

Camera application

OBSCURAS Guide

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Introduction

OBSCURAS is an application required for using the camera supplied with the CFX Series.

Please read the OBSCURAS Function Guide ("this document" hereinafter) thoroughly and make sure you understand its contents to ensure correct use of the OBSCURAS.

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About This Manual

This document describes the following:

- Installing OBSCURAS
- Using OBSCURAS

Notation used in This Guide

- The buttons and items displayed in screens are enclosed in square brackets, such as [OK] and [Open].

Symbols used

Details		
	Important	The "Important" symbol represents information which you must know before using OBSCURAS.
	Tip	The "Tip" pictogram indicates useful information.
	Reference information	Indicates reference pages with related information. Click on the text to display the corresponding page.
	Compulsory	Indicates mandatory actions.

How to Obtain This Guide and Related Manuals

The latest versions of this guide and related manuals are available at:

- Mimaki official website (<https://mimaki.com/download/software.html>)

Chapter 1 About OBSCURAS



This chapter

This chapter describes OBSCURAS.

1.1 Functions and Operating Environment

● Functions

OBSCURAS provides the following functions:

- Registration and management of plotters
- Camera settings
- Imaging settings
- Manual setting and output of register mark positions (teaching register marks)

● Compatible models

OBSCURAS is compatible with the following models.

- CFX Series

● Operating environment

OBSCURAS is compatible with the following operating environments.

OS	Microsoft® Windows 10® (64-bit version) Microsoft® Windows 11®
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● Recommended system

OS	Windows® 10 Pro 64bit
CPU	Intel® Core™ i5 or later
Chipset	Intel chipset
Memory	8 GB or more
Hard disk	10 GB or more free space
Interface	Ethernet port

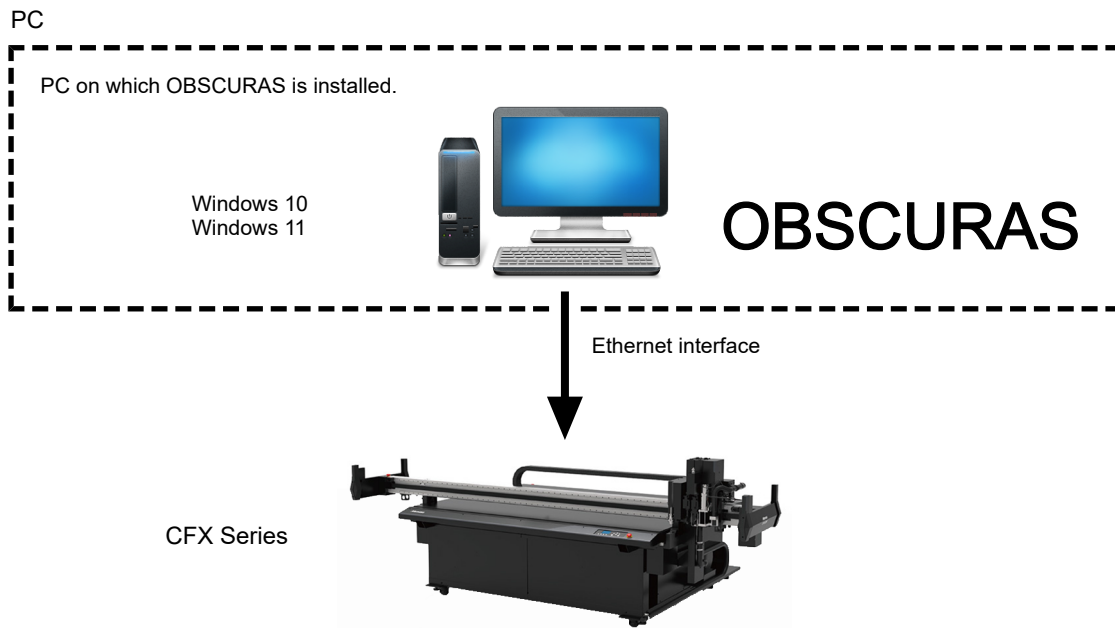


Provide an Ethernet environment that meets or exceeds the following conditions. Stable communication may not be possible if the specifications are lower than the following conditions.

- PC, hub (if used), USB-LAN converter cable (if used)
 - The LAN port must support 1000BASE-T (gigabit)
 - Must support jumbo frame (9000 bytes or higher)
- Cable
 - CAT6 or higher

● System Configuration

One PC can be connected to each CFX unit only.



Chapter 2 Explanation of Functions



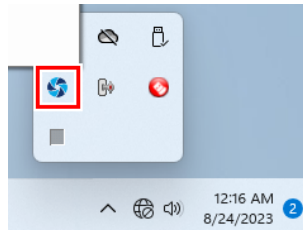
This chapter

This chapter describes how to start up OBSCURAS and its functions.

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2.1 Starting Up

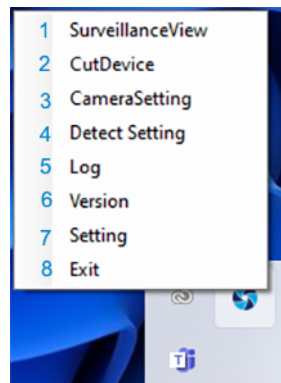
OBSCURAS is displayed on the task bar.



- If the OBSCURAS icon  is not displayed on the task bar, click OBSCURAS on the Windows Start menu to launch it. The icon will then appear on the task bar.

1 Right-click the OBSCURAS icon on the task bar.

- The OBSCURAS menu appears.



1	SurveillanceView	Checks the plotter communication status and indicates whether or not register mark detection is possible.  "SurveillanceView"(P. 11)
2	CutDevice	Displays the [CutDevice] dialog box. This function is used by Mimaki service engineers.  "Cut Device"(P. 37)
3	CameraSetting	Displays the [CameraSetting] dialog box. This function is used by Mimaki service engineers.
4	Detect Setting	Displays the [Detect Setting] dialog box. Function for adjusting the imaging conditions and image processing conditions for work for which register mark and edge detection are problematic.  "Detect Setting"(P. 13)
5	Log	Displays the [Log] dialog box. This function is used by Mimaki service engineers.
6	Version	Displays [Version].  "Version"(P. 25)
7	Setting	Displays the [Setting] dialog box.  "Application Setting"(P. 26)
8	Exit	Exit OBSCURAS.

2.2 Explanation of Functions

SurveillanceView

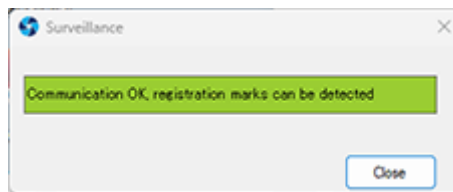
Indicates the communication status between the machine and OBSCURAS.

This allows the user to confirm whether register mark detection is possible.

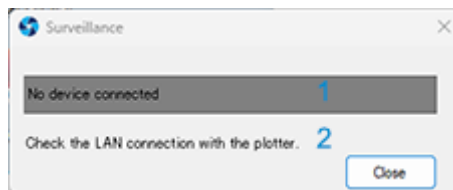
Communication status display procedure

1 Right-click the OBSCURAS icon on the task bar, then select [SurveillanceView].

- The [Surveillance] dialog box appears.



Communication status display types and corresponding action



1. Status display	2. Action display	Action
Cut device registration not implemented	Please register the cutting device.	Register the connected plotter as a cutting device. ☞ "Cut Device"(P. 37)
No device connected	Check the LAN connection with the plotter.	1. Check the connection. – Check the PC LAN connection with the plotter. – Check that a registered cutting device is connected to the plotter. ☞ "Cut Device"(P. 37) 2. If there is no problem with the connection – Restart the PC. – Restart the plotter. Wait until the plotter is reconnected. (Approx. 5 minutes) 3. Check the firewall settings to ensure that communications from the CFX are not being blocked. ☞ "Checking and Changing Firewall Settings"(P. 49) 4. Check to confirm that the PC and camera are on the same network. ☞ "How to Set a Fixed IP Address for the Camera"(P. 52) 5. If the display remains the same, contact Mimaki service engineers.
Camera not connected	Please check the connection with the camera.	

1. Status display	2. Action display	Action
Communication NG Registration mark cannot be detected	Unable to receive commands from plotter. Reconnecting...	Wait until the plotter is reconnected. If the plotter does not reconnect even after waiting approximately 5 minutes, contact your PC security administrator to check whether the port number set in the [Setting] dialog is being blocked.  "Application Setting"(P. 26)
Communication OK, calibration not performed	Please perform calibration.	Contact Mimaki service engineers.
Communication OK, registration marks can be detected		Communication is normal. Register marks can be detected.



If the status frequently changes between Communication OK and Communication NG, there may be a problem with the communication speed. If this occurs, check the following:

- Ethernet environment specifications  ["Functions and Operating Environment"\(P. 6\)](#)
- Jumbo packet settings (Check the Jumbo packet setting procedure.)

Detect Setting

If register mark detection fails due to the effects of the work color or reflection, the image processing used for register mark detection will require adjustment.

The [Detect Setting] dialog box enables register mark detection by altering the imaging settings and image processing settings.

Image Adjustment Procedure

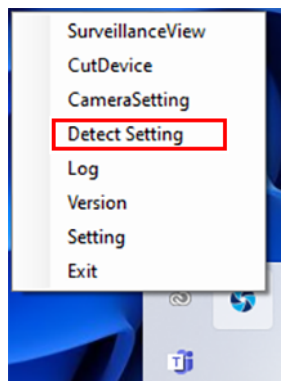
Adjust using [Detect Setting] after setting the plotter to [RegisterMarkCameraAdjustment].

● Set plotter to [RegisterMarkCameraAdjustment]

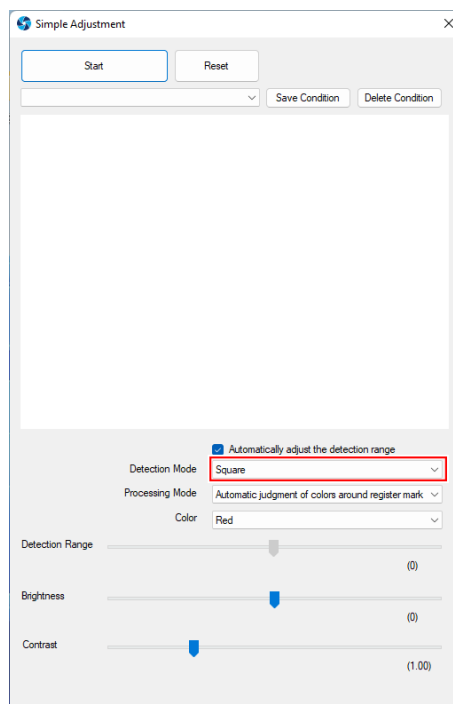
- 1** Connect the plotter to the PC using a LAN cable, then turn on the power to the plotter.
- 2** Once the plotter is set to local mode, load the work with register marks into the plotter.
 - Load the work for which you wish to adjust detection.
- 3** Set the work thickness.
- 4** From the Jog function selection menu, select [RegisterMarkDetectionCameraAdjustment].
- 5** Align the light pointer with the register mark on the work, then press the [ENTER] key.
 - The camera LED lights up, and the plotter stops.

