsoft Edge 108
Operating system	
Windows 10, 64 bit	Yes
Windows 11	Yes
Interface	
Ethernet	Yes

4. Software Installation

The latest version of the software wenglor weHub is available on the wenglor website:
https://www.wenglor.com/product/DNNF024

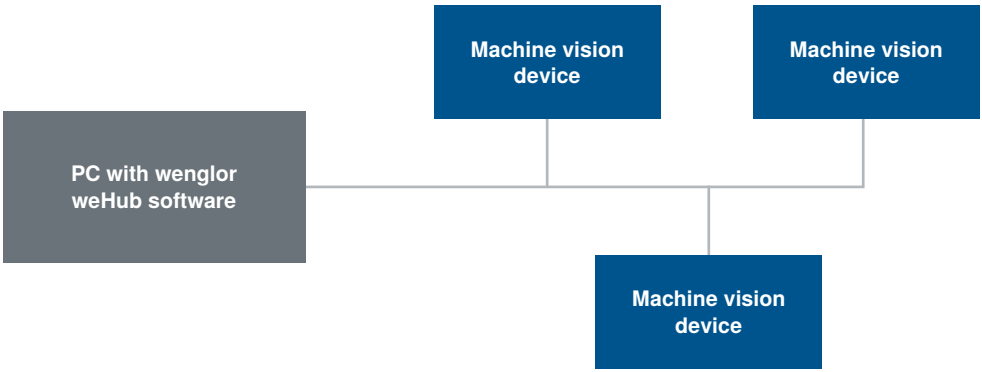
NOTE!
- Supported minimum browser versions (tested on Windows 10 22H2 and Windows 11 22H2 PCs):
  - » Chrome 108
  - » Firefox 108
  - » Microsoft Edge 108
  - » Chromium 111
- Accepting the license agreement is mandatory in order to install the software.
- Admin rights are necessary to install the software wenglor weHub.
- The software wenglor weHub is also available on the Machine Vision Controller MVC as part of the MVC firmware.

5. Network Overview

5.1 Network Cable Connection

Connect the network cable from the LAN Ethernet connector of the machine vision device to the PC with the wenglor weHub software or to a switch in order to bring several devices together.

NOTE!
- For details about the LAN Ethernet connector of the machine vision device, check the operating instructions of the device.
- Cabling must be capable of 1 Gbit/s throughout the entire network.
- Connecting machine vision devices via gateway to the PC with the wenglor weHub software is not supported.



5.2 Network Basics

The network part of the IP address of the machine vision device must coincide with the network part of the IP address of the PC with the wenglor weHub software. The device part of the IP address must be different for the machine vision device and the PC.

Address format for IPv4:

	Network part	**Device part** (host part)
IP address	192.168.100.	**001**
Subnet mask	255.255.255.	**000**

Use the wenglor weHub software to:
- See the network settings of the PC
- See and edit the network settings of the machine vision device in order to bring it in the same network like the PC, e.g.:

5.3 Network Settings of PC with wenglor weHub Software

Open the network settings of the PC and make sure that the network configuration fits, e.g. use the static IPv4 address:
- IP address: 192.168.101.2
- Subnet mask: 255.255.255.0
- Gateway: 0.0.0.0

NOTE!
- By default, the IP address of the network adapter card of the PC is set to obtain the IP address by DHCP server (automatic allocation). Change the setting to a static IP address and select a unique IP address in the network.
- For details about the network settings of the PC, check the operating instructions of the operating system.

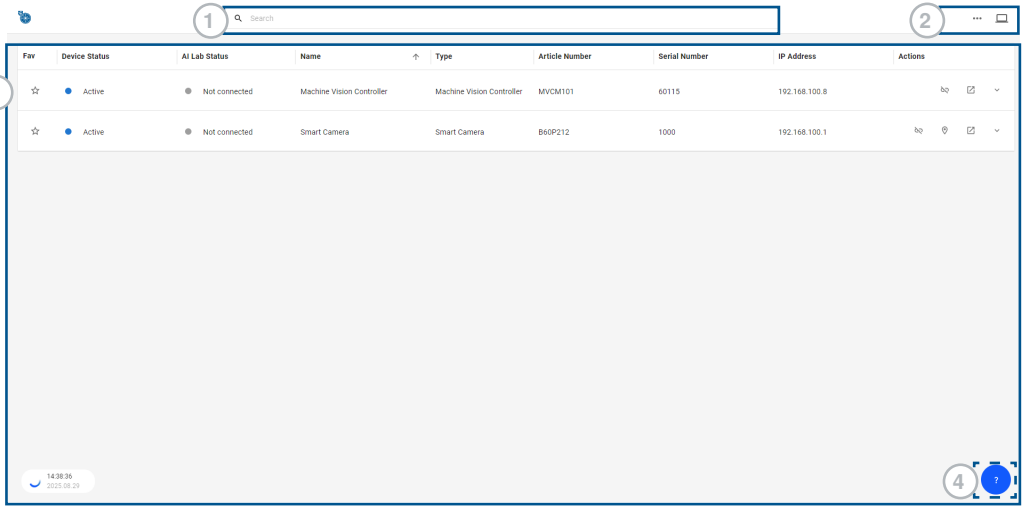
5.4 Default LAN Ethernet Settings of Machine Vision Device

Default LAN Ethernet settings of machine vision devices:
- IP address: 192.168.100.1
- Subnet mask: 255.255.255.0
- Gateway: 0.0.0.0

6. wenglor weHub Software

6.1 Structure

The wenglor weHub software is divided in several areas:
1: Device Search
2: Icon Menu Bar
3: Workspace
4: Help Button (see “6.10 Help Button” on page 25).

