

# User's Manual

## All-in-One Collaboration Solution

NEC 65" InfinityBoard® 2.1

NEC 75" InfinityBoard® 2.1

NEC 86" InfinityBoard® 2.1

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### Large Format Display Models

- IB654Q-2.1
- IB754Q-2.1
- IB864Q-2.1

**NOTE:** Please find your model name on the label on the rear side of the monitor.

## Addendum information

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This user's manual is an addendum to the standard user's manual of the base model monitors V654Q, V754Q and V864Q.

All specifications listed here supersede those in the standard version of the manual included with this monitor.

**NOTE:** Following feature sets are not supported by the InfinityBoard® models:

- **Table Top Stand Option:** The NEC InfinityBoard® version of the base monitor model does not allow for table top installations as the table top brackets have been removed.
- **Room Light Sensing Sensor:** The NEC InfinityBoard® version of the base monitor model does not allow the monitor to make automatic adjustments to the backlight setting.
- **Intelligent Wireless Data Sensor:** The NEC InfinityBoard® version of the base monitor model does not include a sensor for wireless communication to the monitor for information and settings.
- **NEC ornament logo:** The NEC InfinityBoard® version of the base monitor model does not have an ornament logo. Therefore, changing the position of the NEC logo is not possible.

# Important information



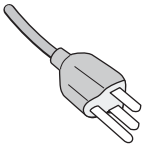
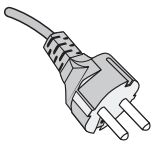
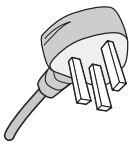
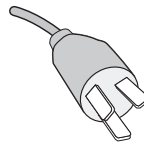
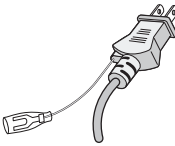
- ⚠ WARNING:** To prevent fire or shock hazards, do not expose this unit to rain or moisture.  
 Do not connect or disconnect this product during an electrical storm.  
 Also, do not use this unit's polarized plug with an extension cord receptacle or other outlets unless the prongs can be fully inserted.  
 Refrain from opening the cabinet as there are high voltage components inside. Refer servicing to qualified service personal.
- ⚠ CAUTION:** To reduce the risk of electric shock, make sure the power cord is unplugged from the wall socket.  
 To fully disengage the power to the unit, please disconnect the power cord from the AC outlet.  
 Do not remove cover (or back). No user serviceable parts inside.  
 Refer servicing to qualified service personnel.  
 Please use the power cord provided with this display in accordance with the power cord table. If a power cord is not supplied with this equipment, please contact NEC. For all other cases, please use the power cord with the plug style that matches the power socket where the monitor is located. The compatible power cord corresponds to the AC voltage of the power outlet and has been approved by, and complies with, the safety standards in the country of purchase.  
 This equipment is designed to be used in the condition of the power cord connected to the earth. If the power cord is not connected to the earth, it may cause electric shock. Please make sure the power cord is earthed properly.



This symbol warns user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

Plug Type	North America	European Continental	U.K.	Chinese	Japanese
Plug Shape					
Region	U.S.A./Canada	EU	U.K.	China	Japan
Voltage	120*	230	230	220	100

\* When operating the MultiSync monitor with its AC 125-240V power supply, use a power supply cord that matches the power supply voltage of the AC power outlet being used.

**NOTE:** This product can only be serviced in the country where it was purchased.

- The intended primary use of this product is as an Information Technical Equipment in an office or domestic environment.
- The product is intended to be connected to a computer and is not intended for the display of television broadcast signals.



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NEC is a registered trademark of NEC Corporation.

MultiSync is a trademark or registered trademark of NEC Display Solutions, Ltd. in Japan and other countries.

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(2) The contents of this user's manual are subject to change without notice.  
(3) Great care has been taken in the preparation of this user's manual; however, should you notice any questionable points, errors or omissions, please contact us.  
(4) The image shown in this user's manual is indicative only. If there is inconsistency between the image and the actual product, the actual product shall govern.  
(5) Notwithstanding articles (3) and (4), NEC will not be responsible for any claims on loss of profit or other matters deemed to result from using this device.



## GPL/LGPL Software Licenses

The product includes software licensed under GNU General Public License (GPL), GNU Lesser General Public License (LGPL), and others. For more information on each software, see "readme.pdf" inside the "about GPL&LGPL" folder on the supplied CD-ROM.

