

DNNF022

Software wenglor Discovery Tool



Operating Instructions

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1. General

1.1 Information Concerning these Instructions

- These instructions enable safe and efficient use of DNNF022.
- 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 Discovery Tool 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 they fit 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

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	DNNF022
General data	
Use	<ul style="list-style-type: none">• For B60• For MLASx1x• For MLBSx1x• For MVC
Version	1.2.3
Language	DE, EN, FR, IT, ES, PT, NL, HU, TR, ZH, RU
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	<ul style="list-style-type: none">• 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 Discovery Tool is available on the wenglor website:

<https://www.wenglor.com/product/DNNF022>

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 Discovery Tool
- The software wenglor Discovery Tool is also available on the Machine Vision Controller MVC as part of the MVC firmware.



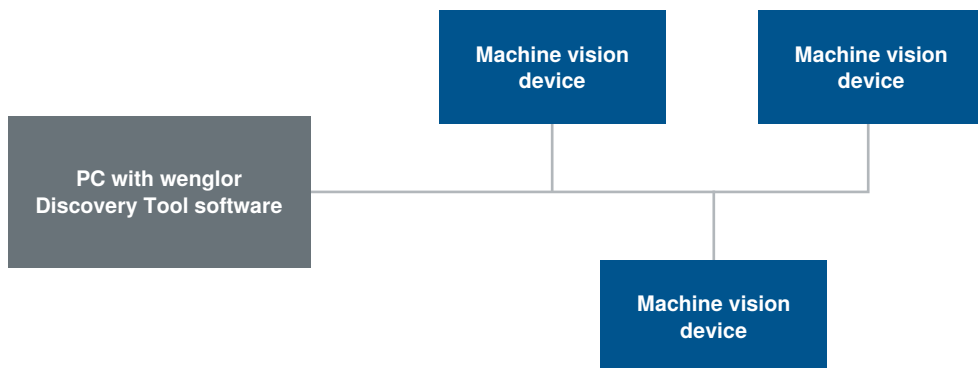
5. Network Overview

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 Discovery Tool 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 Discovery Tool 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 Discovery Tool 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 Discovery Tool 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 Discovery Tool 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:

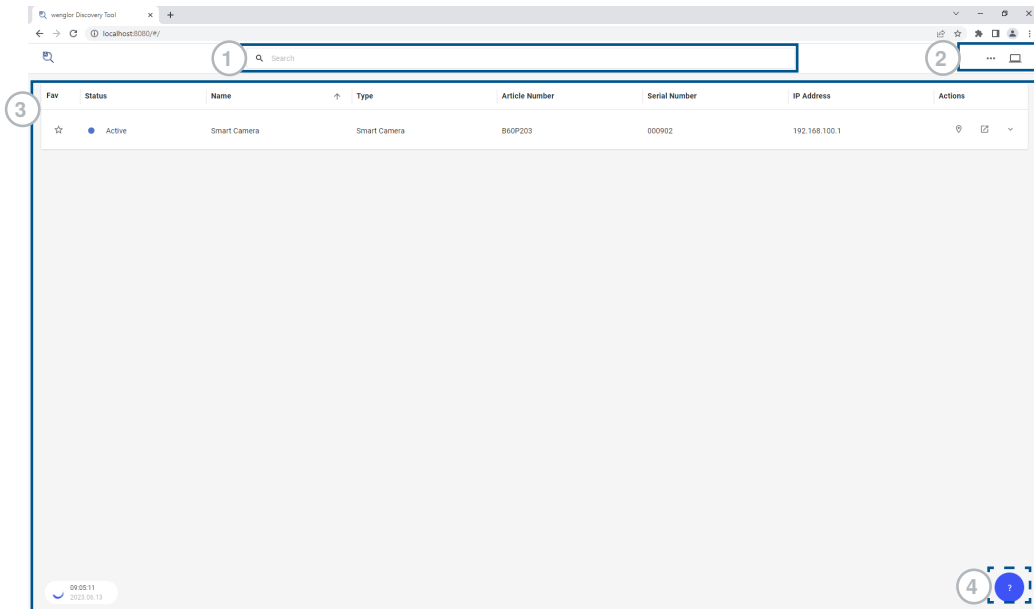
- IP address: 192.168.100.1
- Subnet mask: 255.255.255.0
- Gateway: 0.0.0.0

6. wenglor Discovery Tool Software

6.1 Structure

The wenglor Discovery Tool is divided in several areas:

- 1: Device Search
- 2: Icon Menu Bar
- 3: Workspace
- 4: Help Button (see “6.9 Help Button” on page 20).