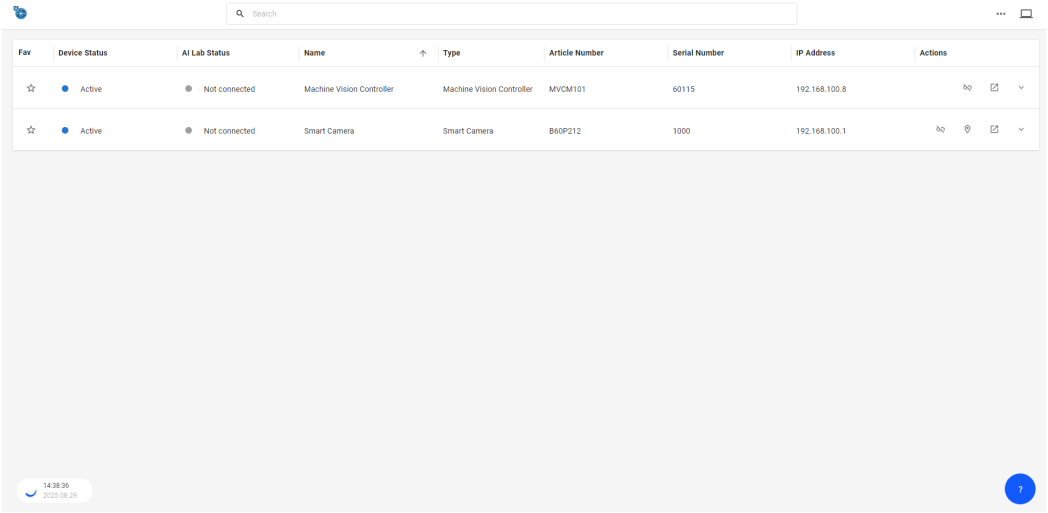


6.2 Finding Machine Vision Devices

Starting the wenglor weHub software opens the default browser on the PC and lists all machine vision devices of the network in the workspace area.

NOTE!

- Use the device search in case of several machine vision devices in the same network.
- The wenglor weHub software finds machine vision devices even if they are in a different subnet.
- Connecting machine vision devices via gateway to the PC with the wenglor weHub software is not supported.
- On the Machine Vision controller the software wenglor weHub finds the MVC itself and Machine Vision Devices that are connected via the LAN Ethernet connectors of the MVC.



If the device is not in the list, please check the following points:

1. Check the power supply of the machine vision device and wait until the device has booted completely.
2. Check the Ethernet connection between the machine vision device and the PC.
3. Make sure that UDP communication on port 33001 and 33002 is possible in the firewall settings of the PC and that the ports 33001 and 33002 are available (not used by any other user or any other application on the PC).

NOTE!

The Windows firewall may block some functions of the software wenglor weHub. In order to prevent this, the software must be granted access for communication via private and public networks or completely deactivate the Windows firewall.

4. Make sure that the IP address of the PC with the software wenglor weHub is unique within the network. Otherwise it might be possible that the PC automatically gets a different network configuration. This does not allow the wenglor weHub software to bind on the ip and port. On Windows PCs you can check the current network configuration via ipconfig.

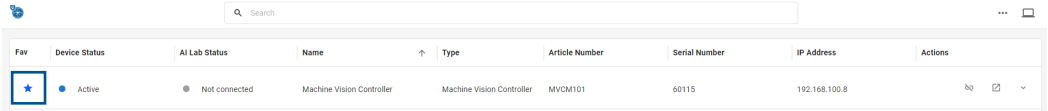
5. Make sure that the PC with the software wenglor weHub has a different network configuration than the machine vision device. In case of booting the machine vision device later with the same network configuration like the PC, it cannot be found by the wenglor weHub software. Change the network settings of the PC with the software wenglor weHub to a unique network configuration within the network in order to find the machine vision device.
6. Reset the network settings on the machine vision device by pressing the button on the device and releasing it between 10 and 15 seconds. During such time, the Device Status LED on the device is blinking very fast in blue color to signal the network reset time. The device automatically performs a reboot in case of a network reset. It starts with the default network settings (see “5.4 Default LAN Ethernet Settings of Machine Vision Device” on page 8).

NOTE!
- The button is not available on every machine vision device. For details about availability and position of the button, check the operating instructions of the machine vision device.
- To prevent unwanted network changes of the machine vision device via pressing the button, deactivate the button functionality on the device website. For details, check the operating instructions of the machine vision device.

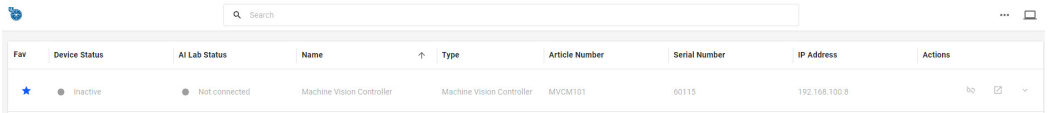
7. Access directly the device website via entering the IP address of the machine vision device in any supported browser. The default IP address of the device is 192.168.100.1 and the default subnet mask is 255.255.255.0. Please use a unique and static network configuration in the same network on your PC (e.g. IP address 192.168.100.10 and subnet mask 255.255.255.0).

6.3 Favorites

Mark frequently used devices as favorite (Fav) by pressing the star symbol at the device.



NOTE!
Devices marked as favorites remain in the list even if the devices are not available. Not available devices are shown with the device status “Inactive” (greyed out). It is not possible to change any setting of the machine vision device if inactive.



6.4 Localize

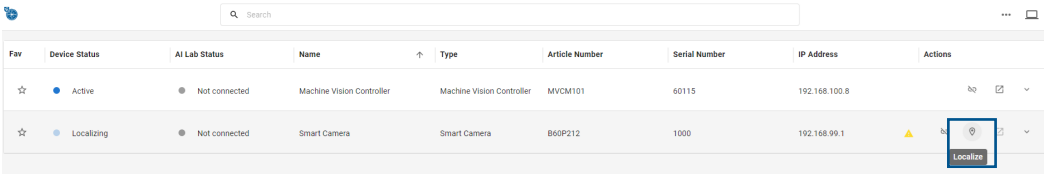
Localizing helps to differentiate in an easy way between several machine vision devices in the same network. If activated, the Device Status LED of the device blinks blue and the device status in the software shows “Localizing” to highlight one specific device. Localizing can be activated by pressing the button in the wenglor weHub software or by pressing the button on the machine vision device.

NOTE!

