NEC

IWB Setup Software/EyeRIS NEC edition

OPERATION MANUAL

This manual describes installation and operation procedures of the driver / the calibration software. For Interactive Whiteboard Kit, projectors and optional products supported by the software, visit the section "IWB Setup Software/EyeRIS NEC edition" on the NEC projector support page of our website.
URL : http://www.nec-display.com/dl/en/index.html

Operating Environment

Supported OSs are as follows:

Windows 7, Windows 8.1, Windows 10

Before starting to install the EyeRIS software, perform the Windows Update for updating your OS in the latest conditions. If your OS is not in the latest conditions, your computer performance may become unstable.

*   For starting up the software, Microsoft .NET Framework 4 or later is required.
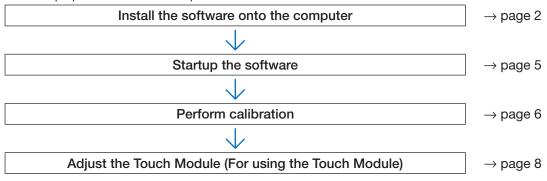
    Download the Microsoft .NET Framework from the website of Microsoft and install it onto the computer.

About trademarks

Microsoft, Windows, .NET Framework are either registered trademarks or trademarks of Microsoft Corporation in the U.S. or other countries.

Setup Procedure

Perform setup operations in below steps:

| Install the software onto the computer | → page 2 |

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| Startup the software | → page 5 |

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| Perform calibration | → page 6 |

↓

| Adjust the Touch Module (For using the Touch Module) | → page 8 |

Install the Software onto the Computer

IMPORTANT

- When installing / uninstalling the software, you must log on the computer with Administrator's privileges.
- Before starting to install the software, quit all application software in running and perform the Windows Update to update your OS to the latest conditions. If other application software is remained in running, installation may not be completed properly. If your OS is not in the latest conditions, your computer performance may become unstable.
- If the displayed language on your OS is not one of correspondent languages for this software, all indications are displayed in English.
- In case the below mentioned software in old version has been installed on the computer, make sure to uninstall the software in old version first and then start to install one in the latest version.
  - NP03Wi IWB
  - EyeRIS

How to install this software

1. Download the software.

   Access to our projector support page in our website with the below
   URL: http://www.nec-display.com/dl/en/index.html
   Find the software for the IWB Setup Software/EyeRIS NEC edition, download and install it onto the computer according to the displayed instructions.

2. Double click [EyeRIS_nec.msi].

   The Setup window is displayed.

3. Click [Next>].

   Displays the Terms of Use screen.

4. Select "I accept the terms in the License Agreement" and click "Next>"

Displays the selection screen of the installation destination folder.
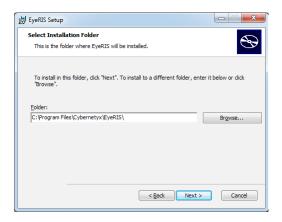
5. Click [Next>].

After that, follow the displayed instructions to complete installation.

Reboot the computer for completing software installation according to the displayed instruction.

> **Note:**
> • The EyeRIS may not work correctly after the initial reboot depending on the computer. If this happens, reboot the computer.
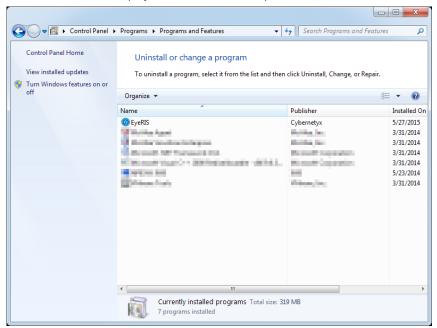
When the installation is complete, an EyeRIS icon is added to the desktop.

How to uninstall the software

1. Click [Control Panel] in the start menu, and double-click [Add or Remove Programs].
2. Right-click [EyeRIS] and click [Uninstall] in the list.
   After that, follow the displayed instructions to complete uninstallation.

3. When uninstallation is completed properly, reboot the computer.

Startup the Software

Preparation:

- First of all, perform setup according to the user's manual supplied with each device you want to connect. After competing all connections to each device, boot up the computer.
- For starting up the software, Microsoft .NET Framework 4 or later is required.
  If Microsoft .NET Framework is not installed on the computer, visit the website of Microsoft for download and install it on the computer.