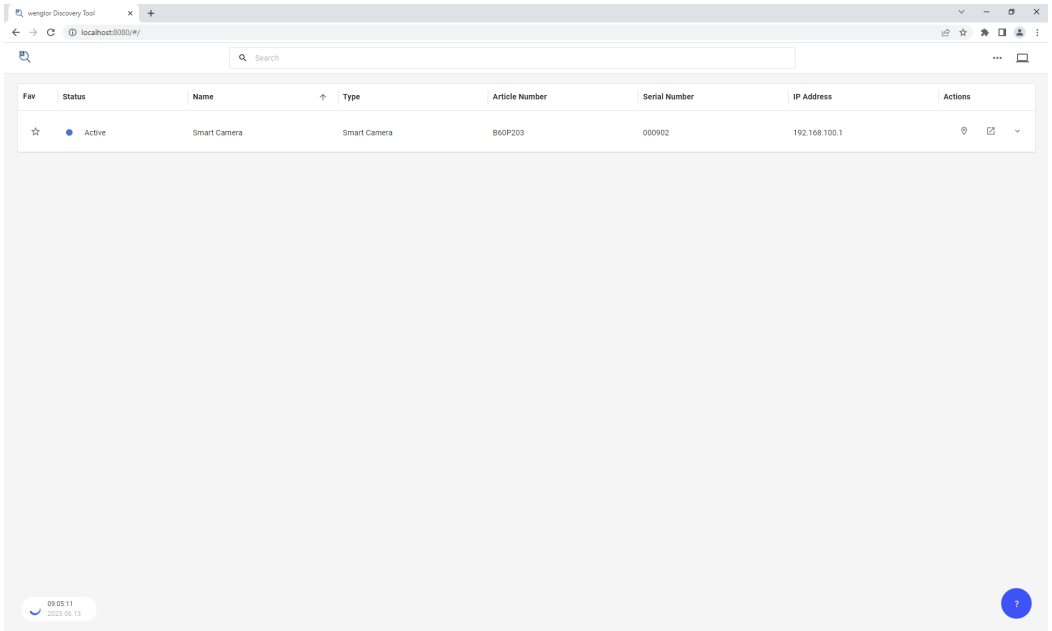


6.2 Finding Machine Vision Devices

Starting the wenglor Discovery Tool 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 Discovery Tool 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 Discovery Tool software is not supported.
- On the Machine Vision controller the software wenglor Discovery Tool 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 Discovery Tool. 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 Discovery Tool 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 Discovery Tool 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 Discovery Tool 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 Discovery Tool. Change the network settings of the PC with the software wenglor Discovery Tool 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

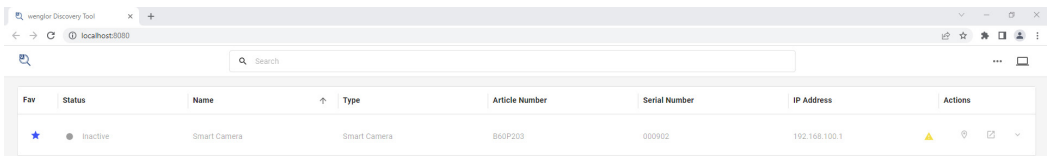
Mark frequently used devices as favorite (Fav) by pressing the star symbol at the device.



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 status in the software shows “Localizing” to highlight one specific device. Localizing can be activated by pressing the button in the wenglor Discovery Tool software or by pressing the button on the machine vision device.

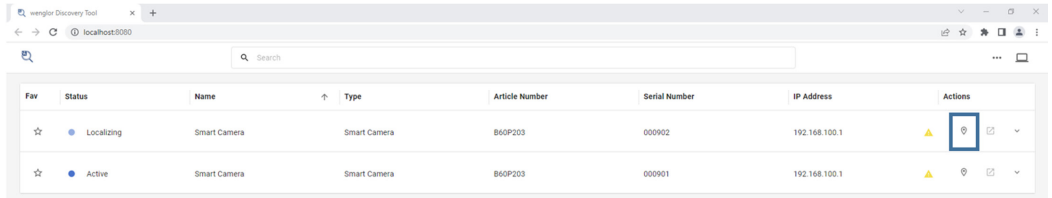
NOTE!