● Adjust using [Detect Setting].

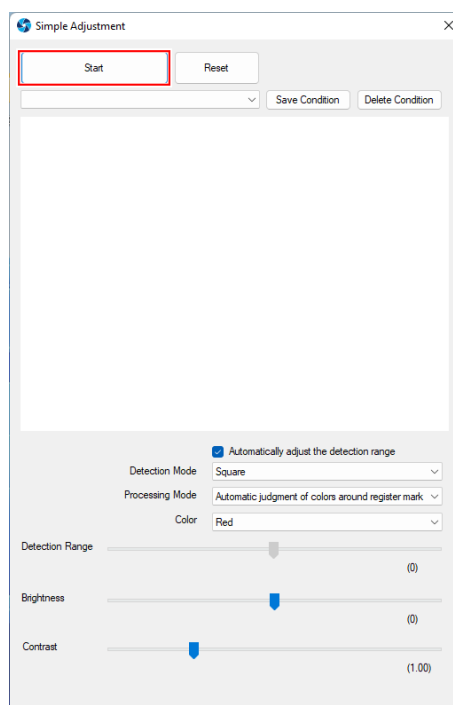
- 1** Right-click the OBSCURAS icon  on the task bar, then select [Detect Setting].
 - Displays the [Detect Setting] dialog box.



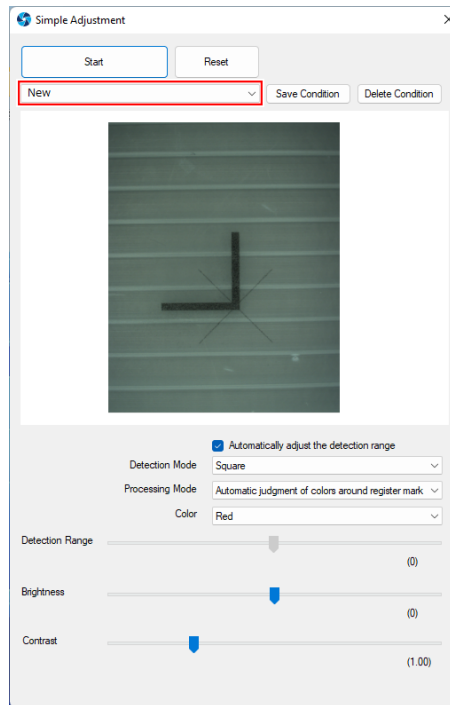
2 Select the type of register mark captured in [Detection Mode].



3 Click the [Start] button.

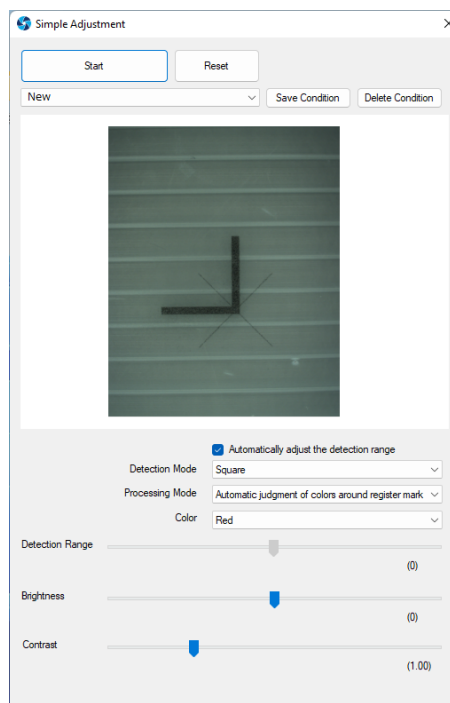


4 Select [New] in [Condition Name].



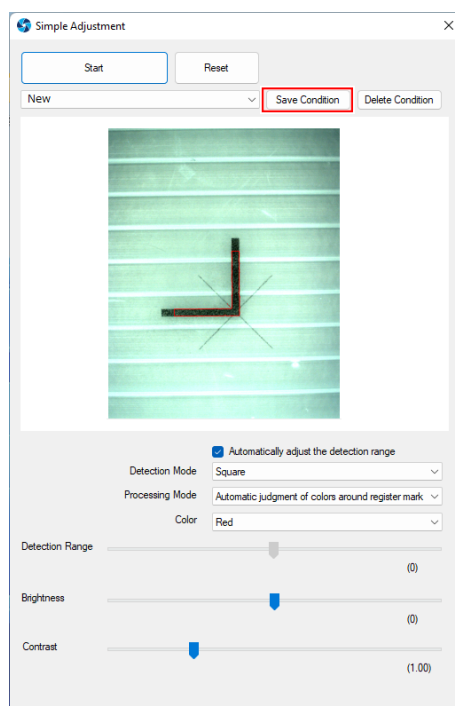
5 Adjust the settings below while checking the image captured until the register mark is correctly enclosed within the red frame. 🖐️ "[Detect Setting] Screen Layout"(P. 18)

- [Detection Range]
- [Brightness]
- [Contrast]

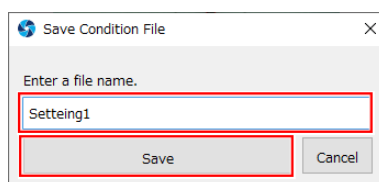


- If the register mark is not detected properly even after adjusting the settings, set [Processing Mode] to suit the work being printed, and readjust. 🖐️ "[Detect Setting] Screen Layout"(P. 18)

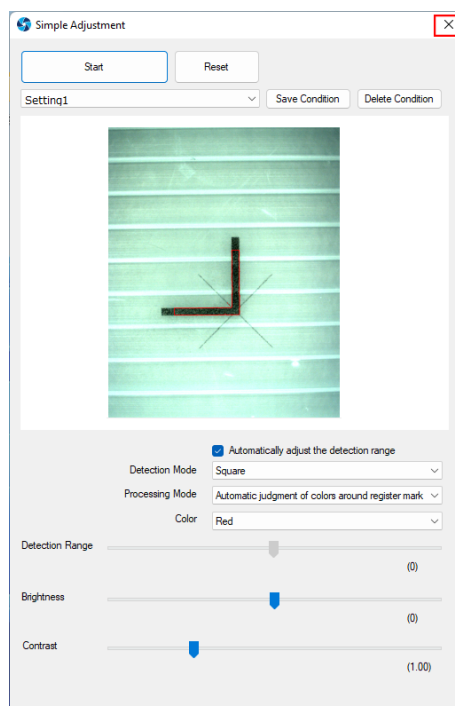
6 Once the setting changes are complete, click the [Save Condition] button.



7 Enter the name for saving, then click the [Save] button.



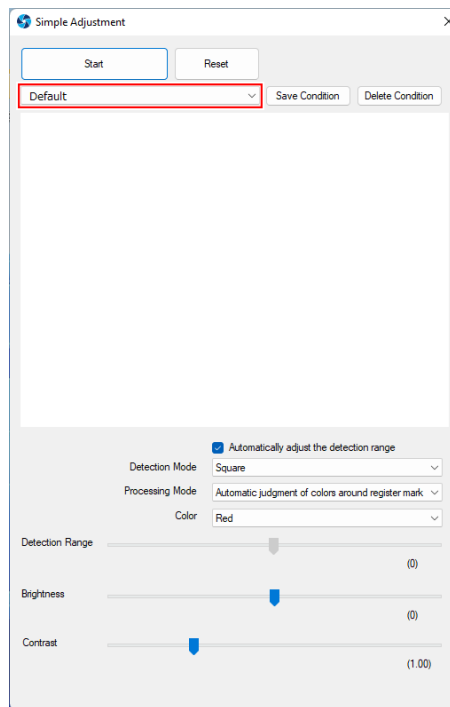
8 Click [×] to close the dialog box.



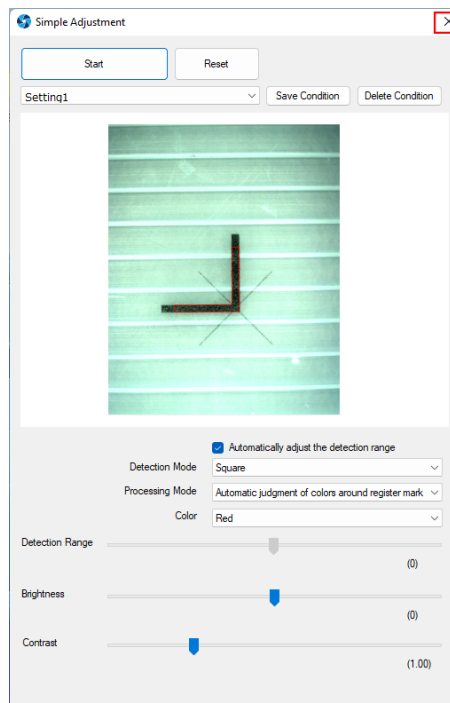
9 Press the plotter [END] key to exit [RegisterMarkDetectionCameraAdjustment] mode.

● To detect register marks by loading saved conditions

- 1 Launch the [Detect Setting] dialog box.
- 2 Select the name of the conditions to be used for detection in [Condition Name].
 - Selecting [Default] detects without any adjustments.

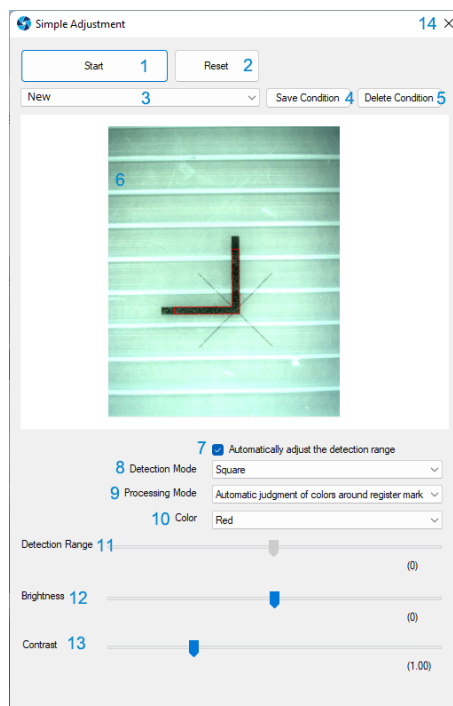


- 3 Click [×] to close the dialog box.



- 4 Detect the registration marks using the plotter.

