



# INSTRUCTION MANUAL

## **Image Mate 4 (MX-1)**

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Please read this instruction manual carefully before using this product.

# TABLE OF CONTENTS

<b>TABLE OF CONTENTS .....</b>	<b>2</b>
<b>INTRODUCTION .....</b>	<b>3</b>
GREETING .....	3
NOTE .....	3
<b>BEFORE USE .....</b>	<b>4</b>
SYSTEM REQUIREMENTS .....	4
INSTALLING / UNINSTALLING .....	5
<b>IMAGE MATE 4 .....</b>	<b>6</b>
STARTING IMAGE MATE 4 .....	6
SCREEN AND ICONS .....	7
REMOTE CONTROL WINDOW .....	9
CAPTURING A STILL IMAGE / VIEWING A STILL IMAGE .....	10
RECORDING VIDEO / VIEWING VIDEO .....	10
LIVE SETTINGS .....	12
<b>TROUBLE SHOOTING .....</b>	<b>14</b>
BEFORE CONTACTING SUPPORT .....	14
<b>UPDATING IMAGE MATE4 .....</b>	<b>16</b>
<b>REFERENCE .....</b>	<b>17</b>
DISCLAIMER .....	17
TRADEMARKS .....	17
ACKNOWLEDGEMENTS AND COPYRIGHTS .....	17

# INTRODUCTION

## GREETING

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Thank you for purchasing ELMO Document Camera. This manual will guide you through using Image Mate 4, the Document Camera controller software. Please read this manual carefully before using Image Mate 4.

## NOTE

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- The sample screens shown in this manual may differ from those you see while using the software.
- For the latest instruction manual, installation manual and firmware information, go to the ELMO web site.
- When using Image Mate 4, be sure to refer to the instruction manual supplied with the Document Camera (MX-1).
- Depending on the OS, Image Mate 4 may not display the correct fonts.

# BEFORE USE

## SYSTEM REQUIREMENTS

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Your computer must meet the following requirements to use Image Mate 4.

OS	Windows 10 64bit
CPU	Core i7(3840x2160@30fps) Core i5 or higher (1920x1080@60fps)
RAM	16GB(3840x2160@30fps) 4GB recommended(1920x1080@60fps)
Display	3840x2160(3840x2160@30fps) 1920x1080 pixels or more(1920x1080@60fps)
Graphic board	Possible to output at 3840x2160 GeForce GTX750 or higher
USB	USB3.0
Compatible Document Camera	MX-1


### NOTE

- If your computer does not meet the system requirements or depending on the performance of your computer, the frame rate during the live video streaming or recording may decrease.

## INSTALLING / UNINSTALLING

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### ●INSTALLING

1. Go to Elmo official website.  
<http://www.elmousa.com/>  
[www.elmoeurope.com/download](http://www.elmoeurope.com/download)
2. Select "Image Mate 4".
3. Click "Download" and read the "Precautions on the handling of the downloaded data".  
Click "Agree".
4. Downloading will start after a short while.  
※If you cannot find the downloaded file, check the download folder of your computer.
5. Run "ImageMate4Setup.msi" after the downloading is completed. Follow the instructions displayed in the installation window of Image Mate 4.
6. The icons [  ] will be created on the desktop after the installation is completed.

### ●UNINSTALLING

To remove Image Mate 4 from your computer, go to "Start menu" and go to "Settings" → "System" → "Apps & features", and uninstall Image Mate 4.

# IMAGE MATE 4

## STARTING IMAGE MATE 4

Start Image Mate 4 from a shortcut [ **IM** ] on the desktop.

Select the desired camera to display by the following procedure.