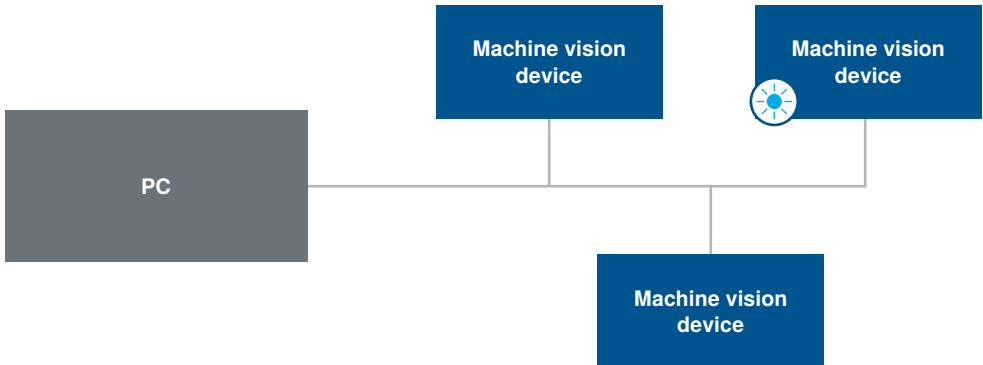
- The button is not available on every machine vision device. For details about availability and position of the button, check the operating instructions of the machine vision device.
- To prevent unwanted blue blinking of the machine vision device via pressing the button, deactivate the button functionality 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 Discovery Tool software or on the machine vision device.

6.4.1 Start via wenglor Discovery Tool 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 authentication 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.

The image shows a login window with the following elements:

- Title: Login
- Label: Username
- Input field: Username
- Label: Password
- Input field: Password
- Buttons: CANCEL (blue outline), LOGIN (grey)

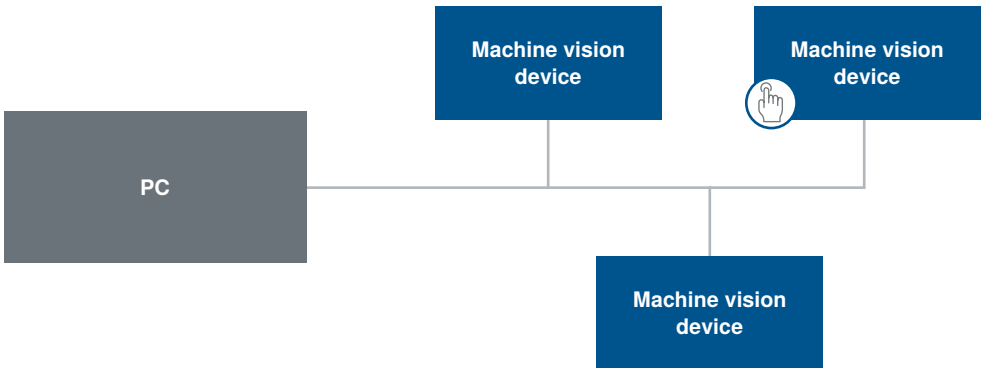
6.4.2 Start on Machine Vision Device

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.

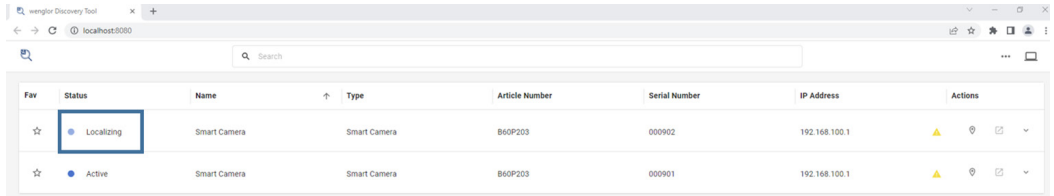


NOTE!

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 Discovery Tool software shows “Localizing” at the relevant device and the device is blinking blue.



Fav	Status	Name	Type	Article Number	Serial Number	IP Address	Actions
☆	Localizing	Smart Camera	Smart Camera	B60P203	000902	192.168.100.1	⚠️ 📍 📄 ⌵
☆	Active	Smart Camera	Smart Camera	B60P203	000901	192.168.100.1	⚠️ 📍 📄 ⌵

6.5 Device Status

The device status in the wenglor Discovery Tool 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)

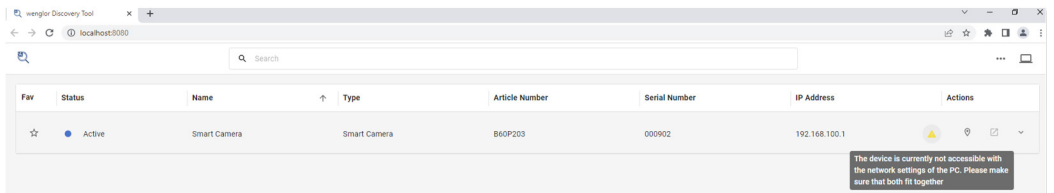


NOTE!