[Detect Setting] Screen Layout



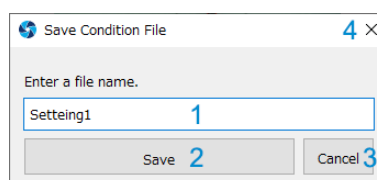
1	Start/Stop	Captures an image. Or stops imaging.
2	Reset	Resets the conditions to their default values. "Default values"(P. 19)
3	Condition Name	Selects a set of conditions. To create a new set of conditions, select [New].
4	Save Condition	Saves the conditions set. The conditions saved are [Processing Mode], [Automatically adjust the detection range], [Detection Range], [Brightness], and [Contrast]. - When [New] is selected for the condition name, the [Save Conditions File] dialog box appears. "Save Conditions File"(P. 19) - When an existing condition name is selected, the [Save Conditions File Confirmation] dialog box appears. "Conditions file save confirmation"(P. 20)
5	Delete Condition	Deletes the conditions selected in [Condition Name]. - Conditions are not deleted if [New] or [Default] is selected for the condition name. - When an existing condition name is selected, the [Delete Confirmation] dialog box appears. Click [OK].
6	Captured image display area	Clicking [Start] captures an image and displays it in the captured image display area. - The image is refreshed at the preset interval. - If a register mark is detected in the image, the outline is highlighted with a solid line.
7	Automatically adjust the detection range	Select the check box to adjust the detection range automatically. - When the check box is selected, the detection range is adjusted automatically. - When the check box is unselected, the register marks are detected using the setting for [Detection Range].
8	Detection Mode	Selects the type of register mark to be detected. "Register mark types"(P. 21)

9	Processing Mode	- Auto detect color around mark: Automatically detects register marks using RGB/HSV processing. - Color around mark is white: Detects register marks using RGB processing. - Color around mark is non-white: Detects register marks after processing using hue in HSV format.
10	Color	Selects the detection range indication color. Select a color that is easily visible compared to the work color. Display colors: Red, Blue, Yellow
11	Detection Range	Adjusts the detection range when [Automatically adjust the detection range] is disabled. Increasing the setting increases the range for identifying as a register mark. Range: 0 to 255
12	Brightness	Adjusts the brightness. Increasing the setting increases the image brightness before detecting register marks. Range: 0 to 255
13	Contrast	Adjusts the contrast. Increasing the setting increases the image contrast before detecting register marks. Range: -1.00 to 3.00
14	✕	Closes the [Detect Setting] dialog box. After closing, register marks are detected using the conditions currently set in [Condition Name]. - When [Default] is selected No settings are adjusted for detection. - When [New] is selected The last conditions selected are automatically selected for detection. - When registered conditions are selected The saved conditions are used for detection.

● Default values

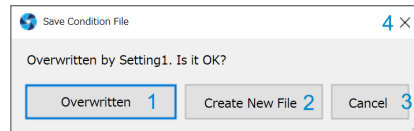
Processing Mode	Auto detect color around mark
Automatically adjust the detection range	On
Detection Range	128
Brightness	1
Contrast	0

● Save Conditions File



1	Conditions file name	Enter the conditions file name.
2	Save	Saves the conditions file.
3	Cancel	Cancels the process.
4	✕	Closes the [Save Conditions File] dialog box.

● Conditions file save confirmation

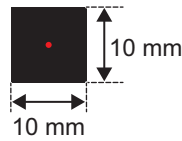


1	Overwritten	Saves the conditions file with the same name.
2	Create New File	The [Save Conditions File] dialog box appears.  "Save Conditions File"(P. 19)
3	Cancel	Cancels the process.
4		Closes the [Save Conditions File Confirmation] dialog box.

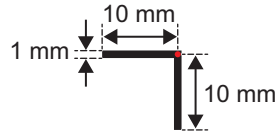
● Register mark types

The red dot indicates the register mark origin.

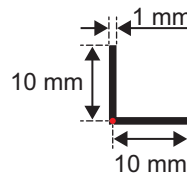
- Square



- Type 1  (lower left, lower right, upper left, upper right)



- Type 2  (lower left, lower right, upper left, upper right)

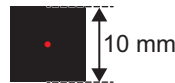


- Round (free)

Left: With mark, Right: Without mark



- Mark tip



- Edge

Edges include the four corners of the work, vertical edges (X direction), and horizontal edges (Y direction). The following can be selected:

- Edge detection (lower left)
- Edge detection (lower right)
- Edge detection (upper left)
- Edge detection (upper right)
- Edge detection (X direction)
- Edge detection (Y direction)

Teaching Register Marks

This function detects register marks by setting the register mark detection position manually.

It allows register marks created using non-Mimaki software or rectangular register marks arranged around data to be detected as register marks.

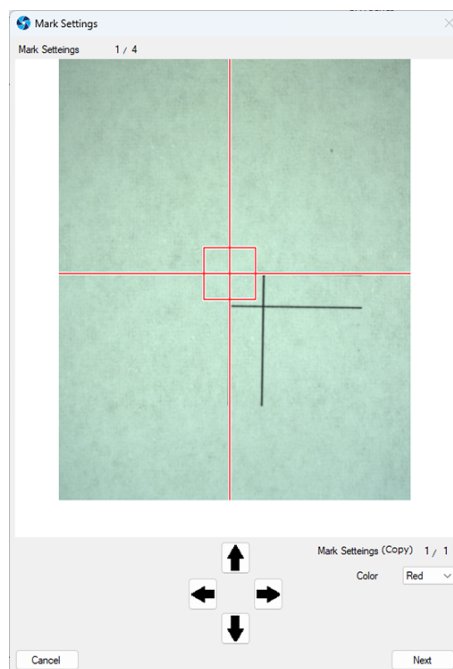
It can also be used when automatic detection is problematic due to the media or printing color.



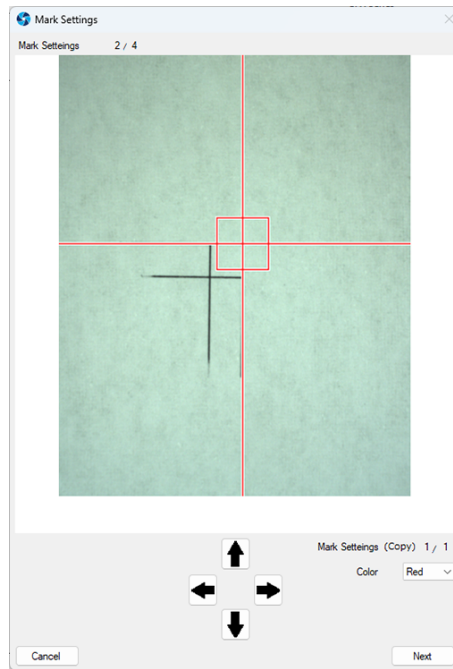
- FineCut9 Ver3.0 or later is required.

Teaching register mark reading method

- 1 Create and print out teaching register mark data using FineCut. (For information on FineCut, refer to the Reference Guide.)**
- 2 Load the printed work on the CFX main unit, then use [Mark Origin Detection] (Type 6 teaching) on the CFX LED panel. (For more information, refer to the CFX main unit operation manual.)**
- 3 Output the teaching register mark data using FineCut. (For information on FineCut, refer to the Reference Guide.)**
 - The Register Mark Setting window automatically opens on the PC on which OBSCURAS is running.

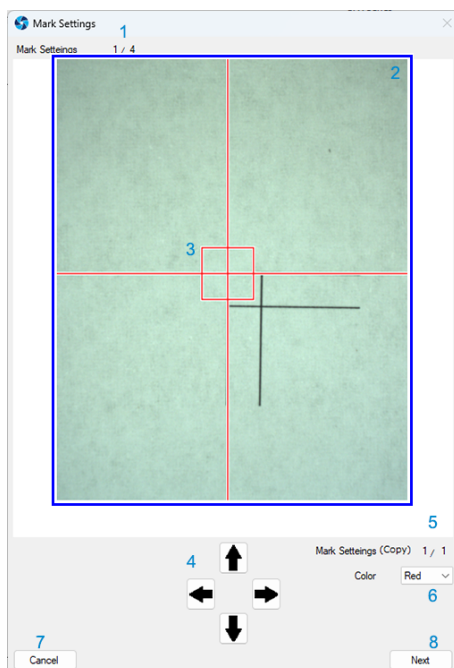


4 Click the points specified in FineCut to set them.



- Repeat Step 4 until all of the detection positions (up to four positions) have been set. Cutting starts once all of the settings are complete.

Teaching register mark screen layout



1	Register Mark Setting	Displays the number of the register mark currently being set. (Currently being detected/Total number detected)
2	Captured image display area	The image is continuously scanned and displayed while teaching register marks are being detected.
3	Cursor	Follows the mouse movement. Hover over the position to be set as a register mark, then click the mouse. The cursor will stay in the center of the scanned image area if the mouse is moved outside the area.
4	Camera move buttons	Click to move the camera. These can be used to move the camera to find register marks if no marks are visible within the scanned image area. They correspond to the cursor keys on the keyboard. They cannot be held down.
5	Mark Settings (Copy)	Indicates the number of the data currently detected if register marks have been copied. (Copies currently detected/Total number of copies)
6	Color	Selects the cursor color. Select a color that is easily visible compared to the work color. (Display colors: Red, Blue, Yellow)
7	Cancel	Stops register mark detection. If copying is in progress, subsequent copy output is also stopped. Clicking the button displays a confirmation window. Yes: Stops register mark detection and closes the Register Mark Setting dialog box. No: Continues register mark detection.
8	Next	Sets the current cursor position (center of scanned image) as a register mark. The operation is the same as clicking on the scanned image display area. This is used for multiple register mark detection when the detection position is not offset from the center of the scanned image.

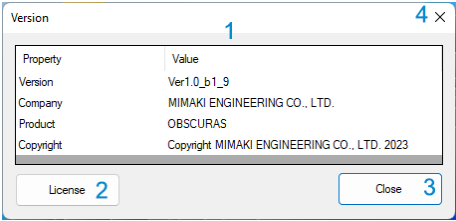
Version

The [Version] dialog box is used for searching, registering, and managing cutting devices.

1 Right-click the OBSCURAS icon on the task bar, then select [Version].

- The [Version] dialog box appears.

2 Check the details in the [Version] dialog box.



1	Version display area	Display the various information details.
2	License	Displays the [License] dialog box. • Used for checking the license. Click [Close] or [×] at the top right to close the [License] dialog box.
3	Close	Closes the [Version] dialog box.
4	×	Closes the [Version] dialog box.

Application Setting

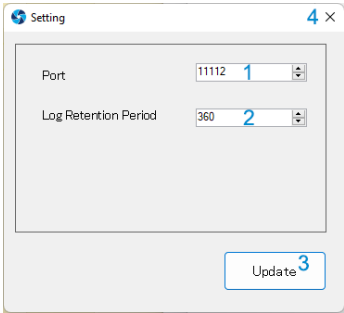
The [Setting] dialog box is used for setting Port and Log Retention Period.



- If the connection between OBSCURAS and the plotter is frequently disconnected, contact the PC security administrator to check if the port number set on this dialog is being blocked.

- 1
- Right-click the OBSCURAS icon on the task bar, then select [Setting].
- Displays the [Setting] dialog box.

- 2
- Sets and updates [Port] and Log [Log Retention Period] setting.



1	Port	Sets the port number on which OBSCURAS will receive commands.
2	Log Retention Period	Sets the period of time that logs will be saved.
3	Update	Updates [Port] and Log [Log Retention Period] setting.
4	X	Click [Setting] to close the dialog box. The changes will be saved.

Chapter 3 Other Functions



This chapter
This chapter describes other functions.

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3.1 Installation

Important!

- Install as a user with Administrator authority.
- When upgrading OBSCURAS, be sure to uninstall the existing OBSCURAS before installing the new version.