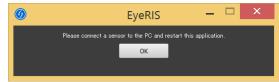1. Double click the EyeRIS icon on the desktop.

   EyeRIS Setup Software is automatically launched and ⊘ icon is created in the task tray. Clicking this icon, EyeRIS setup menu is displayed on the screen.

   If the computer and the camera unit (the projector itself for NP-UM352W) are not connected by a USB cable, the message at right would be displayed on and the software would not be started up.
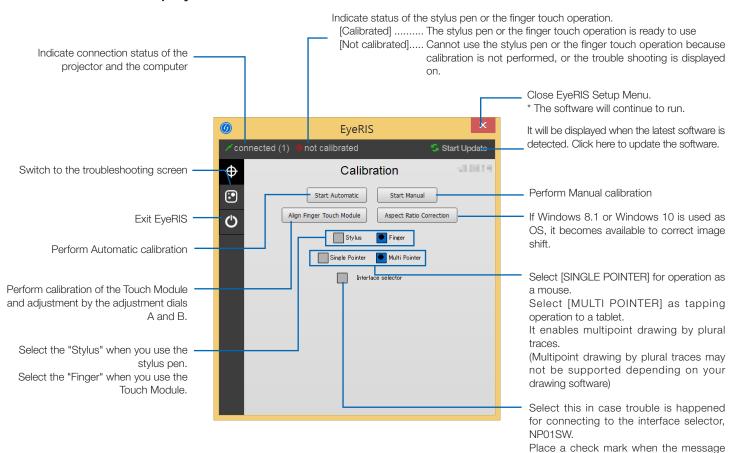
   At the same time, the same message would be displayed when the projector has not powered on (including the STANDBY state) and when [REMOTE PEN] has been disabled if you use NP-UM352W.

   Even if the camera unit (the projector itself for NP-UM352W) has been connected with the computer by a USB cable, the message at right may be displayed on. In this case, please follow the procedures in below:

   1. Click [OK] for stopping to run the software.
   2. Disconnect the USB cable once (circled one on the diagram in the troubleshooting), and then connect the cable again.

Calibration Menu Display

Indicate status of the stylus pen or the finger touch operation.
[Calibrated] .... The stylus pen or the finger touch operation is ready to use
[Not calibrated]..... Cannot use the stylus pen or the finger touch operation because calibration is not performed, or the trouble shooting is displayed on.

Indicate connection status of the projector and the computer

Close EyeRIS Setup Menu.
* The software will continue to run.

It will be displayed when the latest software is detected. Click here to update the software.

Switch to the troubleshooting screen

Exit EyeRIS

Perform Automatic calibration

Perform calibration of the Touch Module and adjustment by the adjustment dials A and B.

Select the "Stylus" when you use the stylus pen.
Select the "Finger" when you use the Touch Module.

Perform Manual calibration

If Windows 8.1 or Windows 10 is used as OS, it becomes available to correct image shift.

Select [SINGLE POINTER] for operation as a mouse.
Select [MULTI POINTER] as tapping operation to a tablet.
It enables multipoint drawing by plural traces.
(Multipoint drawing by plural traces may not be supported depending on your drawing software)

Select this in case trouble is happened for connecting to the interface selector, NP01SW.
Place a check mark when the message "Please connect a sensor to the PC and restart this application." is displayed on even when NP01SW has been properly connected in the state of "Run on system start up" on the trouble shooting screen.

Note:
In the check mark added conditions, it takes longer time for starting up the application from booting up the computer.

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Performing Calibration

Before starting to use the stylus pen or the Touch Module, make sure to perform calibration in order to make the computer to recognize exact position touched by the stylus pen or a finger.
If you change the combination of a projector and a computer, perform CALIBRATION RESET on the trouble shooting screen first and then perform calibration.

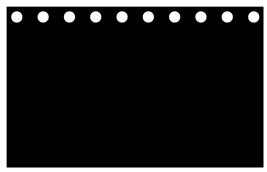| Start Manual	Automatically calibrate the stylus pen position. Recommend this when simple calibration is preferred.
Start Automatic	Manually calibrate the stylus pen position. Recommend this for installing the projector permanently or when precise calibration is preferred.
Align Finger Touch Module	Before starting to use the Touch Module, perform calibration and adjustment by the dials A/B on the Touch Module for the touch operation. Please refer Adjustment procedure on page 8.
Aspect Ratio Correction	If Windows 8.1 or Windows 10 is used as your OS, traced lines at the screen edge may not match lines indicated on the screen after performing calibration (both by automatic and manual). In this case, utilize this to adjust shifted lines by correcting the aspect ratio.