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.



Fav	Status	Name	Type	Article Number	Serial Number	IP Address	Actions
☆	Active	Smart Camera	Smart Camera	B60P203	000902	192.168.100.1	⚠️ 📍 📄 ⌵

The device is currently not accessible with the network settings of the PC. Please make sure that both fit together

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.

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



The screenshot shows the 'wenglor Discovery Tool' interface. At the top, there is a search bar and a table of discovered devices. The table has columns for Fav, Status, Name, Type, Article Number, Serial Number, IP Address, and Actions. One device is listed: 'Smart Camera' (Active), Type 'Smart Camera', Article Number 'B60P203', Serial Number '000901', and IP Address '192.168.100.1'. Below the table, there is a detailed configuration view for the selected device, showing fields for Name, Type, Article Number, Serial Number, Manufacturer, Hardware Version, Firmware Version, MAC Address, LAN settings (Fixed IP, IP Address, Subnet Mask, Gateway), and a 'More info' link.

Fav	Status	Name	Type	Article Number	Serial Number	IP Address	Actions
☆	● Active	Smart Camera	Smart Camera	B60P203	000901	192.168.100.1	⚠️ 📍 📄 ⬆️

Running

Name: Type: Article Number: Serial Number:

Manufacturer: Hardware Version: Firmware Version: MAC Address:

LAN

Fixed IP: IP Address: Subnet Mask: Gateway:

More info: <https://wenglor.com/product/B60P203>

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 authentication 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.



The screenshot shows the wenglor Discovery Tool interface. A table lists the discovered devices, with one Smart Camera selected. A configuration window is open for this device, showing fields for Name, Type, Article Number, Serial Number, IP Address, and Subnet Mask. A 'Login' dialog box is overlaid on top, prompting for Username and Password. The dialog has 'CANCEL' and 'CONFIRM' buttons. The background configuration window also has 'CANCEL' and 'LOGIN' buttons. The interface includes a search bar, a status indicator (Active), and a bottom status bar showing the time 17:18:14 on 2023-09-11.

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.

The screenshot shows the wenglor Discovery Tool interface with the PC Network Settings panel open. The panel displays the current network configuration for the selected Ethernet adapter. The IP Address field is highlighted with a blue border. The configuration includes fields for Name, Type, Article Number, Serial Number, IP Address, Subnet Mask, and Gateway. The IP Address is set to 192.168.101.1. The Subnet Mask is 255.255.255.0. The Gateway is 0.0.0.0. The panel also shows a list of Network Adapters, with Ethernet 3 selected. The interface includes a search bar, a status indicator (Active), and a bottom status bar showing the time 17:18:14 on 2023-09-11.

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 Discovery Tool 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 screenshot shows the wenglor Discovery Tool interface. The main window displays a table of devices with columns for Fav, Status, Name, Type, Article Number, Serial Number, IP Address, and Actions. The selected device is a Smart Camera with Article Number B60P203 and Serial Number 000902, currently at IP Address 192.168.100.1. Below the table, the 'Running' section shows a form for editing device settings, including Name, Type, Article Number, Serial Number, Manufacturer, Firmware Version, MAC Address, Subnet Mask, and Gateway. The IP Address field is set to 192.168.100.1. To the right, the 'PC Network Settings' panel shows a list of Network Adapters (Ethernet, Ethernet 3) and their respective IP Address, Subnet Mask, and Gateway settings.

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

The screenshot shows the wenglor Discovery Tool interface with a confirmation dialog box overlaid. The dialog box contains the text: "The device is about to reboot" and "In order to apply the settings a reboot is required". Below the text are two buttons: "CANCEL" and "OK". The background interface is dimmed, showing the same device settings as in the previous screenshot.