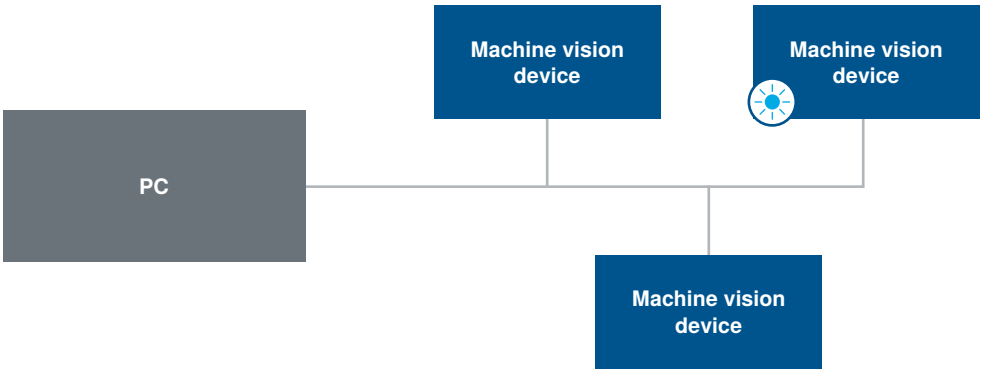
- The button is not available on every machine vision device. For details about availability and position of the button, check the operating instructions of the machine vision device.
- To prevent unwanted blue blinking of the machine vision device via pressing the button, deactivate the button functionality on the device website. For details, check the operating instructions of the machine vision device
- Deactivate localizing by pressing the button again in the wenglor weHub software or on the machine vision device.

6.4.1 Start via wenglor weHub Software

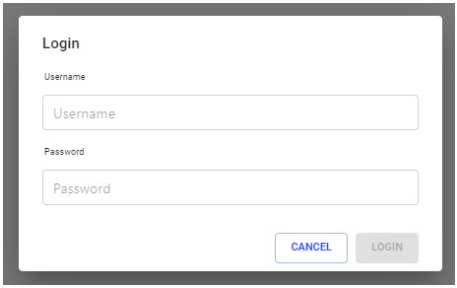
Activate localizing by pressing the “Localize” button in the software.



The device status LED of the relevant machine vision device is blinking blue.



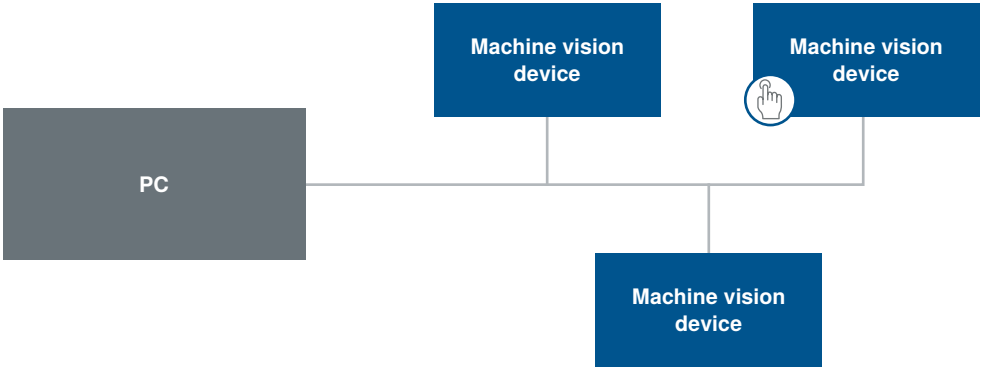
NOTE!
If authentification is activated on the device, entering username and password is necessary to start or stop localizing of the machine vision device. For details, check the operating instructions of the machine vision device.



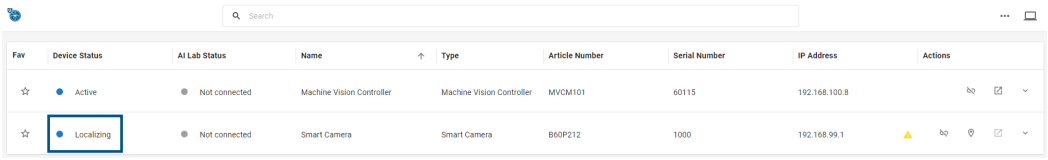
6.4.2 Start on Machine Vision Device

Activate localizing by pressing the button on the machine vision device. Pressing the button and releasing it between 3 and 6 seconds starts localizing. During such time, a preview of localizing is shown at the Device Status LED of the device to signal the localizing timing interval.

NOTE!
The button is not available on every machine vision device. For details about availability and position of the button, check the operating instructions of the machine vision device.



The device status in the wenglor weHub software shows “Localizing” at the relevant device and the device is blinking blue.



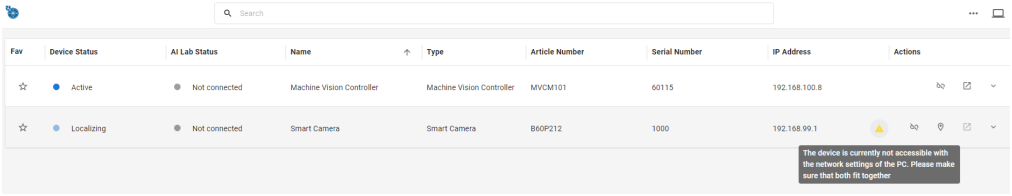
6.5 Device Status

The device status in the wenglor weHub software signals the following states:
- Blue: Active (running)
- Blue blinking: Localizing (device is blinking, see “6.4 Localize” on page 12)
- Yellow: WARNING (e.g. unwanted position change)
- Red: ERROR (e.g. crashed software service)

NOTE!
Depending on the device, different warning and error states are available. For details, check the operating instructions of the machine vision device.

6.6 Edit Name and Network Configuration

If the network settings of the machine vision device do not fit to the PC network settings, a warning symbol next to the IP address of the device shows the mismatch.

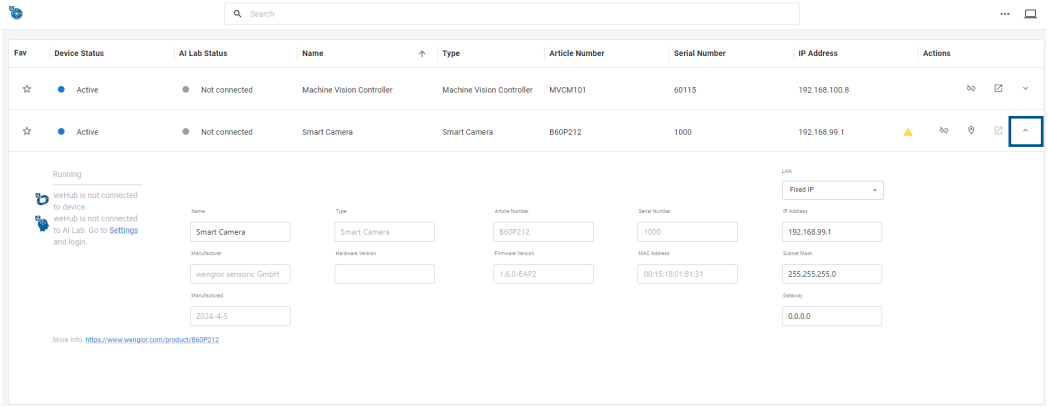


Open the extended device view in order to edit the name or the LAN Ethernet settings of the device.