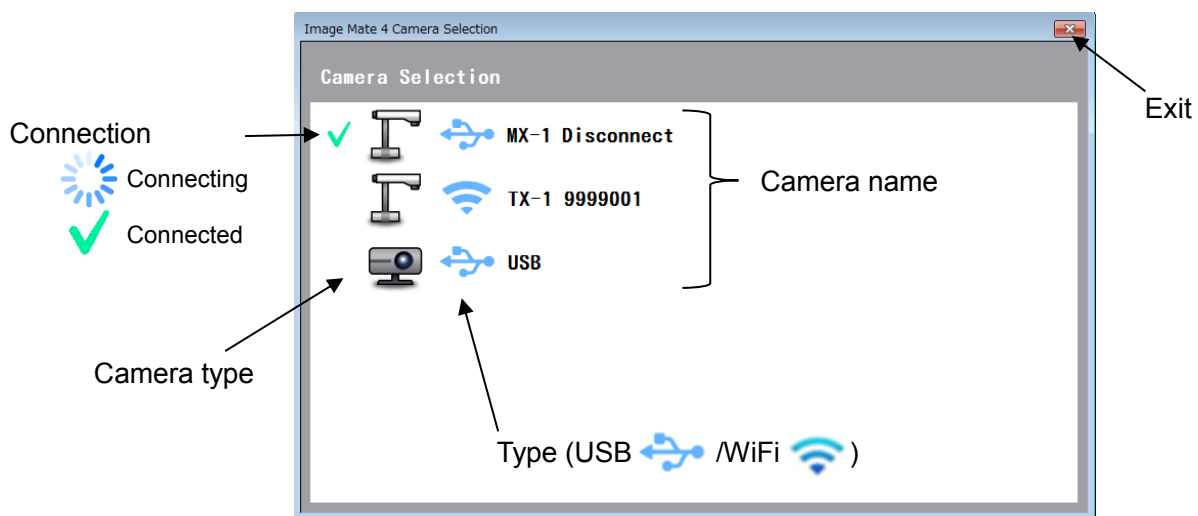
※The camera will not be recognized when it is not turned on. Connect the camera to a running computer via the USB cable (bus power).

### CAUTION




Image Mate 4 may not start if the USB cable is connected before starting Image Mate 4. Start Image Mate 4 before connecting the MX-1 via the supplied USB cable.

## ●HOW TO SELECT THE CAMERA

- The live image of the camera appears after Image Mate 4 is started when the Document Camera (MX-1) is connected to a computer via the USB cable.
- The following Camera Selection window appears when a computer is connected to several cameras via the USB cable.

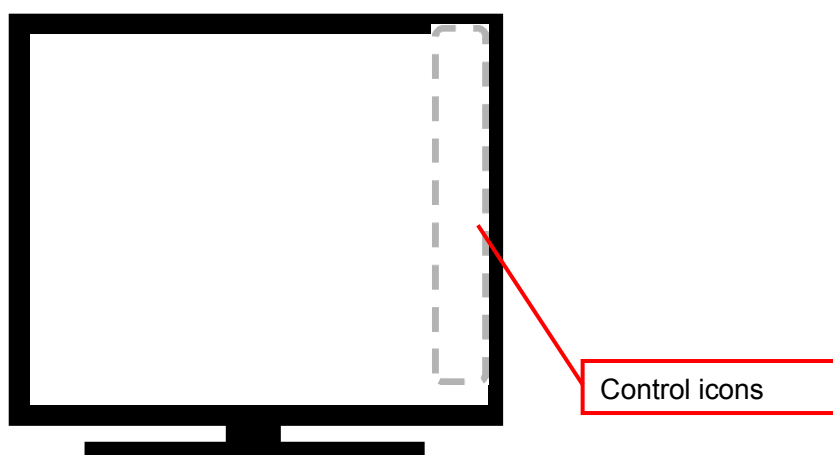



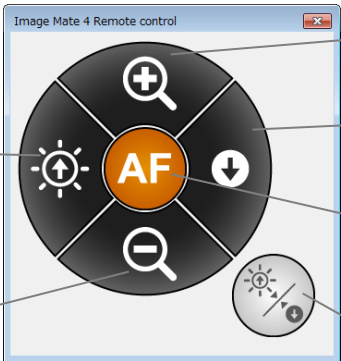







### <Connection procedure>


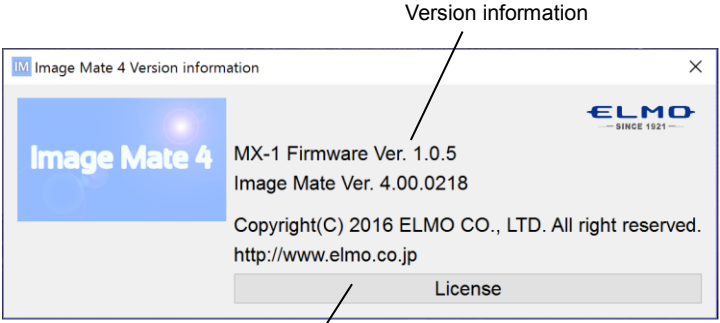

- ① Click the selected camera name.
- ② The connection status changes to "Connecting" [  ].
- ③ The connection status changes to "Connected" [  ] after the connection is established.
  - ※The software will cancel the selection and start to connect to the other selected camera if the camera name of the other camera is selected after the connection is established.
  - ※The connection will be disconnected if [  ] is pressed
- ④ The camera selection window disappears and the live image of the camera appears.