- 1 Download the installer for this tool from the OBSCURAS download page on the Mimaki official website (<https://mimaki.com/download/software.html>).**



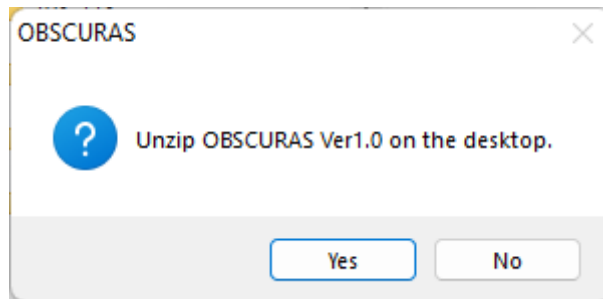
The installer can be obtained as follows if the PC is not connected to the Internet.

- If you have a PC connected to the Internet, download the installer on that PC, then copy it to the PC on which OBSCURAS is to be installed.

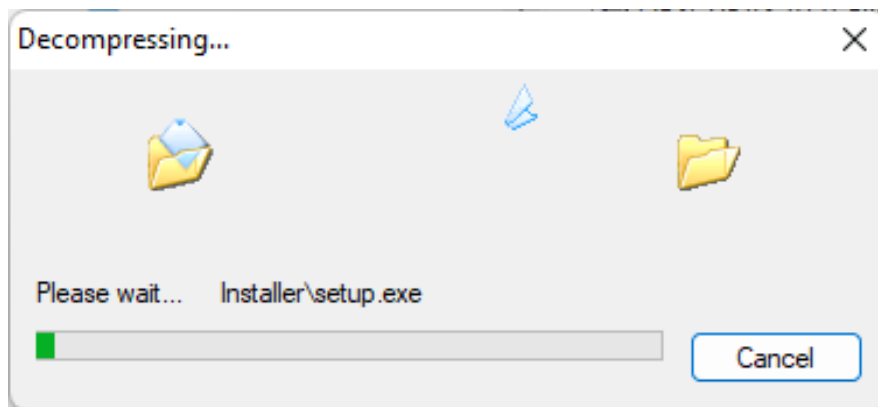
- 2 Run the downloaded file. (OBSCURAS_v***.exe)**

- "****" corresponds to the version.

- 3 When displayed "Unzip OBSCURAS Ver** on the desktop." (Expand OBSCURAS to the desktop.), click [Yes].**



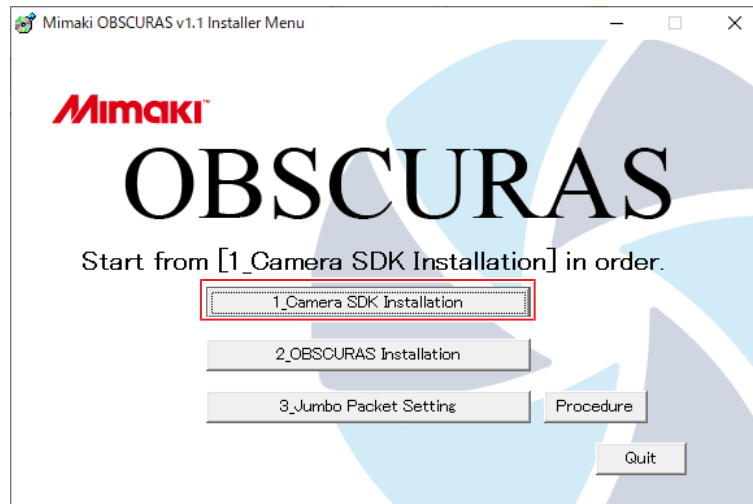
- The OBSCURAS installer is automatically launched on the desktop.



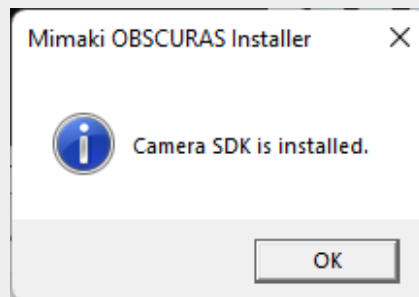
- 4 Select the display language.**



5 Click [1_Camera SDK Installation].

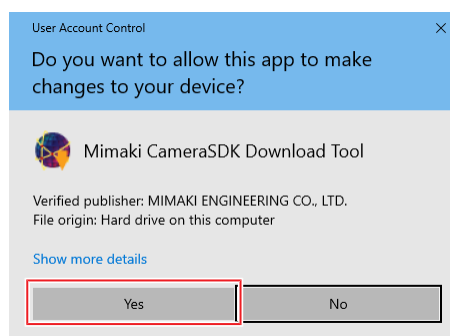


[Camera SDK is installed.] will be displayed if SDK has already been installed. Click [OK], and proceed to [2_OBSCURAS Installation] (step 16).



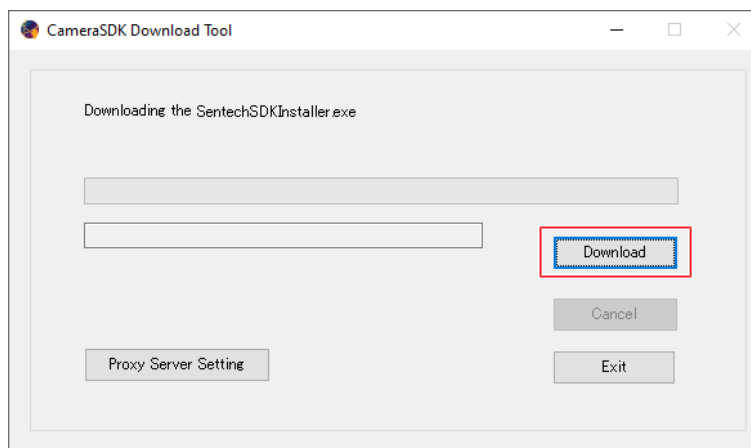
- [It cannot be installed on a 32-bit PC.] will be displayed if you are using a 32-bit PC.
- If the SDK installer has already been downloaded, proceed to step 8 to launch the Sentech SDK Installer.

6 Select [Yes] on the User Account Control dialog box.



- The Camera SDK downloader launches.

7 Click [Download].



- The Camera SDK installer is downloaded.



- The SDK installer is downloaded to "\\Users\\Public\\Documents".
- The installer can be deleted once SDK has been installed.

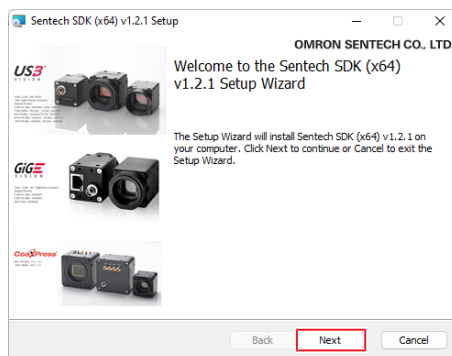
8 Click [Install].



9 Select [Yes] on the User Account Control dialog box.

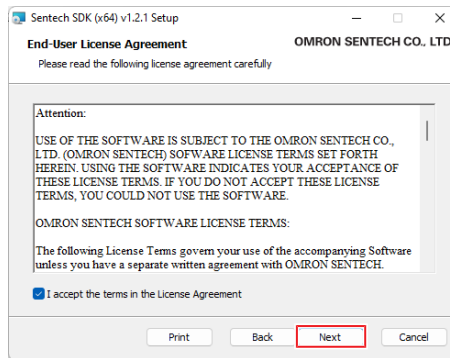
- The Camera SDK setup wizard launches.

10 Click [Next].

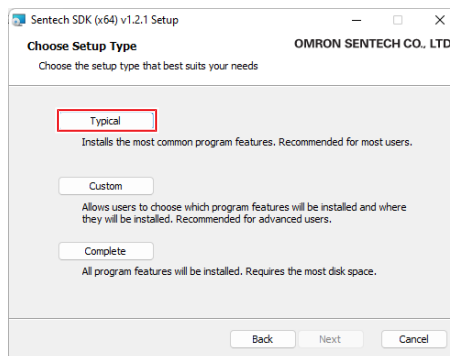


11 Select the [I accept the terms in the License Agreement] check box.

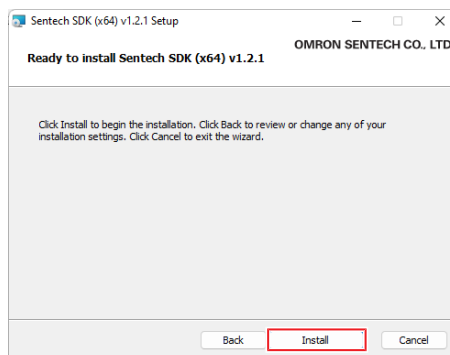
- Click [Next].



12 Click [Typical].

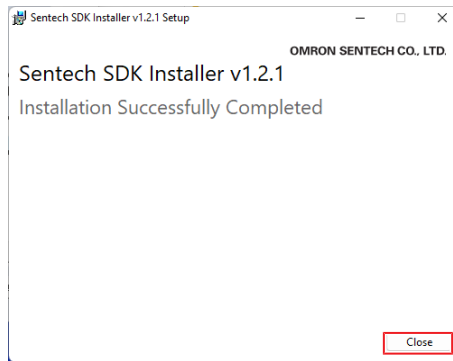


13 Click [Install].

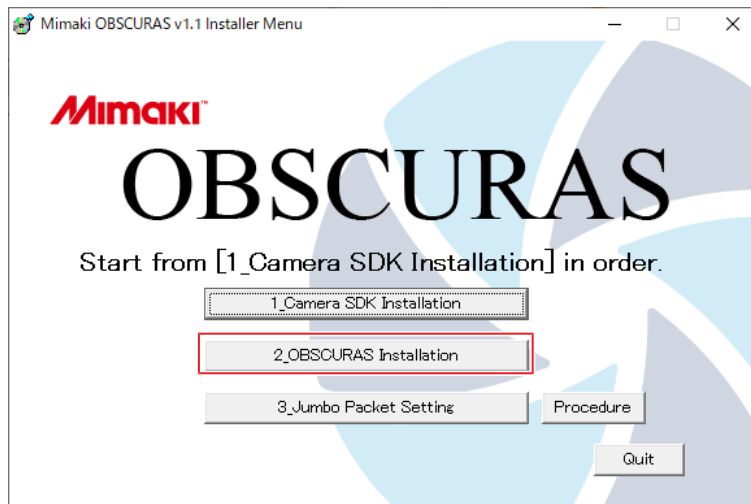
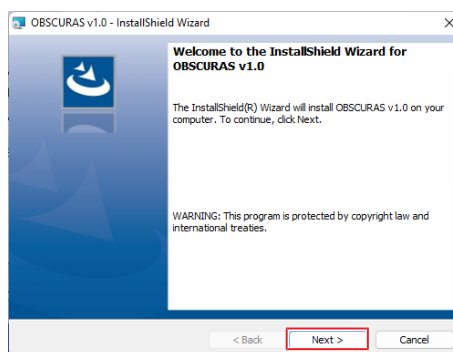


14 Click [Finish].



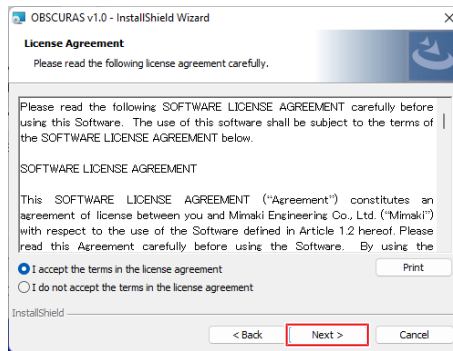
15 Click [Close].**16** Click [2_OBSCURAS Installation].