- Name (limited to 63 characters)
- LAN Ethernet setting with options:
  - » Fixed IP: Set fix IP address, subnet mask and gateway of the machine vision device.
  - » Obtain IP: DHCP server in the network can assign network settings automatically to the machine vision device. Only supported by the B60 Smart Camera and the MVC Machine Vision Controller.

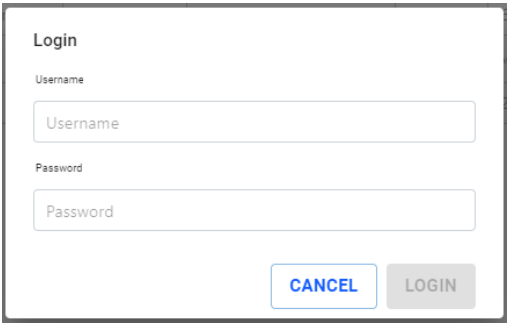
NOTE!

- Make sure to use a unique network configuration for the LAN connector of the Machine Vision Device within the LAN network. Furthermore, the network configuration of the LAN port must be different to the network configuration of the RTE port of the Machine Vision Device. For details about suitable network settings, see “5.2 Network Basics” on page 8.
- On the Machine Vision Controller MVC, the network configuration of the LAN connector needs to be different to the network configuration of the CAM ports. The network configuration of the CAM ports on the MVC is fix and reserved. Trying to use one of the reserved IP addresses results into an error message. The following IP addresses are reserved for the CAM ports of the MVC:
  - » 192.168.90.1 - 192.168.90.255
  - » 192.168.91.1 - 192.168.91.255
  - » 192.168.92.1 - 192.168.92.255
  - » 192.168.93.1 - 192.168.93.255
- Furthermore, the following IP addresses are reserved for all Machine Vision Devices and not allowed at the LAN port:
  - » 169.254.0.0/16 (not allowed at Machine Vision Controller MVC)
  - » 0.0.0.0/8
  - » 1.0.0.0/8
  - » 127.0.0.0/8
  - » 224.0.0.0/4
  - » 233.252.0.0/24
  - » 240.0.0.0/4
  - » 255.255.255.255/3

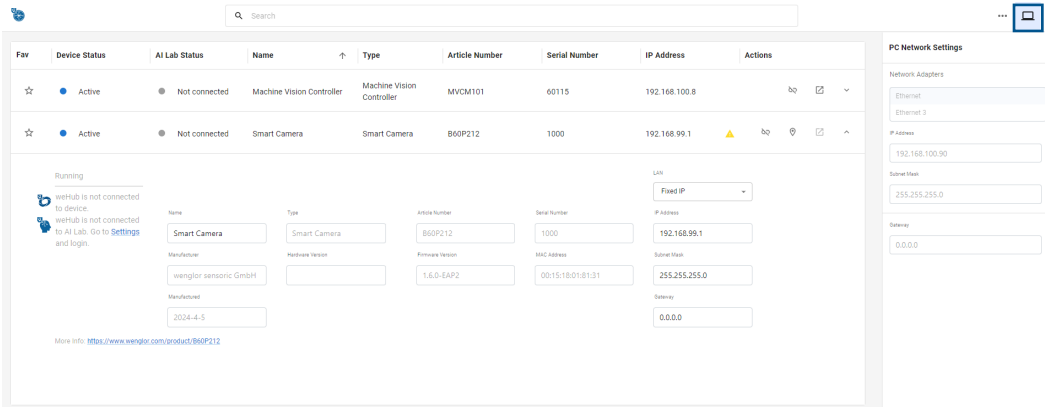


NOTE!

- If the network configuration of the machine vision device is set to DHCP and there is no DHCP server in the network, the machine vision device will start after a certain time with a backup network configuration.
- If authentification is activated on the device, entering username and password is necessary to edit name or network configuration of the machine vision device. For details, check the operating instructions of the machine vision device.



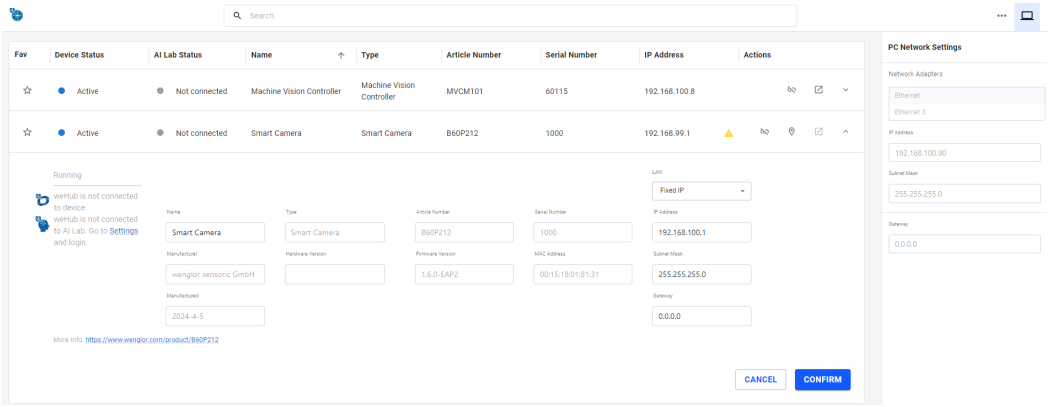
Open the PC network settings by pressing the PC button in the icon menu bar in order to see the current network settings of the used Ethernet adapter of the PC.



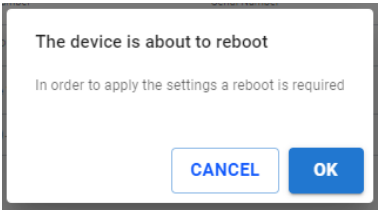
NOTE!