Note:
- It may require to perform calibration again when resolution of the connected computer is changed or the input signal transmission is interrupted temporarily.
- Calibration may not be performed properly when the language bar has floated on the desktop.
  Minimize the language bar to dock in the task tray and then perform calibration.

Perform Calibration Automatically [Automatic Calibration]

Click the [Start Automatic] button on the displayed calibration menu.

Projected image on the screen will be switched to the Automatic Calibration Screen.

After five to eight seconds, calibration will be completed and the screen will return to display the projected image.

Note:
- If the message in below is displayed on the screen, refer to the Troubleshooting on page 10 and check if the screen is installed within the recognition area of the camera and if the camera and the screen get influence of external light.

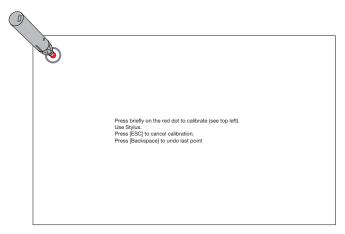## Perform Calibration Manually [Manual Calibration]

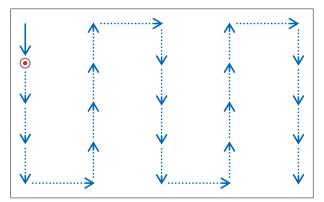1. Click [Start Manual] button on the displayed calibration menu.

   Projected image on the screen is switched to the Manual Calibration Screen and red dot ⊙ is indicated at the top left on the screen.

2. Press the center of the red dot with the stylus pen.

    The red dot is indicated at 25 points in order on the screen.

Press briefly on the red dot to calibrate (see top left).
Use Stylus.
Press [ESC] to cancel calibration.
Press [Backspace] to undo last point

When all points indicated by the red dot are pressed by the stylus pen, calibration is completed and the calibration completion message is displayed on.

3. Touch icon in the task tray by the stylus pen.

This message is popped up when calibration is completed properly.

Note:

- For disconnecting the USB cable connecting the computer and the camera unit (the projector itself for UM352W), make sure to exit for finishing the software. If the software is remained in run and the USB cable is disconnected, it may cause of unstable computer motion.
- If a check mark is added to the "Auto Run" on the trouble shooting screen, the software starts to run automatically when the computer is started up.
- Drawing software is required to use the interactive white board function.
  Drawing software cannot be downloaded from our projector support page, prepare commercially available drawing software.
- Even if other images are displayed by switching the input source either on the projector or a separately sold switcher, the interactive whiteboard function remains to run. If the stylus pen is used on the screen under this condition (touch by fingers for the touch module), drawing may be appeared on the computer screen or other operations may be performed unexpectedly.
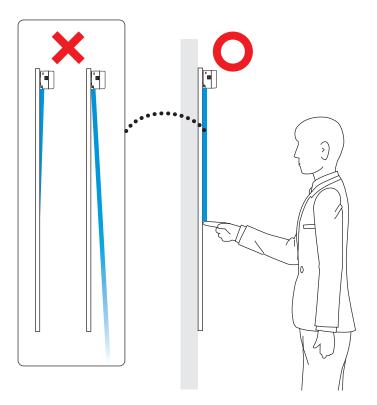
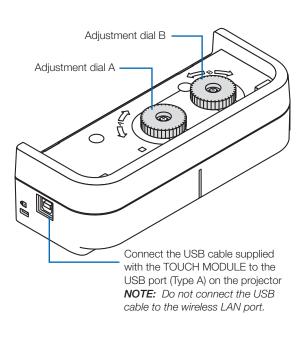# Touch Module Adjustment (For using the Touch Module)

Mount the Touch Module at the top of the screen according to the installation manual supplied with the Touch Module.