- The OBSCURAS installer starts up.

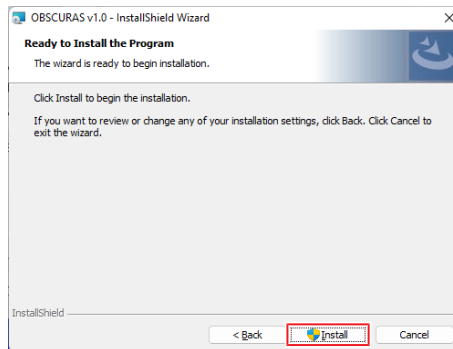
**17** Click [Next].

18 Select [I accept the terms of the license agreement].

- Click [Next].

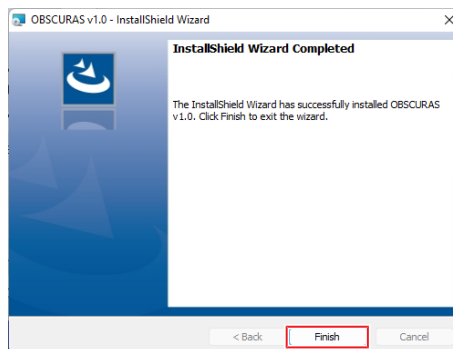


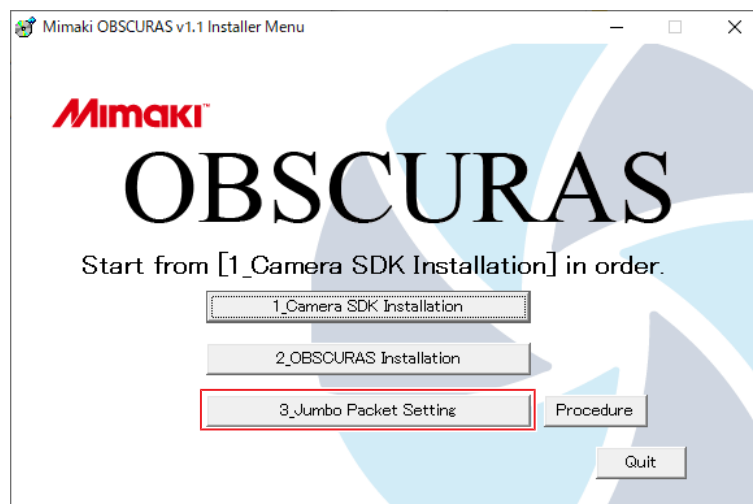
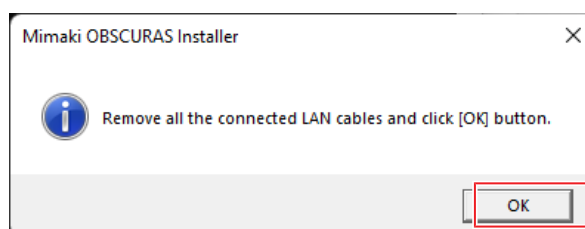
19 Click [Install].



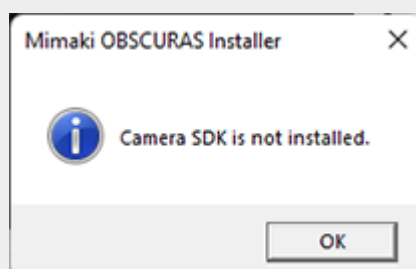
20 Select [Yes] on the User Account Control dialog box.

21 Click the [Finish] button.

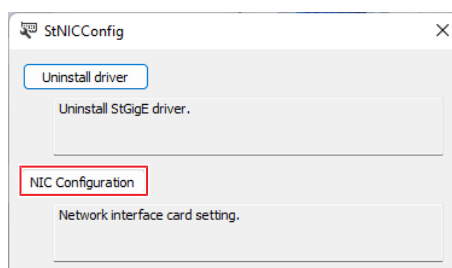


22 Click [3_Jumbo Packet Setting].**23** Unplug all of the LAN cables connected to the PC, then click [OK].

 [Camera SDK is not installed.] will be displayed if camera SDK has not been installed properly. Repeat the procedure from [1_Camera SDK Installation].

**24** Select [Yes] on the User Account Control dialog box.

- StNICConfig starts up.

25 Click [NIC Configuration].

26 Set the following settings.

NIC Configuration

File

Network interface card: Intel(R) Ethernet Connection (7) I219-V

StGigE Driver ☒

Switch this on to use StGigE driver for reducing the CPU usage of transferring the image data. Switch this off for using SocketAPI to handle the image packets. This will increase the CPU usage.

Jumbo Packet: Initial[1514]

Set up the maximum packet size when streaming. Larger packet size increases the performance.

Receive Buffers: Initial[256]

Specifies the number of buffers used when receiving. A large value prevents the reception buffer from running out under heavy load.

Transmit Buffers: Initial[512]

Specifies the number of buffers used when sending. A large value prevents the transmission buffer from running out under heavy load.

Interrupt Moderation: Initial[1]

Interrupt Moderation Rate: Initial[65535]

Disabling increases interrupt frequency and responsiveness, but increases CPU load. When enabled, interrupts are less frequent and CPU load is reduced, but they are less responsive. Depending on the network card used, you may be able to set the interrupt frequency when it is enabled with a parameter (manufacturer-dependent name) such as InterruptModerationRate. You may be able to improve frame dropping by changing settings depending on usage and

Internet protocol v4 property: Show ...

NIC property: Show ...

Firewall: Show ...

OK

- In [Network interface card], set the network card used for the connection to the plotter.
- Change [Jumbo Packet] to [9014Bytes[9014]].
- Change [Receive Buffers] to [Maximum[2048]].
- Change [Transmit Buffers] to [Maximum[2048]].



It may not be possible to change the jumbo packet setting.

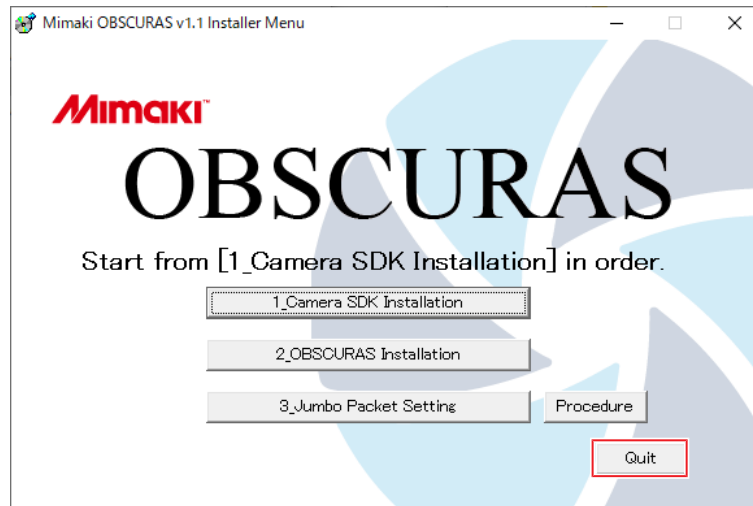
- ["If the Jumbo Packet Setting Cannot be Changed to 9014"\(P. 46\)](#)

27 Click the [OK] button.

28 Click the [×] button to close StNICConfig.

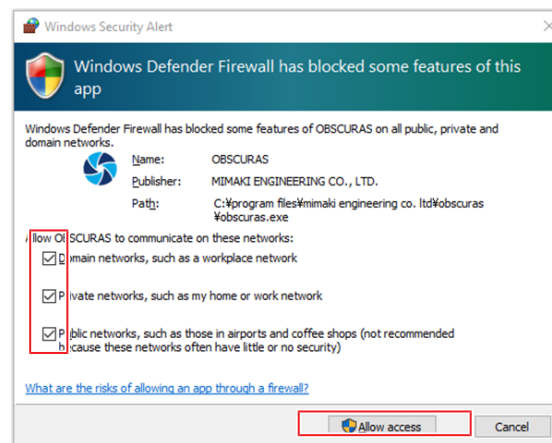
29 Click [Quit] to exit the installer.

- Installation is now complete.



30 Connect the plotter to the PC.

- When connecting from a different PC
See "👉 ["When Connecting a New PC"\(P. 44\)"](#)
- When installed for the first time
Launch the camera app.
If a [Windows Security Alert] appears when launching, select all of the check boxes, then click [Allow access].

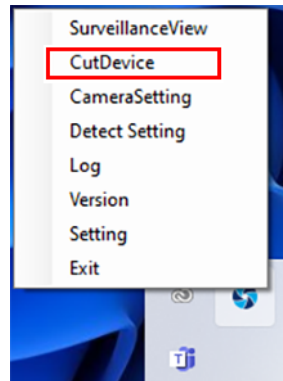


3.2 Cut Device

The [CutDevice] dialog box is used for searching, registering, and managing cutting devices.

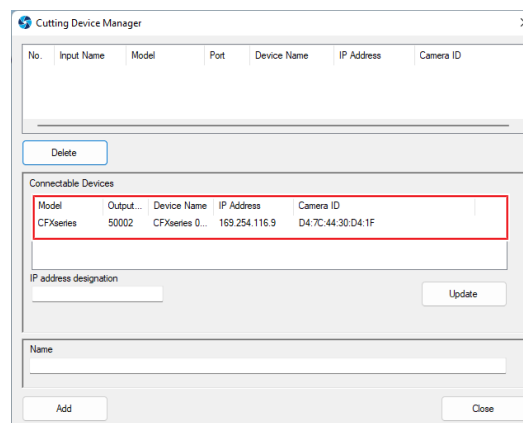
Cutting Device Registration

- 1 Connect the plotter to the PC using a LAN cable, then turn on the power to the plotter.
- 2 Right-click the OBSCURAS icon  on the task bar, then select [CutDevice].
 - Displays the [CutDevice] dialog box.



- If the OBSCURAS icon  is not displayed on the task bar, click OBSCURAS on the Windows Start menu to launch it. The icon will then appear on the task bar.

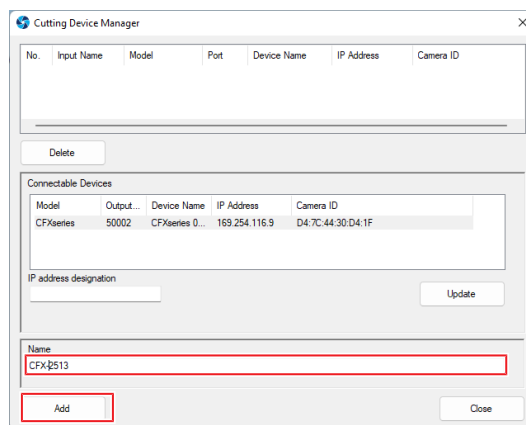
- 3 Check to confirm that the cutting device currently connected is listed in [Connectable Devices].