- If no device is in extended device view, different PC network adapters can be selected to check the network settings of all available PC network adapters.
- Only wired network adapters of the PC appear (no wireless network adapters).
- In the software wenglor weHub on the Machine Vision Controller MVC, the network adapters of LAN and local host (lo) are shown and only Machine Vision Devices attached to the LAN connectors and the MVC itself (via local host) appear in the list.

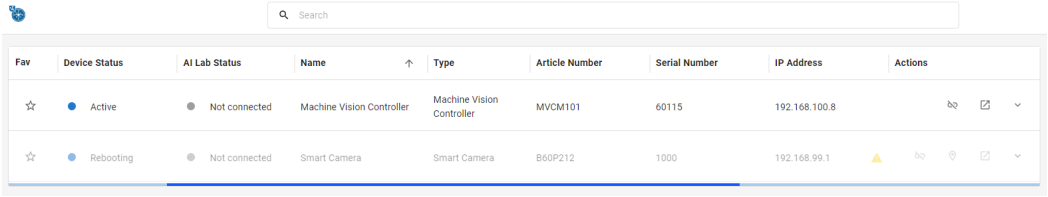
If name or network configuration of the machine vision device are changed, the buttons Confirm and Cancel appear. Press Confirm to send the settings to the device.



The machine vision devices needs a reboot in order to apply network changes.

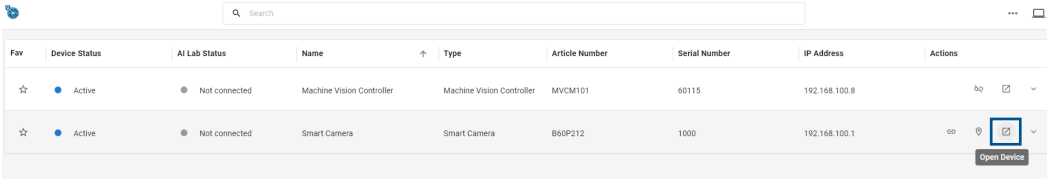


Press OK to apply the network change via a device reboot.



6.7 Access Device Website

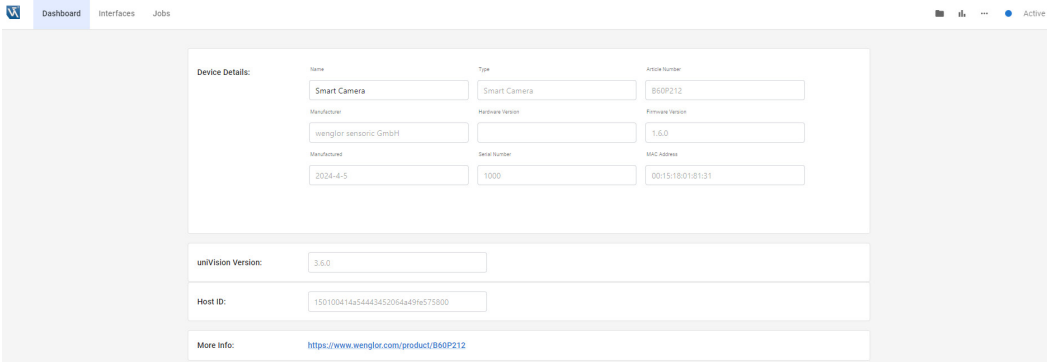
Click on “Open Device” in order to access the device website.



NOTE!

- If the machine vision device is in a different subnet and not accessible, the button “Open Device” is disabled.
- If the wenglor weHub software does not find the machine vision device, it might be possible to access the device website directly via entering the IP address in the browser (for details see “6.2 Finding Machine Vision Devices” on page 10).

A new tab in the browser is opened with the device website.

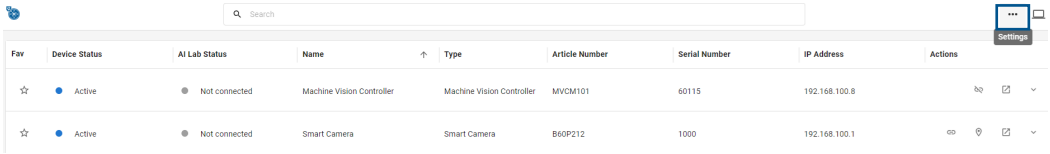


NOTE!

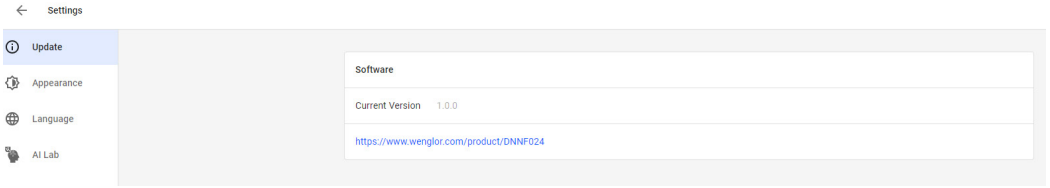
The device website is described in the operating instructions of the machine vision device.

6.8 Settings

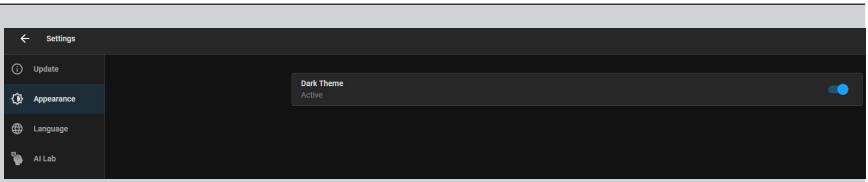
Click on the “Settings” icon in the menu icon bar in order to open the settings of the wenglor weHub software.



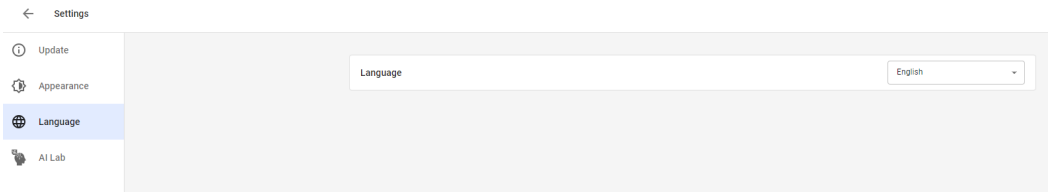
The side navigation “Update” shows the current version of the wenglor weHub software. Clicking on the link opens a new tab in the browser to the product detail page on the wenglor website in order to download the latest software version. Internet access is necessary to open the link.