Then adjust the Touch module to emit the infrared light parallel to the screen surface. Remove the dial cover on the Touch Module and adjust the two dials in the following procedures:

> **Note:**
>
> - Make sure to perform calibration before performing the Touch Module adjustment.
> - The drawing accuracy may be worse caused on affection of the ambient conditions such as temperature.
>   It is recommended to perform calibration for the Touch Module periodically.
>   From the second time of calibration, you can skip the adjustment of dial A at Step 3 and dial B at Step 4. When you skip these steps, touch the "Continue" of each adjustment menu.
> - The drawing line may become disconnected if the infrared light emitted from the Touch Module strikes a part of your hand before striking your fingertip.

Adjustment dial B

Adjustment dial A

Connect the USB cable supplied with the TOUCH MODULE to the USB port (Type A) on the projector
NOTE: Do not connect the USB cable to the wireless LAN port.

1. Remove the dial cover of the Touch Module.

2. Click the "Finger" in the calibration menu and next click the "Align Finger Touch Module".
   Automatic calibration will be performed.
   If error is happened during the automatic calibration, the manual calibration menu will be displayed. (→ page 6)

> **Note:**
>
> - Pull out the USB cable for the Touch Module once before performing the manual calibration.

When the calibration is completed, the touch module adjustment menu will be displayed.
Connect the USB cable to the Touch Module again if it has disconnected for the calibration.

3. Adjustment by the adjustment dial B on the Touch Module.
   (1) Select the evenness of the surface on the screen.

		Accuracy of touch operation
Even	Select when the screen unevenness is within the flatness 3 mm.	good
Moderate	Select when the screen unevenness is within the flatness 5 mm.	
Uneven	Select when the screen unevenness is within the flatness 8 mm.	poor

(2) Select the distance from the touch module to the blue dot on the screen.

If you change the setting, the blue dot position will move upward or downward. For using the small screen, select the "FAR". For using the large screen, select the "Close".

(3) Turn the adjustment dial A counterclockwise until its turn end.

(4) Touch the blue dot at the bottom of the screen by a finger.

Adjustment value will be displayed.

If the value is not displayed, holding to touch the blue dot and turn the adjustment dial A clockwise until the value is displayed.

(5) Holding to touch the blue dot, turn the adjustment dial A clockwise until the value gets to 100%.

When the position is adjusted optimally, the blue dot will turn into green.

(6) Touch the "Continue".

Go to the next step.

4. Adjustment by the adjustment dial B on the Touch Module.

(1) Turn the adjustment dial B counterclockwise by its turn end.

(2) Touch the blue dot at the left bottom of the screen by a finger.

Adjustment value will be displayed.

(3) Holding to touch the blue dot, turn the adjustment dial B clockwise until the value gets to 100%.

When the position is adjusted optimally, the blue dot will turn green.

(4) Touch the "Continue".

Go to the next step.

5. Calibrate the position to touch.

(1) Touch the nine dots on the screen until all of them turn into green.

The calibration menu will be displayed.
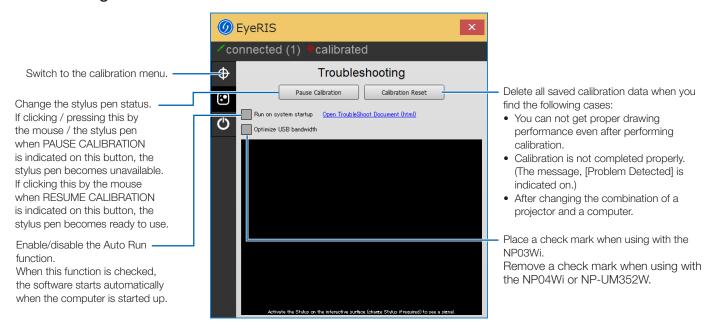
The adjustment of the touch module is completed.

> **Note:**
> - If you cannot obtain accurate drawing by the finger touch operation, please repeat the Touch Module adjustment.

Troubleshooting

You can check the installation condition of the camera unit when the troubleshooting in the EyeRIS setup menu is displayed on.

Troubleshooting screen

Switch to the calibration menu.

Change the stylus pen status.
If clicking / pressing this by
the mouse / the stylus pen
when PAUSE CALIBRATION
is indicated on this button, the
stylus pen becomes unavailable.
If clicking this by the mouse
when RESUME CALIBRATION
is indicated on this button, the
stylus pen becomes ready to use.