- If the device currently connected is not listed, click the [Update] button to reload [Connectable Devices].

- 4 Select the cutting device to be registered from the [Connectable Devices] list.

5 Enter a registration name as desired in the [Name], then click the [Add] button.

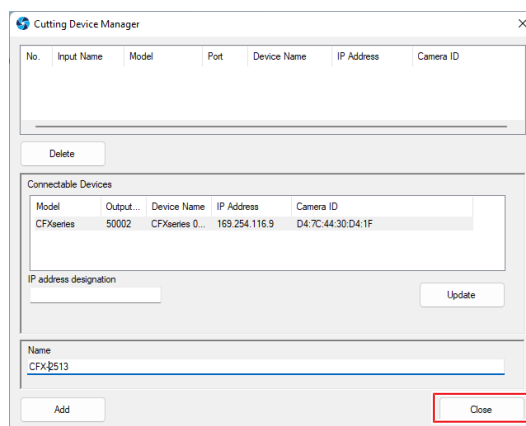


The screenshot shows the 'Cutting Device Manager' dialog box. It has a table at the top with columns: No., Input Name, Model, Port, Device Name, IP Address, and Camera ID. Below the table is a 'Delete' button. Then there is a 'Connectable Devices' section with a table containing one row: Model (CFXseries), Output... (50002), Device Name (CFXseries 0...), IP Address (169.254.116.9), and Camera ID (D4:7C:44:30:D4:1F). Below this is an 'IP address designation' field and an 'Update' button. At the bottom, there is a 'Name' field containing 'CFX-2513' and an 'Add' button highlighted with a red box. A 'Close' button is also present at the bottom right.



- Only one device can be registered. Multiple devices cannot be registered.

6 After registering, click the [Close] button to close the [Cutting Device Manager] dialog box.



This screenshot shows the same 'Cutting Device Manager' dialog box as before, but now the 'Close' button at the bottom right is highlighted with a red box. The 'Name' field still contains 'CFX-2513' and the 'Add' button is no longer highlighted.

[Cutting Device Manager] Screen Layout

1	Cutting device display area	Displays information about registered cutting devices. "Items displayed in the cutting device display area"(P. 40)
2	Delete	Deletes registered cutting devices.
3	Connectable Devices display area	Lists the connectable cutting devices. "Items displayed in the available device display area"(P. 40)
4	IP Address destination	Used to enter the cutting device IP address.
5	Update	Uses the entered [IP address] to search for available cutting devices and lists them in the available device display area. If the [IP address] is not entered, all available cutting devices will be listed.
6	Name	Enters a name for the cutting device to be registered.
7	Add	Adds a cutting device. The cutting device added is listed in the available device display area.
8	Close	Closes the [CutDevice] dialog box.
9		Closes the [CutDevice] dialog box.

● **Items displayed in the cutting device display area**

No.	Registration number
Name	Name entered at time of registration
Model	Model name of registered cutting device
Port	Output port for registered cutting device
Device Name	Name of registered cutting device
IP Address	IP address of registered cutting device
Camera ID	ID of camera connected to registered cutting device

● **Items displayed in the available device display area**

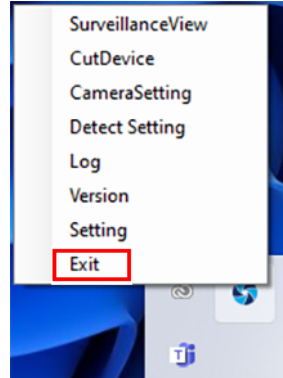
Model	Model name of available cutting device
Port	Output port for available cutting device
Device Name	Name of available cutting device
IP Address	IP address of available cutting device
Camera ID	ID of camera connected to available cutting device

3.3 Uninstallation



- Uninstallation can be performed only by users with Administrator authority.

1 Right-click the OBSCURAS icon on the task bar, then select [Exit].



- OBSCURAS ends.

2 From the Windows [Start] menu, click [Settings].

3 Click [Apps] > [Apps & features].

4 From the list in [Apps & features], select [OBSCURAS], then click [Uninstall].

5 Click [Uninstall].

- Uninstallation starts.

6 Click [Finish].

- OBSCURAS uninstallation is now complete.



- The following procedure should be performed after OBSCURAS uninstallation.

7 From the Windows [Start] menu, click [Settings].

8 Click [Apps] > [Apps & features].

9 From the list in [Apps & features], select [Sentech SDK Installer v***], then click [Uninstall].

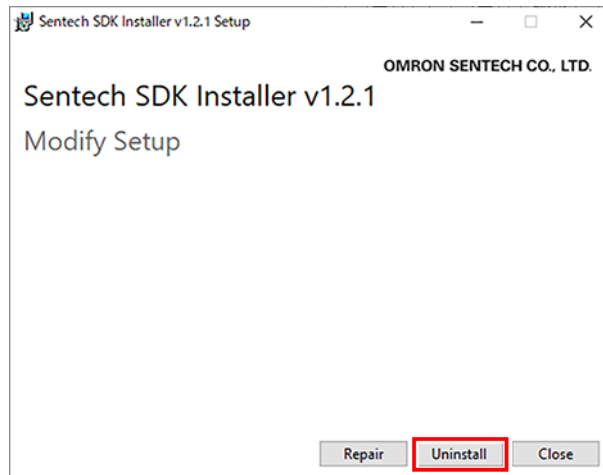


- Please note that a similar item called [Sentech SDK v***] is available, so be sure not to confuse them.

10 Select [Yes] on the User Account Control dialog box.

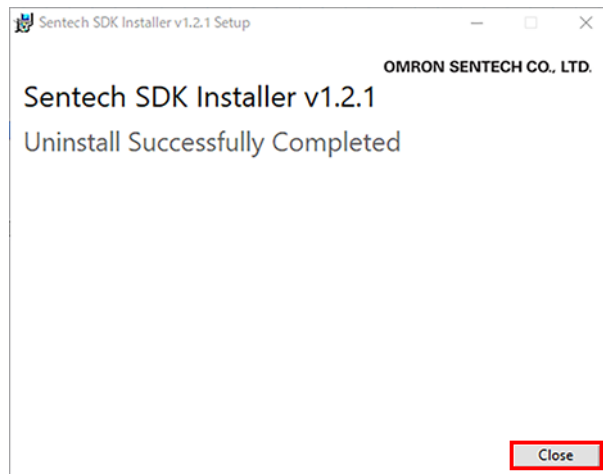
11 Click [Uninstall].

- Uninstallation starts.



12 Click [Close].

- Uninstallation is now complete.



Chapter 4 Troubleshooting



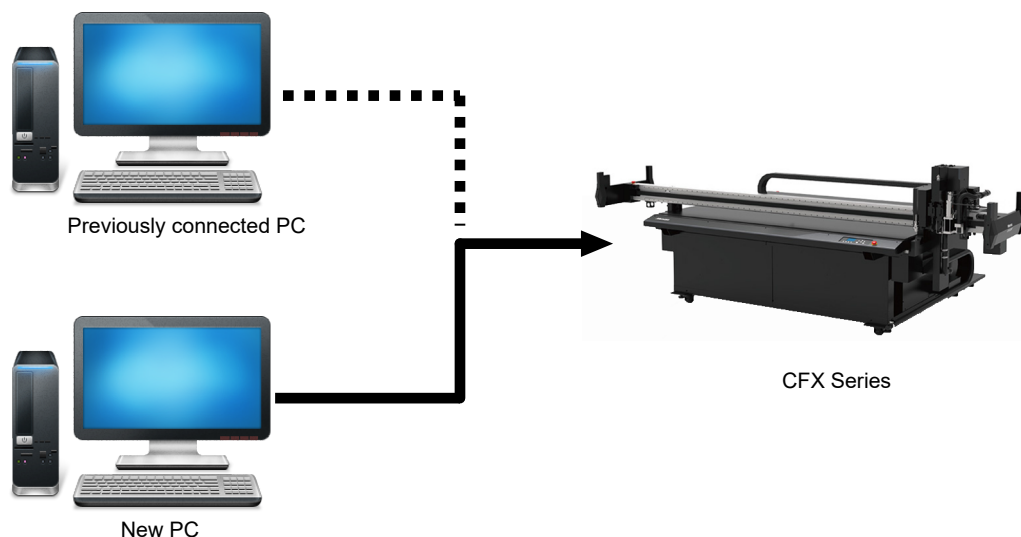
This chapter

This chapter describes corrective actions for troubleshooting and connecting a new PC.

When Connecting a New PC.....	44	How to Set a Fixed IP Address for the Camera	52
If the Jumbo Packet Setting Cannot be		How to Check and Change the PC and	
Changed to 9014.....	46	Camera IP Addresses	54
Checking and Changing Firewall Settings.....	49	Troubleshooting.....	56

4.1 When Connecting a New PC

When connecting a new PC to the plotter, connect as follows.



1 Install OBSCURAS on the new PC. 🖱️ **"Installation"(P. 28)**

2 Copy the following folder from the previously connected PC.

- C:\ProgramData\MIMAKI_OBSCURAS\CommonSettingFile



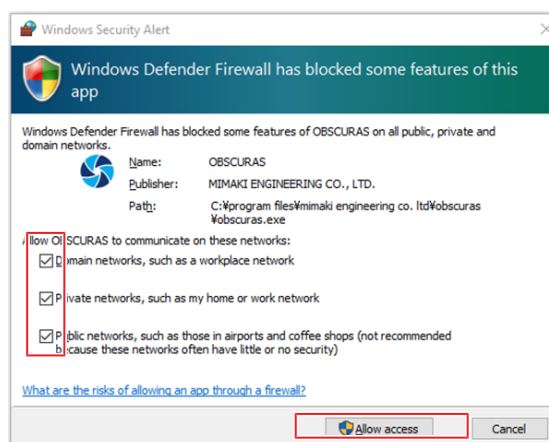
- Be sure to copy the entire [CommonSettingFile] folder as well as the files within the folder.

3 Paste the copied folder into the following folder on the new PC.

- C:\ProgramData\MIMAKI_OBSCURAS

4 Start up OBSCURAS on the new PC.

- If a [Windows Security Alert] appears when OBSCURAS is launched, select all of the check boxes, then click [Allow access].



5 Use [CutDevice] to register the plotter currently connected. 🖱️ **"Cutting Device Registration"(P. 37)**



- When two or more PCs with the OBSCURAS installed are simultaneously connected to one CFX, it may not be possible to transmit data properly. Please uninstall or exit the OBSCURAS on one of the two PCs beforehand.

4.2 If the Jumbo Packet Setting Cannot be Changed to 9014

It sometimes may not be possible to change the jumbo packet setting during the installation procedure for reasons such as the following:

- The value cannot be changed
- The jumbo packet cannot be entered

NIC Configuration [X]

File

Network interface card: Intel(R) Ethernet Connection (7) I219-V [v]

StGigE Driver ☒
 Switch this on to use StGigE driver for reducing the CPU usage of transferring the image data. Switch this off for using SocketAPI to handle the image packets. This will increase the CPU usage.