The side navigation “Appearance” allows to switch between bright and dark theme.

Bright theme	
Dark theme	

The side navigation “Language” allows to change the user language (DE, EN, FR, IT, ES, TR, ZH).



6.9 AI Loop to AI Lab

6.9.1 Basics

The software weHub provides direct and seamless communication between the Machine Vision Device and AI Lab (https://ai-lab.wenglor.com/). It enabled to upload data (e.g. images) from the Machine Vision Device to AI Lab for labeling of data and for training of AI models. Furthermore, it enables to download models from AI Lab to the Machine Vision Device in order to execute the model on the Machine Vision Device (in Module Image AI within the uniVision job).

Supported Machine Vision Devices:

- B60 Smart Camera
- MVC Machine Vision Controller

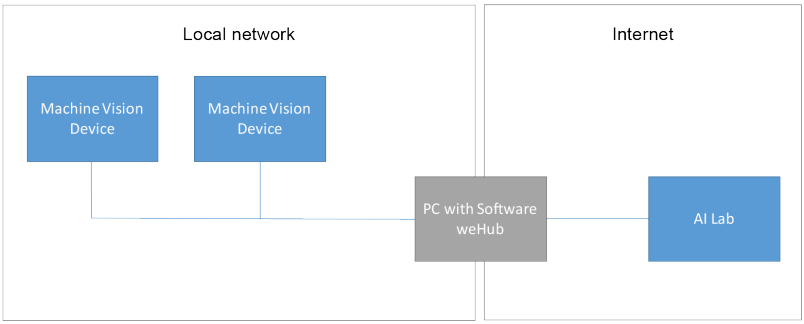
NOTE!

- For details about the AI Loop, check the separate interface protocol for AI Loop.
- The weHub software creates a TCP connection to the Machine Vision Device. It uses the port 5558 for data upload and the port 5559 for model download. Make sure that the ports are not in use by another application and that the network does not block the ports.
- The communication from the weHub software to AI Lab works via HTTPS on the ports 80 and 443.

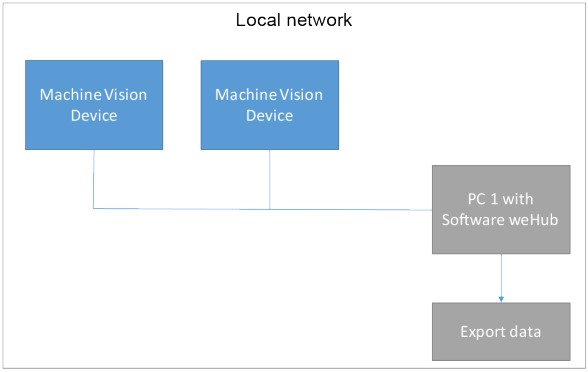
6.9.2 Setup

weHub with access to Machine Vision Device and AI Lab

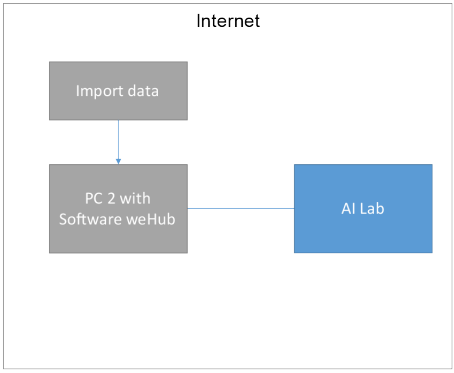
Use the weHub software with access to AI Lab (requires internet connection) and to the Machine Vision Device in the local network in order to upload data and to download models (recommended).



Export data at one weHub and import it in another weHub
Furthermore, it is possible to use one PC with the software weHub to collect and store data (e.g. images) in case of no internet connection at the PC. Once data collection is finished, export the data into a zip file in the software weHub. Copy the zip file to another PC with connection to AI Lab and import it in the software weHub. Importing requires a valid connection to AI Lab as it registers the Machine Vision Devices used for data collection in AI Lab. weHub uploads the data automatically to AI Lab. Model download via weHub is not supported in this use case. Alternatively, download the model in AI Lab, copy the model to the PC with access to the Machine Vision Device and load the model from file in Module Image AI (within uniVision job).



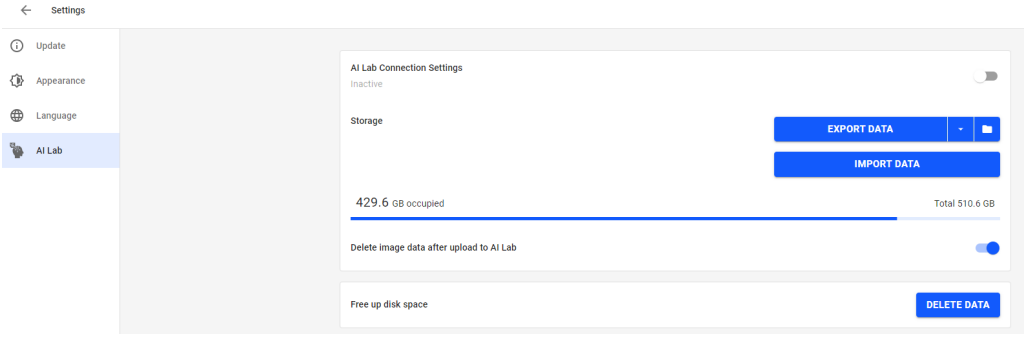
Step 1: Collect and store data in weHub software on PC 1. Export dat to zip file.