Enable/disable the Auto Run
function.
When this function is checked,
the software starts automatically
when the computer is started up.

Delete all saved calibration data when you
find the following cases:
• You can not get proper drawing
  performance even after performing
  calibration.
• Calibration is not completed properly.
  (The message, [Problem Detected] is
  indicated on.)
• After changing the combination of a
  projector and a computer.

Place a check mark when using with the
NP03Wi.
Remove a check mark when using with
the NP04Wi or NP-UM352W.

EyeRIS
connected (1) calibrated

Troubleshooting

Pause Calibration   Calibration Reset

Run on system startup   Open TroubleShoot Document (html)
Optimize USB bandwidth

Activate the Stylus on the interactive surface (charge Stylus if required) to see a signal.

- **Check the camera recognition area**
  Press four corners of the projection screen by the stylus pen.
  A red square is indicated on the troubleshooting screen and it can be checked all area of the screen surface is in the camera recognition area.

  > **Note:**
  > • When drawing, do not place any objects such as cables or a part of the body between the stylus pen and the camera unit.
  > • In case your projector orientation is DESKTOP, a red square on the trouble shooting screen is indicated at the 180° opposite from the indicated position on the screen.

- **Check influence of external light**
  If the camera and/or the screen is exposed to strong light, it may cause of malfunction because the computer cannot recognize the stylus pen. If a red square is indicated on the screen without touching the screen by the stylus pen, it means the camera and/or the screen get influence of external light. In this case, change the place to install them avoiding to receive direct sunshine or strong light.
  When the Touch Module is mounted beside a window, avoid receiving influence of light from outside by appropriate measures as closing a curtain and keeping a certain distance from the window, etc.
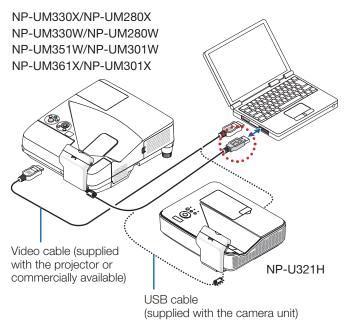
Others

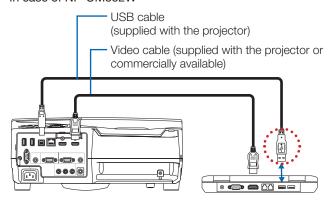| The stylus pen does not work.	• Have the driver and the calibration software been installed on the computer? • Is the USB cable connected properly? (See "Connection Diagram" on page 12) • Has calibration performed properly? Even calibration is performed at the beginning, please perform calibration again when the stylus pen becomes inactive during operation • Does the stylus pen have proper charge? If red LED is not turned on by pressing the pen tip, charge the stylus pen. • Stop to run the software and disconnect the USB cable connected with the computer once, then connect the USB cable again. (See the circled part in the connection diagram on page 12) • Touch the icon in the task tray. If the icon disappears or it has not displayed on, double click the EyeRIS icon on the desktop again to restart the EyeRIS. • If you cannot perform drawing when [MULTI POINTER] is selected on the calibration screen with the Windows 8.1 OS (can perform drawing under [SINGLE POINTER]), reboot the computer keeping the connection between the computer and the projector by a computer cable or a HDMI cable. • If the buttons in EyeRIS Seup Menu are not available when [MULTI POINTER] is selected, select [SINGLE POINTER].