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



Fav	Status	Name	Type	Article Number	Serial Number	IP Address	Actions
☆	Rebooting	Smart Camera	Smart Camera	B60P203	000902	192.168.100.1	⚠️ 🔄 📄 ▼

6.7 Access Device Website

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



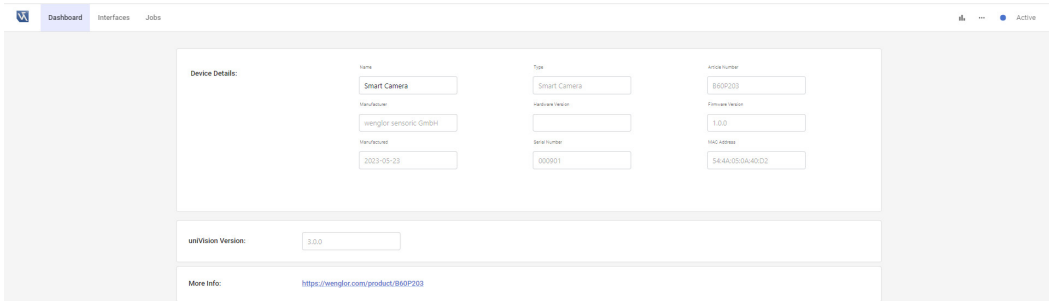
Fav	Status	Name	Type	Article Number	Serial Number	IP Address	Actions
☆	Active	Smart Camera	Smart Camera	B60P203	000902	192.168.100.1	🔗 📄 ▼

NOTE!



- If the machine vision device is in a different subnet and not accessible, the button “Open Device” is disabled.
- If the wenglor Discovery Tool 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.



Device Details:					
Name	Smart Camera	Type	Smart Camera	Article Number	B60P203
Manufacturer	wenglor sensor GmbH	Hardware Version		Firmware Version	3.0.0
Manufactured	2023-05-23	Serial Number	000901	MAC Address	54-8A-05-0A-4D-02
univision Version:	3.0.0				
More info:	https://wenglor.com/product/B60P203				



NOTE!

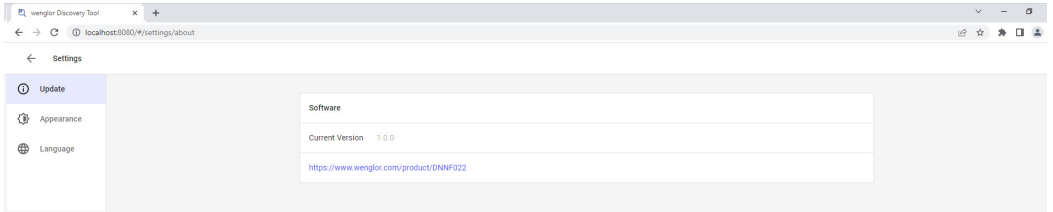
The device website is described in the operating instructions of the machine vision device.

6.8 Settings

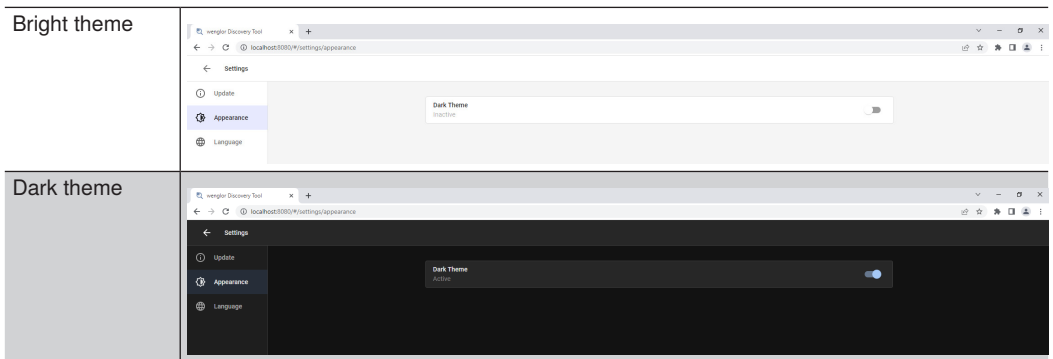
Click on the “Settings” icon in the menu icon bar in order to open the settings of the wenglor Discovery Tool software.