## SCREEN AND ICONS

The live image of the camera is displayed when Image Mate 4 is started.



Icon	Name	Function
	Remote control	To display the remote control window. <span>P. 9</span> 
	Capture	To save the currently displayed image as a still image. <span>P. 10</span>
	Start recording/ Stop recording	To start and stop recording. <span>P. 10</span>
	Open	To open the destination folder of still image files or video files recorded with Image Mate 4.
	Freeze	To pause the image. Click this icon again to resume the image.
	Rotate Images	To rotate the image by 180°. ※During the freeze can't be rotation of the image.
	Live settings	To configure Resolution settings, Camera mode settings and Camera settings. <span>P. 12</span>
	Camera selection	To display a list of connected cameras. Select the camera to display.

	Show version	<p>To display the version information of the connected Document Camera and Image Mate 4.</p>  <p>The software license agreement will be displayed. Carefully read it before using Image Mate 4.</p>
	Exit	<p>To close Image Mate 4.</p> <p>A confirmation message will be displayed when this icon is clicked. Click “OK” to close Image Mate 4.</p>

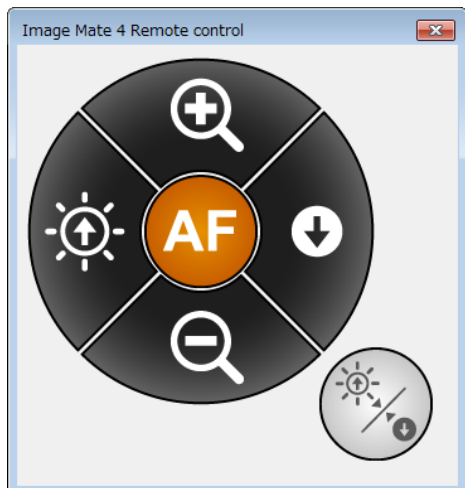








## REMOTE CONTROL WINDOW

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You can control the Document Camera (MX-1) from the remote control window.

- Each function can be operated by pressing respective buttons.
- The remote control window can be moved by dragging.




Button	Name	Function
	Auto Focus	To focus automatically.
	Zoom in	To enlarge the image.
	Zoom out	To shrink the image.
	Brightness (brighten)	To brighten the image.
	Brightness (darken)	To darken the image.
	Reset Brightness	To return the brightness setting to factory default setting.

## CAPTURING A STILL IMAGE / VIEWING A STILL IMAGE

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### ●CAPTURING A STILL IMAGE


The currently displayed image can be captured and saved as a still image.

A still image of the currently displayed image will be captured when [  ] is pressed.


The captured still image will be saved in a folder.

### ●VIEWING A STILL IMAGE

The destination folder of captured still images is [Pictures/ELMO Interactive Toolbox/rec].

The destination folder can be opened from [  ] in the control menu.

(※The destination folder may defer depending on the OS.)


1. Click [  ] in the menu to open the destination folder.
2. Double-click a still image file to view it.

## RECORDING VIDEO / VIEWING VIDEO

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### ●RECORDING VIDEO

The currently displayed image of the Document Camera (MX-1) can be recorded and saved as a video file. When a microphone is connected to a computer, you can also record audio.


Recording of the currently displayed image will be started when [  ] is pressed. The recorded video file will be saved in a folder.



※There are some limitations on saving the recorded video file in a folder.

Resolution		Live video streaming	Recording resolution
4:3	3M	2048x1536 30fps	1280x960 30fps
	13M	4160x3120 21fps	1280x960 30fps
16:9	720P	1280x720 60fps	1280x720 60fps
	1080P	1920x1080 30fps	1280x720 30fps
		1920x1080 60fps	1280x720 60fps
	4K	3840x2160 30fps	1280x720 30fps


### CAUTION

- Recording may not be performed correctly depending on the performance of your computer or the network condition.
- The resolution of the MX-1 will be changed according to the recording resolution during recording.
- The performance may be degraded when connecting with the USB2.0.

※The Start recording icon [  ] changes to the Stop recording icon during recording.  
You can stop recording by pressing the Stop recording icon.