The finger touch operation does not work.	• Is the type A USB port on the projector is connected with the type B USB port on the Touch Module by the USB cable? • Stop to run the software and disconnect the USB cable connected with the computer once, then connect the USB cable again. (See the circled part in the connection diagram on page 12) • Touch the ⃟ icon in the task tray. If the ⃟ icon disappears or it has not displayed on, double click the EyeRIS icon on the desktop again to restart the EyeRIS. • If you cannot perform drawing when [MULTI POINTER] is selected on the calibration screen with the Windows 8.1 OS (can perform drawing under [SINGLE POINTER]), reboot the computer keeping the connection between the computer and the projector by a computer cable or a HDMI cable. • If a part of your body or clothes get too close to or contact with the projection screen, the touch operation may not work correctly, If this happens, keep a distance away between your body/clothes and the projection screen. • Drawing may not be possible from poor response depending on the computer if your touch operation is too fast. Slowly perform drawing.
Drawing lines are distorted in touch operation.	• When your screen has a frame, the position of touch points may not be corrected if the outline of displayed image is too close to the frame of the screen. If this happens, adjust the position for the projected image area to the screen according to the installation manual supplied with the Touch Module.
Lines traced with the stylus pen or the finger touch operation do not match lines indicated on the screen.	• Was calibration performed properly? Even calibration had performed at the beginning, please perform calibration again when positions of drawn lines are shifted during operation. • Perform [Calibration Reset] on the troubleshooting screen and then perform calibration again. • Please perform calibration again. If it does not solve the problem by performing automatic calibration, try to perform manual calibration.
Multipoint drawing does not work with the stylus pen or touch operation when [MULTI POINTER] is selected.	• Reboot the computer. • Some drawing software do not support the multipoint drawing function (MULTI POINTER). Check with the specifications of your drawing software if it supports the function.
The message, [Problem Detected] is indicated on.	X mark is indicated to [Connection]: • Stop to run the software and disconnect the USB cable connected with the computer once, then connect the USB cable again. (See the circled part in the connection diagram on page 12)
	X mark is indicated to [Calibration]: • Check if a physical disturbance stays between the camera unit and the screen. • Perform [Calibration Reset] on the troubleshooting screen and then perform calibration again. • If the language bar has floated on the desktop, minimize the language bar to dock in the task tray and then perform calibration again. • Stop to run the software and disconnect the USB cable connected with the computer once, then connect the USB cable again. (See the circled part in the connection diagram on page 12) • Lower the output resolution to the projector and then perform calibration again. For example, in case the set value as output resolution has been 1080p, lower it to 720p.
	X mark is indicated to [Disturbance]: • Check if the camera unit and/or the screen is/are exposed to light. Check the influence of external light on the Trouble shooting screen. • If the USB cable is connected with the touch module, disconnect the USB cable for the touch module once and connect it again after performing calibration.
[Start Manual] cannot be selected	• When the computer goes into sleep mode while performing the manual calibration, the manual calibration cannot be done even after the computer returns to the normal mode. If this happens, restart the EyeRIS.
Calibration does not exit normally.	• If EyeRIS shuts down while performing the stylus pen calibration (Automatic/Manual) or the Touch module calibration, restart EyeRIS. If EyeRIS will not work correctly after restarting, reboot the computer.
The stylus pen does not work during manual calibration.	• Stop to run the software and disconnect the USB cable connected with the computer once, then connect the USB cable again. (See the circled part in the connection diagram on page 12)
The finger touch operation does not work during touch module adjustment.	• Stop to run the software and disconnect the USB cable connected with the computer once, then connect the USB cable again. (See the circled part in the connection diagram on page 12) • Perform [Calibration Reset] on the troubleshooting screen and then perform calibration again.
The message, [Please connect a sensor to the PC and restart this application.] is indicated on.	• Click [OK] and stop to run the software and disconnect the USB cable connected with the computer once, then connect the USB cable again. (See the circled part in the connection diagram on page 12) If it does not solve this problem, repeat to connect/disconnect the USB cable several times. • When the interface selector NP01SW is connected to your computer, you may have this message depending on the computer. Place a checkmark in the box for [Interface selector] on the Calibration screen. (→ page 5) If this does not solve the problem, turn off the main power switch on NP01SW and then turn it back on.
[SINGLE POINTER] and [MULTI POINTER] buttons are not displayed on the calibration menu.	• Depending on a computer in use, these buttons may not be displayed on the calibration menu. In this case, the pointer performs under the [SINGLE POINTER] selected condition. Please keep this condition for use.

<Connection Diagram>

See User's Manual for each device.

NP-UM330X/NP-UM280X
NP-UM330W/NP-UM280W
NP-UM351W/NP-UM301W
NP-UM361X/NP-UM301X

Connection via NP01SW

RS232C cable (supplied with the NP01SW)

USB cable (supplied with the camera unit or projector)

HDMI cable (supplied with the NP01SW)

LAN cable (commercially available)

Video cable (supplied with the projector or commercially available)

NP-U321H

USB cable (supplied with the camera unit)

In case of NP-UM352W

USB cable (supplied with the projector)

Video cable (supplied with the projector or commercially available)

HDMI cable (commercially available)

USB cable (commercially available)