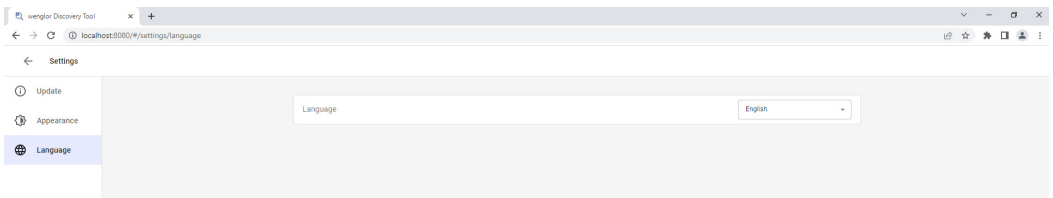
The side navigation “Update” shows the current version of the wenglor Discovery Tool software. Clicking on the link opens a new tab in the browser to the product detail page on the wenglor website in order to download the latest software version. Internet access is necessary to open the link.



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

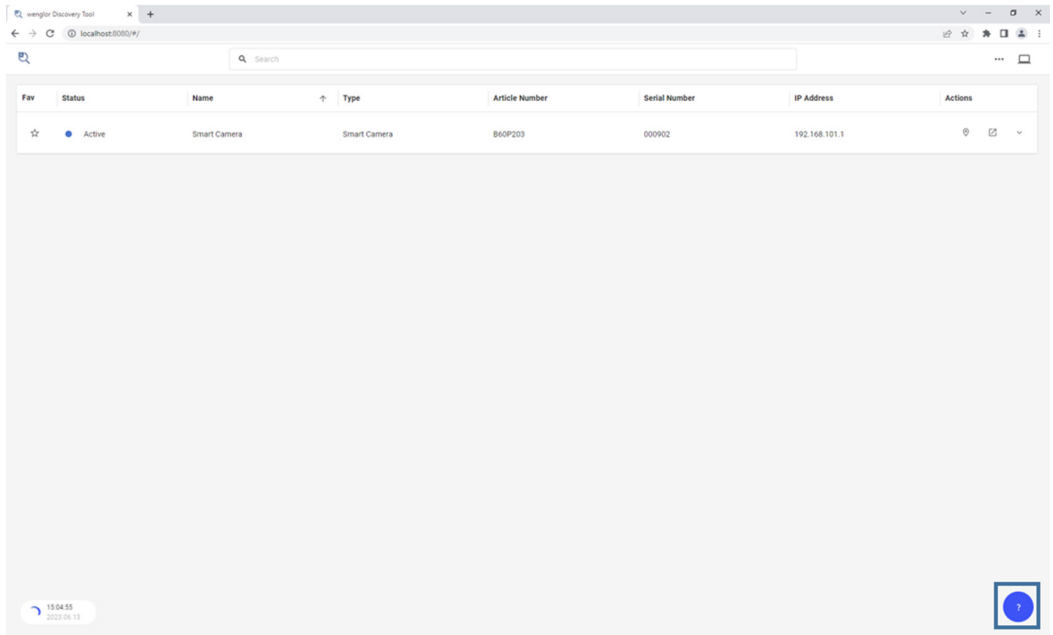


The side navigation “Language” allows to change the user language (DE, EN, FR, IT, ES, PT, NL, HU, TR, ZH, RU).



6.9 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 Discovery Tool software in a new tab of the browser
- Release notes: Opens the release notes of the wenglor Discovery Tool software in a new tab of the browser containing the changes between different software versions

7. Third Party Licenses

Third party licenses used in the software wenglor Discovery Tool are available on the PC where the software is installed (see "6.9 Help Button" on page 20) 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	Comptability
1.0.0	07.07.2023	Initial version of the operating instructions	Firmware B60: 1.0.0 Firmware MLxSx1x: 1.0.0
1.0.1	11.08.2023	Minor changes	Firmware B60: 1.0.0 Firmware MLxSx1x: 1.0.0
1.0.2	19.09.2023	Updated technical data for version 1.0.1 of Software wenglor Discovery Tool	Firmware B60: 1.0.1 Firmware MLxSx1x: 1.0.0
1.1.0	11.12.2023	Updated description for version 1.1.0 of Software wenglor Discovery Tool.	Firmware B60: 1.1.0 Firmware MLxSx1x: 1.0.0
1.1.1	28.02.2024	Minor changes	Firmware B60: 1.1.1 Firmware MLxSx1x: 1.2.0
1.2.0	08.08.2024	Updated description for version 1.2.0 of Software wenglor Discovery Tool	Firmware B60: 1.3.0 Firmware MLxSx1x: 1.3.0 Firmware MVC: 1.0.0
1.2.1	30.01.2025	Minor changes (list of reserved IP addresses).	Firmware B60: 1.4.0 Firmware MLxSx1x: 1.3.2 Firmware MVC: 1.1.0