 / 	<p>This icon appears during video recording.</p> <p>The color of this icon changes between red and white during video recording.</p>
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### ●VIEWING VIDEO (SAME DESTINATION FOLDER AS A STILL IMAGE)

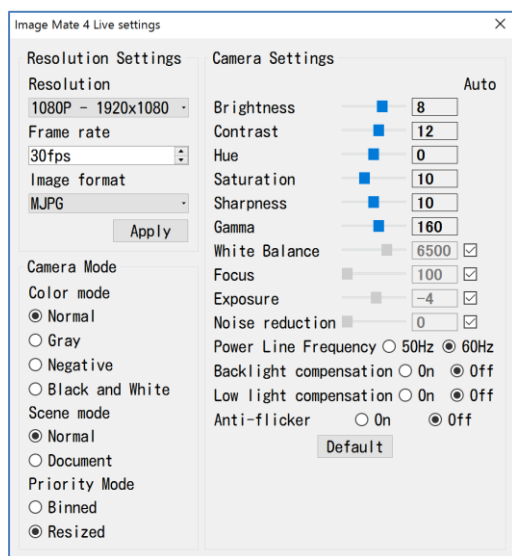
1. Click [  ] in the menu to open the destination folder.
2. Double-click a video file to view it.

### NOTE

- Depending on the performance of your computer or type of the file, you may not be able to view the captured still image or recorded video correctly.
- Depending on the playback environment, some video files recorded by Image Mate 4 may not be played back.
- The recording time may differ from the created video time.

## LIVE SETTINGS

Resolution Settings, Camera Mode settings and Camera Settings can be configured.



※The image shows the initial settings.  
(USB3.0)

### ●Resolution Settings

Item	Setting value	Frame rate		Description
		USB3.0	USB2.0	
Resolution/ Frame rate	VGA	30fps	30fps	<div><div></div><div>The image quality increases in the order as indicated by the arrow, while the network load also increases. As the network load increases, the image distortion tends to occur, preventing smooth video playback.</div><div></div></div> <div><div></div><div>These settings are not available when connecting with the USB2.0.</div></div>
	XGA	30fps	30fps	
	720p	60fps	30fps	
		30fps		
	QVGA	30fps	30fps	
	1080p	60fps	30fps	
		30fps		
	3.0M	30fps	18fps	
	4K	30fps		
13.0M	21fps			

※The available frame rate varies depending on the selected resolution.

Image format	MJPEG	The image format of the MX-1 is MJPG.
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### ●Camera Mode

Item	Setting value	Description
Color mode	Normal	To display the image in color.
	Gray	To display the background in black and the light color in gray.
	Negative	The brightness or darkness of the image and the color of the image will be reversed.
	B&W	To display the image in black and white.

Scene mode	Normal	To clearly display photos or documents with color.
	Document	To clearly display text documents.
Priority mode	Binned	The speed takes precedence over image quality.
	Resized	The image quality takes precedence over speed.

## ●Camera Settings

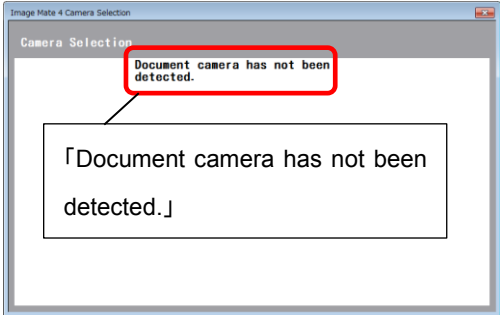
Item	Setting range	Description
Brightness	0~12	To adjust the brightness. It does not follow the brightness of the shooting environment.
Contrast	0~20	To adjust the level of contrast of texts and lines.
Hue	-180~180	To adjust the color tone of the image.
Saturation	0~31	To adjust the saturation of the image.
Sharpness	5~15	To adjust the clarity of the image.
Gamma	100~200	To adjust the image characteristics of the input/output devices. Adjust the value according to your preference.
White Balance ※1	2000~8000	To adjust the level of red color and blue color in the image manually.
Focus ※1	100~3000	To adjust the focus.
Exposure ※1	-10~1	To adjust the exposure level. ※If you remove the tick from the check box of “Auto”, the above brightness setting will be disabled.
Noise reduction ※1	0~10	To adjust the level of noise reduction.
Power Line Frequency	50Hz	When you notice a light flickering, set this value same as the power frequency of your area.
	60Hz	
Backlight compensation	On	To prevent the object in the center of the image from becoming dark when there is a strong backlight behind the object.
	Off	
Low light compensation	On	When this setting is set to On, the camera automatically selects the appropriate brightness for the shooting in dark environment or in an environment where the brightness changes abruptly.
	Off	
Anti-flicker	On	To reduce the flickering in the image by adjusting the brightness.
	Off	

※1 If you remove the tick from the check box of “Auto” ☒ at the right of the setting items, you can set the value as you wish.