Jumbo Packet Initial[1514] [v]
 Set up the maximum packet size when streaming. Larger packet size increases the performance.

Receive Buffers Initial[256] [v]
 Specifies the number of buffers used when receiving. A large value prevents the reception buffer from running out under heavy load.

Transmit Buffers Initial[512] [v]
 Specifies the number of buffers used when sending. A large value prevents the transmission buffer from running out under heavy load.

Interrupt Moderation Initial[1] [v]

Interrupt Moderation Rate Initial[65535] [v]
 Disabling increases interrupt frequency and responsiveness, but increases CPU load. When enabled, interrupts are less frequent and CPU load is reduced, but they are less responsive. Depending on the network card used, you may be able to set the interrupt frequency when it is enabled with a parameter (manufacturer-dependent name) such as InterruptModerationRate. You may be able to improve frame dropping by changing settings depending on usage and

Internet protocol v4 property [Show ...]

NIC property [Show ...]

Firewall [Show ...]

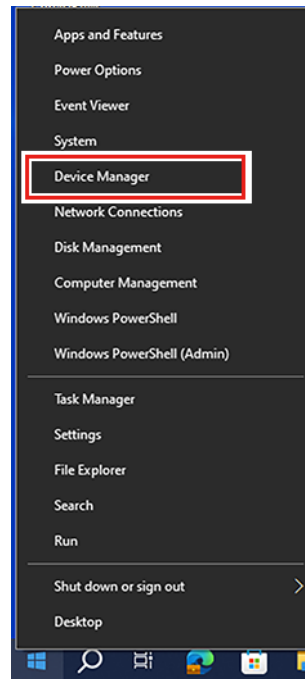
[OK]

In cases like this, set the jumbo packet using the following procedure.

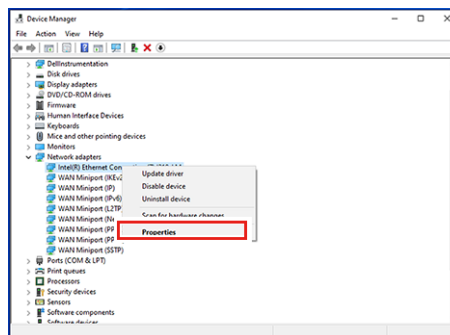


- The LAN cables must all be disconnected before using this procedure.

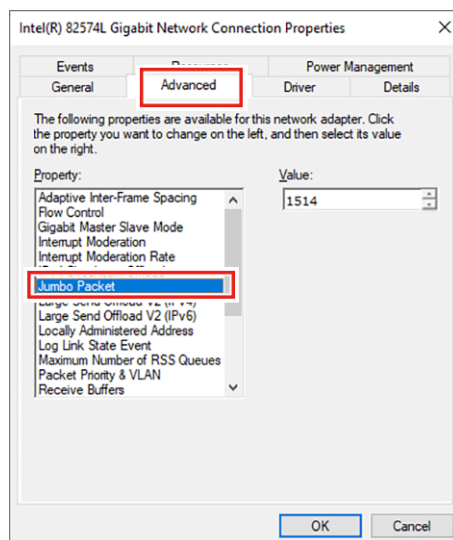
1 Right-click the Windows Start menu and select [DeviceManager].



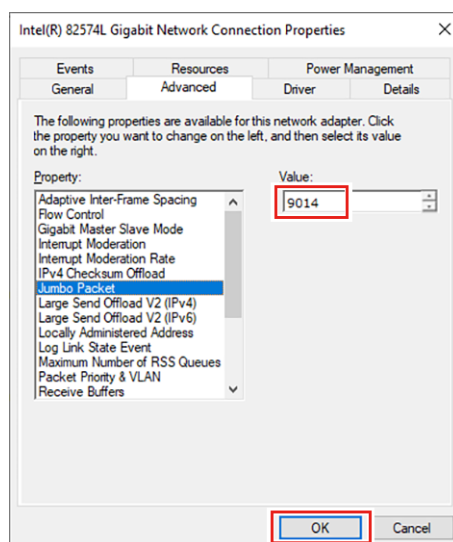
2 Expand [Network adapters], right-click on the network card for which the settings are to be changed, then select [Properties].



3 Click [Advanced], then select [Jumbo Packet] from the properties list.



4 Enter "9014" for [Value], then click [OK].



5 Restart the PC.

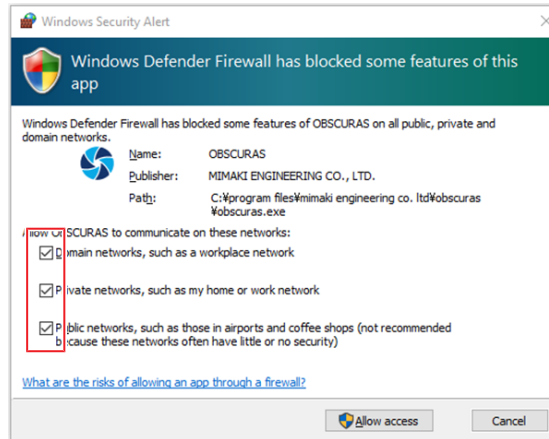


- The exact display and procedure may differ depending on the particular LAN port used. For details, refer to the manufacturer's instructions for the LAN port used.

4.3 Checking and Changing Firewall Settings

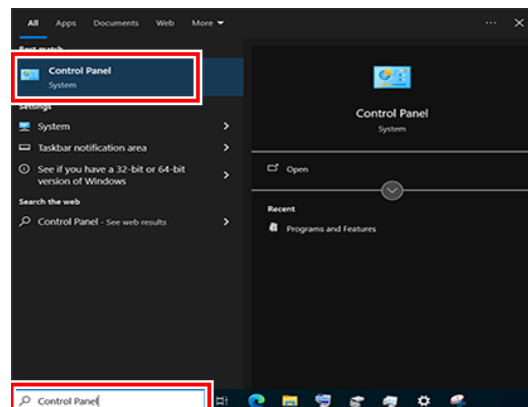
If normal communication is not possible between the CFX and OBSCURAS, there is a possibility that OBSCURAS is being blocked due to the firewall settings.

Selecting all of the check boxes on the following window displayed when OBSCURAS is launched for the first time allows communication to be set without problems.

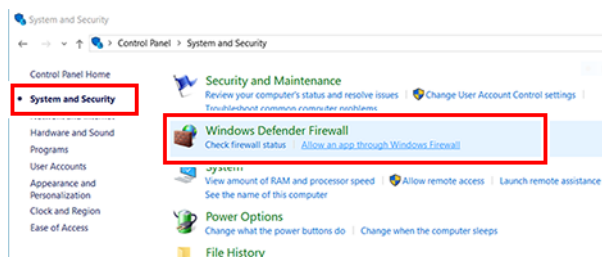


The following section describes how to check whether communication is being blocked by the firewall and how to change the settings.

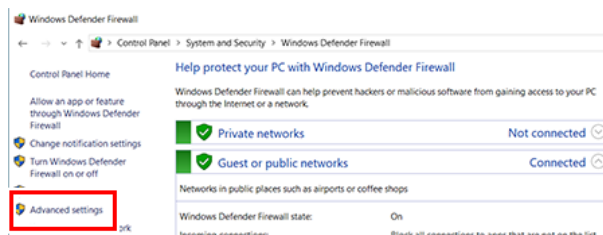
- 1 In the search box located next to the Start menu on the taskbar, type "Control Panel" and select [Control Panel] from the list of results.



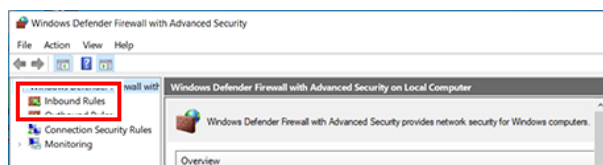
- 2 Select [System and Security] - [Windows Defender Firewall].



3 In the menu on the left, click [Advanced settings].



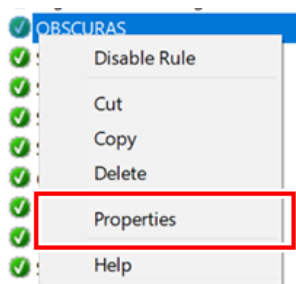
4 In the [Windows Defender Firewall with Advanced Security] dialog box, click [Inbound Rules].



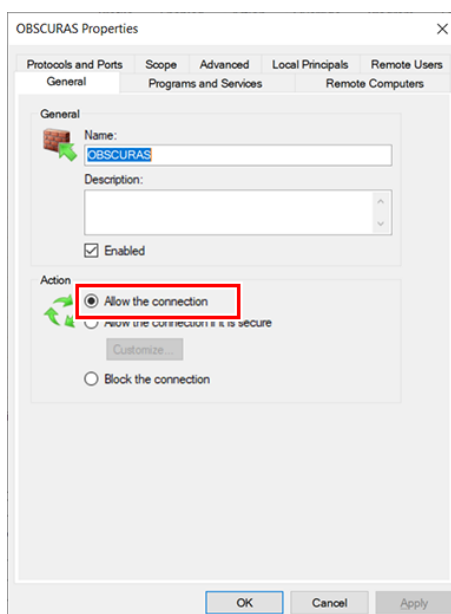
5 Look for the OBSCURAS settings.



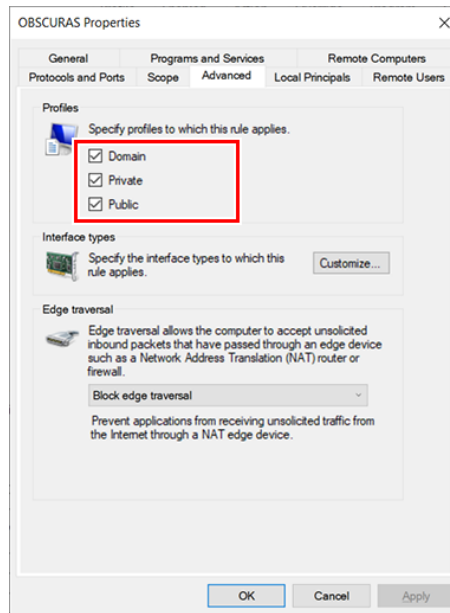
6 Right-click the OBSCURAS settings, then click [Properties].



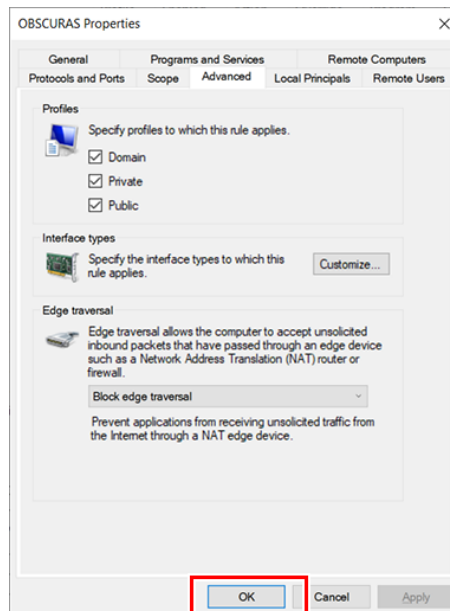
7 On the [General] tab, under [Action], click [Allow the connection].