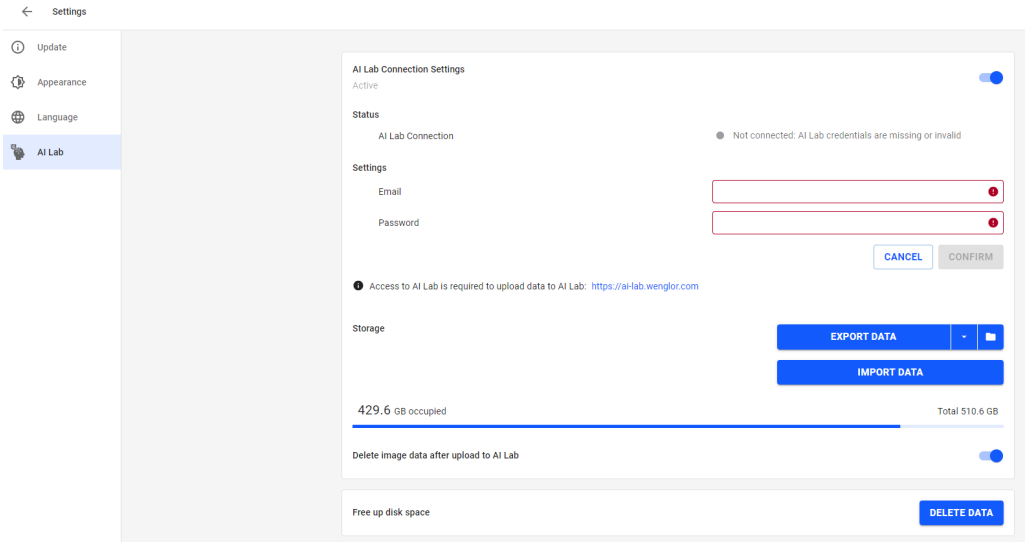
Step 2: Import and upload data to AI Lab on PC 2 (with AI Lab connection).

6.9.3 Settings

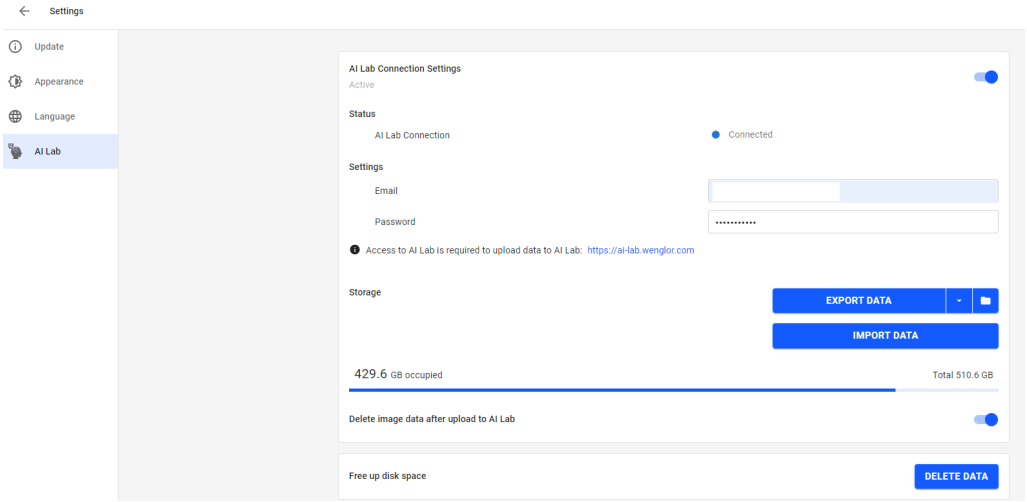
Click in the weHub software on the “Settings” icon and then in the side menu on “AI Lab”.



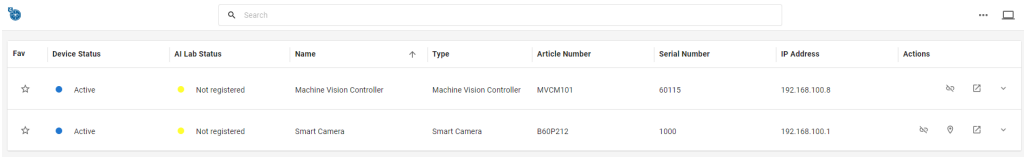
Enable “AI Lab Connection Settings” in order to connect from the weHub software to AI Lab.



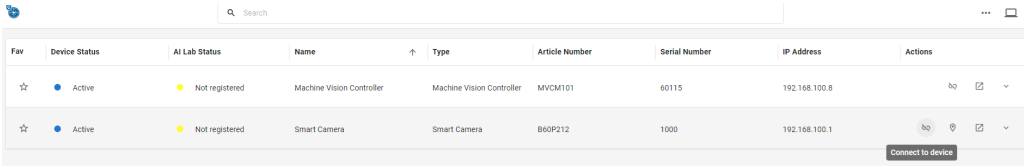
Enter your “Email” and “Password” to connect. It requires at first to create an account at AI Lab (https://ai-lab.wenglor.com/). Use the same login data in the weHub software. In case of a valid connection to AI Lab, the “AI Lab Connection” status switches to “Connected”.



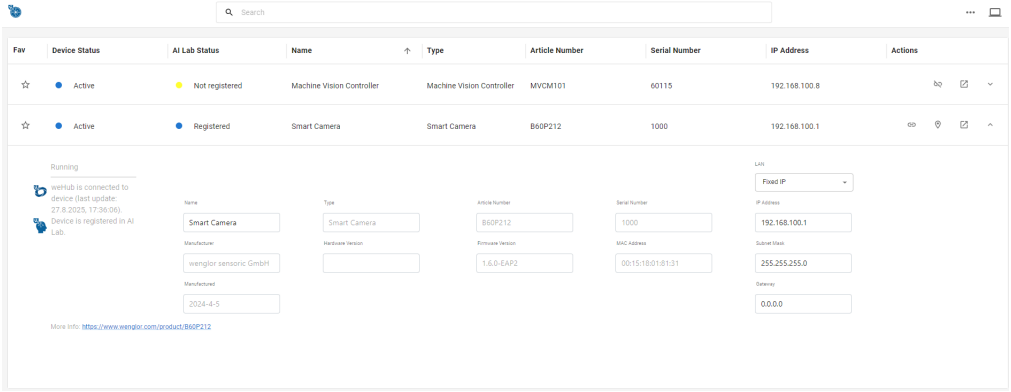
Go back to the main page of the weHub software. The “AI Lab Status” of the Machine Vision Devices shows “Not registered”.



Click at the relevant Machine Vision Device at “Actions” on the button “Connect to Device” in order to connect to the device and in order to register the Machine Vision Device in AI Lab. It is only possible if the weHub Server is active on the Machine Vision Device and if the device is accessible by the weHub software within the network.