\* The Camera mode settings and Camera settings will be initialized when the Default button is pressed.

# TROUBLE SHOOTING

## BEFORE CONTACTING SUPPORT

Symptom	<p>The following message appears.</p> 
Cause	The USB cable is disconnected.
Remedy	Remove the USB cable and connect again. If the problem still persists, restart Image Mate 4.

Symptom	There is a delay or decrease in the frame rate.
Remedy	<p>Close all other applications on your computer.</p> <p>If you have not updated your Windows, update it immediately to keep your Windows up-to-date. This may improve the problem.</p>

Symptom	Video recording cannot be performed properly.
Remedy	Video recording may not be possible if your computer does not meet the system requirements.



Symptom	There is a distortion in the Live image.
Remedy	<p>The image distortion can be reduced by decreasing the resolution and frame rate.</p> <p>If you are using a 32bit computer, you may not be able to achieve the full performance when the resolution is set to high such as 4K and 13K. Decreasing the resolution or using a 64bit computer may improve the problem.</p>

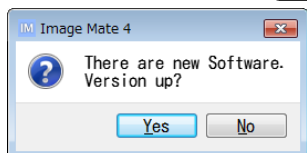
Symptom	4K video images cannot be displayed.
Remedy	<p>Verify that your system meets the following requirements:</p> <p>Processor : Intel® Core i7 or higher</p> <p>Memory : 16GB</p> <p>Graphic board : GeForce GTX750 or higher</p>

Symptom	Image Mate 4 does not start.
Remedy	<p>Image Mate 4 may not start if the USB cable is connected before starting a computer.</p> <p>Start Image Mate 4 before connecting the USB cable.</p>

# UPDATING IMAGE MATE4

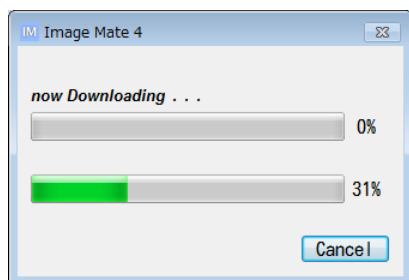
If your computer is connected to the Internet, you can update Image Mate 4 to the latest version. Update your Image Mate 4 according to the following procedure:

- ① If there is any update to a new available version, the following update notification message is displayed when [  ] in the menu is pressed. 



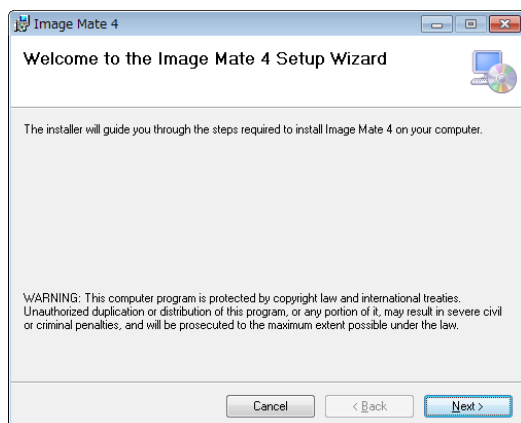
- ② Press [Yes] to perform the update. Press [No] or [x] if you do not want to perform the update now.
- ③ The downloading starts.


※It may take some time to complete the download depending on the network condition.

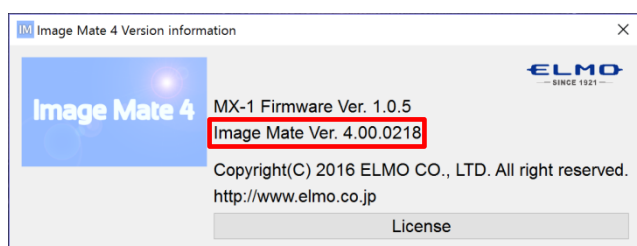


- ④ Image Mate 4 is automatically closed and the following installation window appears after the downloading is completed.

Proceed the installation by following the instructions displayed on the screen.



- ⑤ Restart your computer after the installation is completed.
- ⑥ Start Image Mate 4. Press [  ] and verify the version.





# REFERENCE

## DISCLAIMER

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The contents of this manual and Image Mate 4 are subject to change without prior notice. Our software may not function as intended due to compatibility issues with the peripheral devices and existing software installed in your computer.

ELMO Co., Ltd. cannot be held responsible for either direct or indirect damages suffered by users while using our software.

## TRADEMARKS

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## ACKNOWLEDGEMENTS AND COPYRIGHTS

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- This software is based in part on the work of the Independent JPEG Group.

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