- 8** On the [Advanced] tab, under [Profiles], select [Domain], [Private], and [Public].

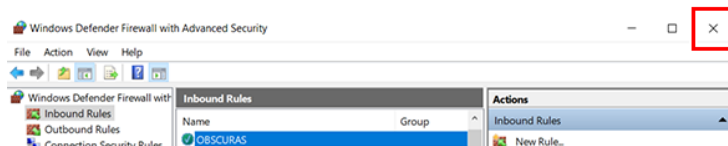


- 9** Click [OK].



- 10** Perform the procedure described in steps 6 to 9 for all of the OBSCURAS settings displayed in step 5.

- 11** Click [×] to close the dialog box.



4.4 How to Set a Fixed IP Address for the Camera

When using a fixed IP address for the CFX and the PC to which it is connected, there may be cases where OBSCURAS cannot connect to the camera, and communication may become highly unstable.

In such cases, use the following procedure to set the IP address of the camera to the same subnet.

1 Exit OBSCURAS.



- The IP address cannot be changed unless OBSCURAS is exited.

2 Turn on the power to the CFX.

3 Connect the CFX to the PC.

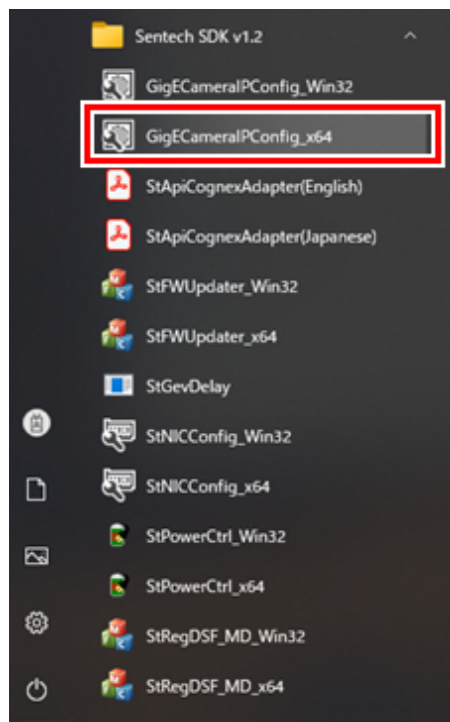


- If there are multiple CFX units, be sure to connect them one at a time.



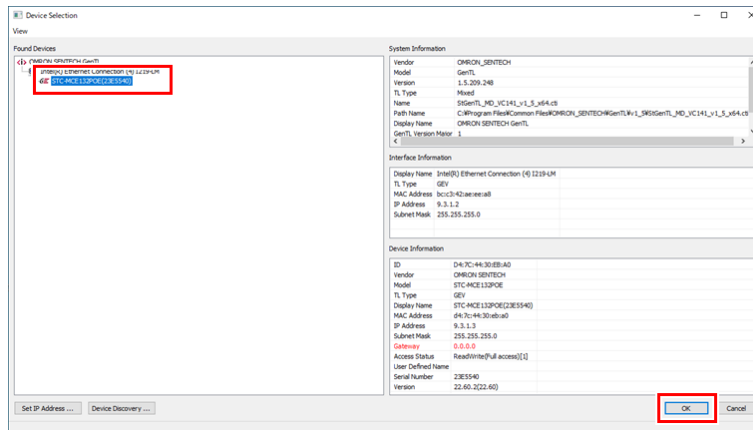
- They can also be connected via a hub.

4 In the Start menu, open the [Sentech SDK v**] folder, then click [GigECameraIPConfig_x64].



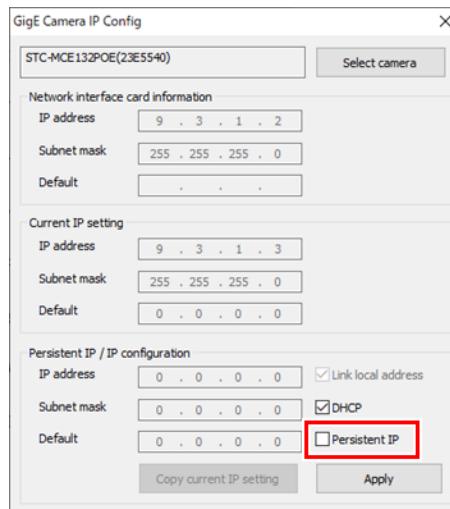
- "v**" corresponds to the camera SDK version.

5 Select [STC-MCE132POE] displayed in the area on the left, then click [OK].

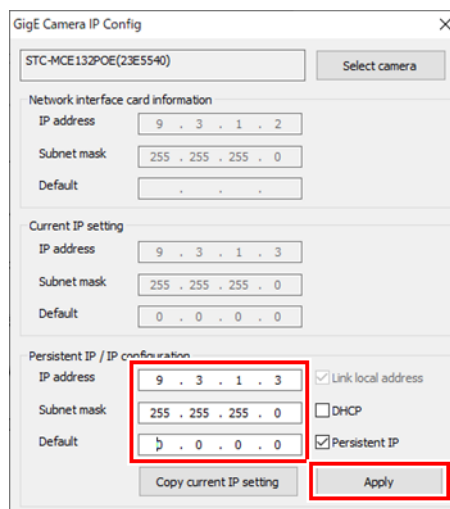


- If [OK] cannot be clicked, check the following:
["How to Check and Change the PC and Camera IP Addresses"\(P. 54\)](#)

6 When the [GigE Camera IP Config] dialog appears, select the [Persistent IP] check box.



7 Enter the fixed [IP address], [Subnet mask], and [Default (Gateway)], then click [Apply].



- Wait until the [Apply] button is enabled.

8 Click [×] to close the [GigE Camera IP Config] dialog.



- Perform the following after changing the IP address:
 - (1) Launch OBSCURAS.
 - (2) Delete all of the cutting devices registered in [CutDevice].
 - (3) Re-register the cutting devices deleted in (2).

How to Check and Change the PC and Camera IP Addresses

If [OK] cannot be clicked in step 4 of "[How to Set a Fixed IP Address for the Camera](#)"(P. 52)", the PC and camera IP addresses may be on different networks.

● How to check the current camera IP address

Click [Set IP Address] at the bottom left of the dialog.

The PC network information is displayed on the left, and the camera network information is displayed on the right.

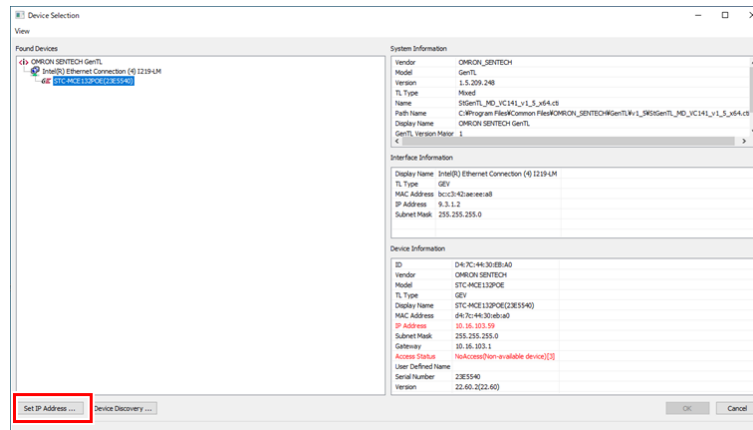
● If the networks are different

Set to the same network using either of the following methods:

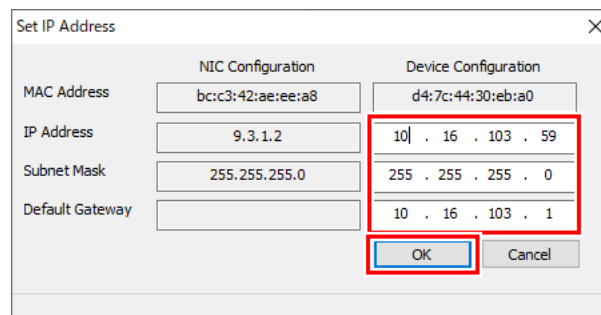
- Method 1: Change the PC IP address
- Method 2: Change the camera IP address temporarily

Procedure for method 2

1. Click [Set IP Address] at the bottom left of the dialog, then change [IP Address], [Subnet Mask], and [Default Gateway].

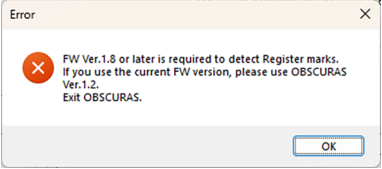
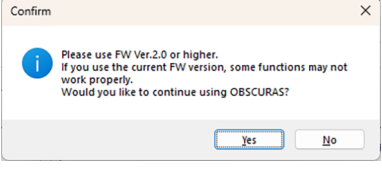
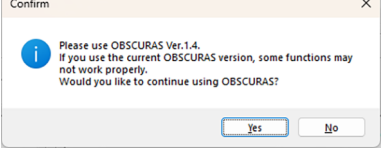


2. Once entered, click [OK].



4.5 Troubleshooting

Describes corrective actions for troubleshooting.

Phenomenon	Measures
An error occurs in detection.	Check the error number displayed on the plotter with the plotter manual of procedures and take related action.
An error occurs in register mark detection.	Check the communication status display.  "SurveillanceView"(P. 11) Check the Ethernet environment specifications.  "Functions and Operating Environment"(P. 6)
A register mark detection error may occur only on specific work.	Changes the imaging settings and image processing settings in the [Detect Setting] dialog.  "Detect Setting"(P. 13)
An error message "Cannot activate multiple apps." is displayed.	- Restart the PC. - Check if the OBSCURAS is not starting up with another account that is signed in to the PC.
An error message "FW Ver1.8 or later is required to detect Register marks." is displayed. 	Please update plotter FW to Ver1.8 or higher. Otherwise, uninstall the existing OBSCURAS and use OBSCURAS Ver1.2. Click the [OK] button to exit OBSCURAS.
A message "Please use FW Ver*. * or higher" is displayed. 	Displays the recommended FW version for OBSCURAS currently in use. Upgrading plotter FW to the recommended version will enable all new functions. It does not affect basic operation if you continue using the current FW version. • Yes: Close the dialog box. (Ready for use) • No: Exit OBSCURAS.
A message "Please use OBSCURAS Ver*. * or higher" is displayed. 	Displays the recommended OBSCURAS version for the plotter currently in use. Upgrading OBSCURAS to the recommended version will enable all new functions. It does not affect basic operation if you continue using the current OBSCURAS version. • Yes: Close the dialog box. (Ready for use) • No: Exit OBSCURAS.

Chapter 5 Appendix



This chapter

This chapter describes the machine specifications.

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Camera App

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Camera App is built using open source software:

- OpenCvSharp4
- log4net

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