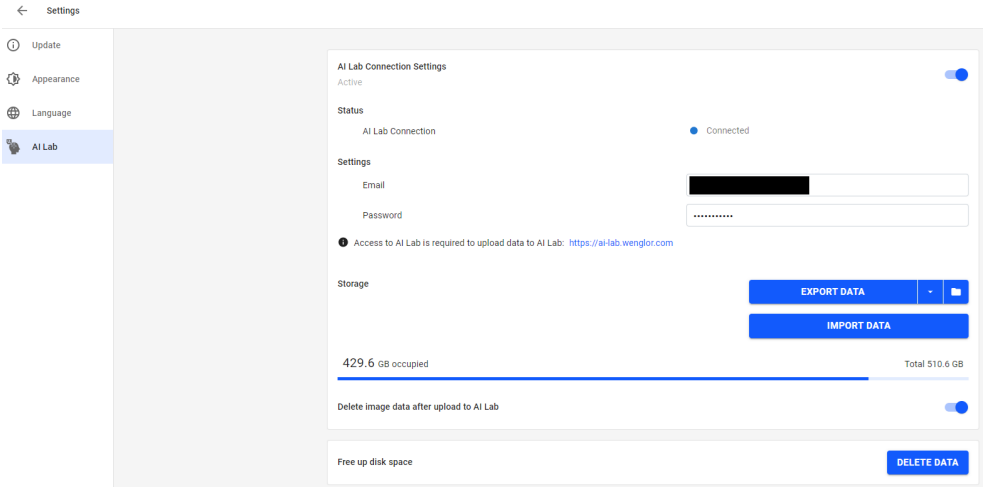


In case of a valid connection and registration, the “AI Lab Status” of the Machine Vision Device switches to “Registered”. Opening the extended view of the Machine Vision Device provides further info about the connection to the Machine Vision Device and to AI Lab.



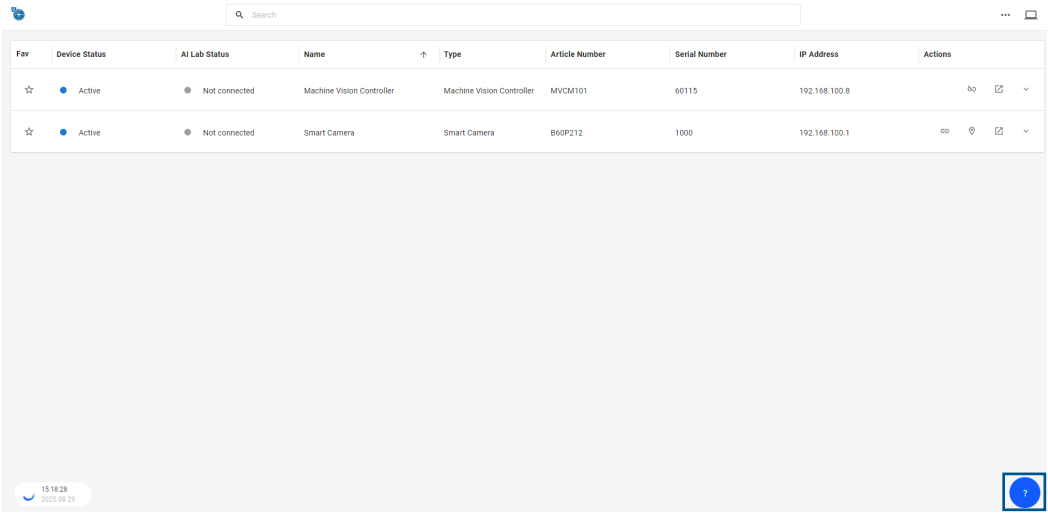
If the Machine Vision Device with the software weHub has no connection to AI Lab (e.g. because of no internet connection), use the weHub software to store the data locally. Export the data, bring the file to another PC with connection to AI Lab and import the file in the weHub software in order to upload the data to AI Lab. Click on the “Settings” icon and then in the side menu on “AI Lab” to access the export and import functionality:

- Export data: Exports the data to a zip file (without deleting them).
- Export and delete the data: Exports the data to a zip file (and deletes them).
- Open backups directory: Opens the file manager pointing to the file location of the backup zip files.
- Import data: Opens the upload file window to import backup files. It requires to delete existing data (e.g. images) in weHub. The import data functionality is only available in case of a valid connection to AI Lab as weHub registers the Machine Vision Devices used for data collection in AI Lab during the data import.
- Delete image data after upload to AI Lab: If active, weHub automatically deletes data after successful upload to AI Lab.
- Free up disk space: Deletes the data from the local file location.



6.10 Help Button

Open the help button to access further information.



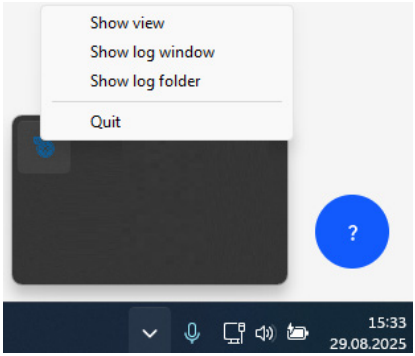
- Tutorials: Opens a new tab in the browser with tutorials on the wenglor website (only available with internet access)
- Software highlights: Opens a new tab in the browser with the product highlights page on the wenglor website (only available with internet access)
- Third party licenses: Opens a new tab in the browser to access the third party licenses on the device (no internet access necessary).

NOTE!
Third-party software licenses are also available on the wenglor website:
https://www.wenglor.com/License/s/License

- EULA: Opens the EULA that must be accepted before the software installation (see “4. Software Installation” on page 7).
- Operating instructions: Opens the operating instructions of the wenglor weHub software in a new tab of the browser
- Release notes: Opens the release notes of the wenglor weHub software in a new tab of the browser containing the changes between different software versions

6.11 Close the Software weHub

Closing the last browser tab with the software weHub does not automatically stop the weHub background process in order to keep the data upload functionality active (see section „6.9 AI Loop to AI Lab“). In order to quit the software weHub background process, open the context menu of the weHub icon tray (on the right side of the Windows/Linux taskbar) and click on “Quit”. The context menu additionally allows to open the software in the default browser via “Show view”, to show the log window or the log folder.



7. Third Party Licenses

Third party licenses used in the software wenglor weHub are available on the PC where the software is installed (see “6.10 Help Button” on page 25) or on the wenglor website (requires internet access) at https://www.wenglor.com/License/s/License

8. Change Index of Operating Instructions

Version	Release Date	Description/Changes	Compatability
1.0.0	27.08.2025	Initial version of the operating instructions	Firmware B60: 1.6.0 Firmware MVC: 1.3.0 Firmware MLxSx1x: 1.3.2