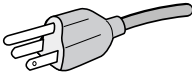
## Registration information

### Cable Information

- CAUTION:** Use the provided specified cables with this product so as not to interfere with radio and television reception.  
For mini D-Sub 15-pin, please use a shielded signal cable with ferrite core.  
For HDMI, DisplayPort, USB and D-Sub 9-pin, please use a shielded signal cable.  
Use of other cables and adapters may cause interference with radio and television reception.

### FCC Information

- ⚠ WARNING:** The Federal Communications Commission does not allow any modifications or changes to the unit EXCEPT those specified by NEC Display Solutions of America, Inc. in this manual. Failure to comply with this government regulation could void your right to operate this equipment.
1. The power supply cord you use must have been approved by and comply with the safety standards of U.S.A., and meet the following condition.

Power supply cord Plug shape	Non shield type, 3-conductor  U.S.A.
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2. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If necessary, the user should contact the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet, prepared by the Federal Communications Commission, helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

#### **SUPPLIER'S DECLARATION OF CONFORMITY**

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

U.S. Responsible Party: NEC Display Solutions of America, Inc.  
Address: 3250 Lacey Rd, Ste 500  
Downers Grove, IL 60515  
Tel. No.: (630) 467-3000  
Type of Product: Display Monitor  
Equipment Classification: Class B Peripheral  
Model: MultiSync IB654Q-2.1  
MultiSync IB754Q-2.1  
MultiSync IB864Q-2.1



To see a list of our TCO certified monitors and their TCO Certification (in English only), visit our website at:  
[https://www.nec-display.com/global/about/legal\\_regulation/TCO\\_mn/index.html](https://www.nec-display.com/global/about/legal_regulation/TCO_mn/index.html)

## Safety precautions, maintenance, and recommended use

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### Safety precautions and maintenance

Refer to the monitor's full user's manual for complete safety and maintenance instructions.

### Cleaning the glass surface

- The glass surface should be cleaned regularly with a soft, lint-free cloth.
- It is recommended to use an anti-static plastic and glass cleaner suited for PMMA/acrylic glass/Plexiglas, or water with a small amount of washing-up liquid.

### Cleaning the cabinet

To clean the cabinet, dampen the cloth with a neutral detergent and water, wipe the cabinet and follow with a dry cloth.

1. Unplug the power supply.
2. Gently wipe the cabinet with a soft cloth.

**NOTE:** DO NOT clean with benzene thinner, alkaline detergent, alcoholic system detergent, wax, polish cleaner, soap powder, or insecticide. Rubber or vinyl should not be in contact with the cabinet for an extended period of time. These types of fluids and materials can cause paint to deteriorate, crack, or peel.

## Shipping box contents

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### **65" InfinityBoard® 2.1**

- FlatFrog InGlass™ Touch Display (V654Q IGB)
- OPS Slot-in PC (OPS-Kbl-i7v-d8/128/W10Pro/W/TPM/Infinity)
- Side-mounted Speaker Set (SP-65IBSM)
- USB Camera (Huddly 2m Room Kit)
- 2x Passive Magnetic Pen
- Remote Control
- CD-ROM (User Guides/Manuals)
- Addendum to User's Manuals
- Power Cable
- DisplayPort Cable
- 2x USB Cable 300cm
- USB Cable 10cm
- Cable Clamps

### **75" InfinityBoard® 2.1**

- FlatFrog InGlass™ Touch Display (V754Q IGB)
- OPS Slot-in PC (OPS-Kbl-i7v-d8/128/W10Pro/W/TPM/Infinity)
- Side-mounted Speaker Set (Speaker SP-75IBSM)
- USB Camera (Huddly 2m Room Kit)
- 2x Passive Magnetic Pen
- Remote Control
- CD-ROM (User Guides/Manuals)
- Addendum to User's Manuals
- Power Cable
- DisplayPort Cable
- 2x USB Cable 300cm
- USB Cable 10cm
- Cable Clamps

### **86" InfinityBoard® 2.1**

- FlatFrog InGlass™ Touch Display (V864Q IGB)
- OPS Slot-in PC (OPS-Kbl-i7v-d8/128/W10Pro/W/TPM/Infinity)
- Side-mounted Speaker Set (SP-86IBSM)
- USB Camera (Huddly 2m Room Kit)
- 2x Passive Magnetic Pen
- Remote Control
- CD-ROM (User Guides/Manuals)
- Addendum to User's Manuals
- Power Cable
- DisplayPort Cable
- 2x USB Cable 300cm
- USB Cable 10cm
- Cable Clamps

## Unpacking the monitor

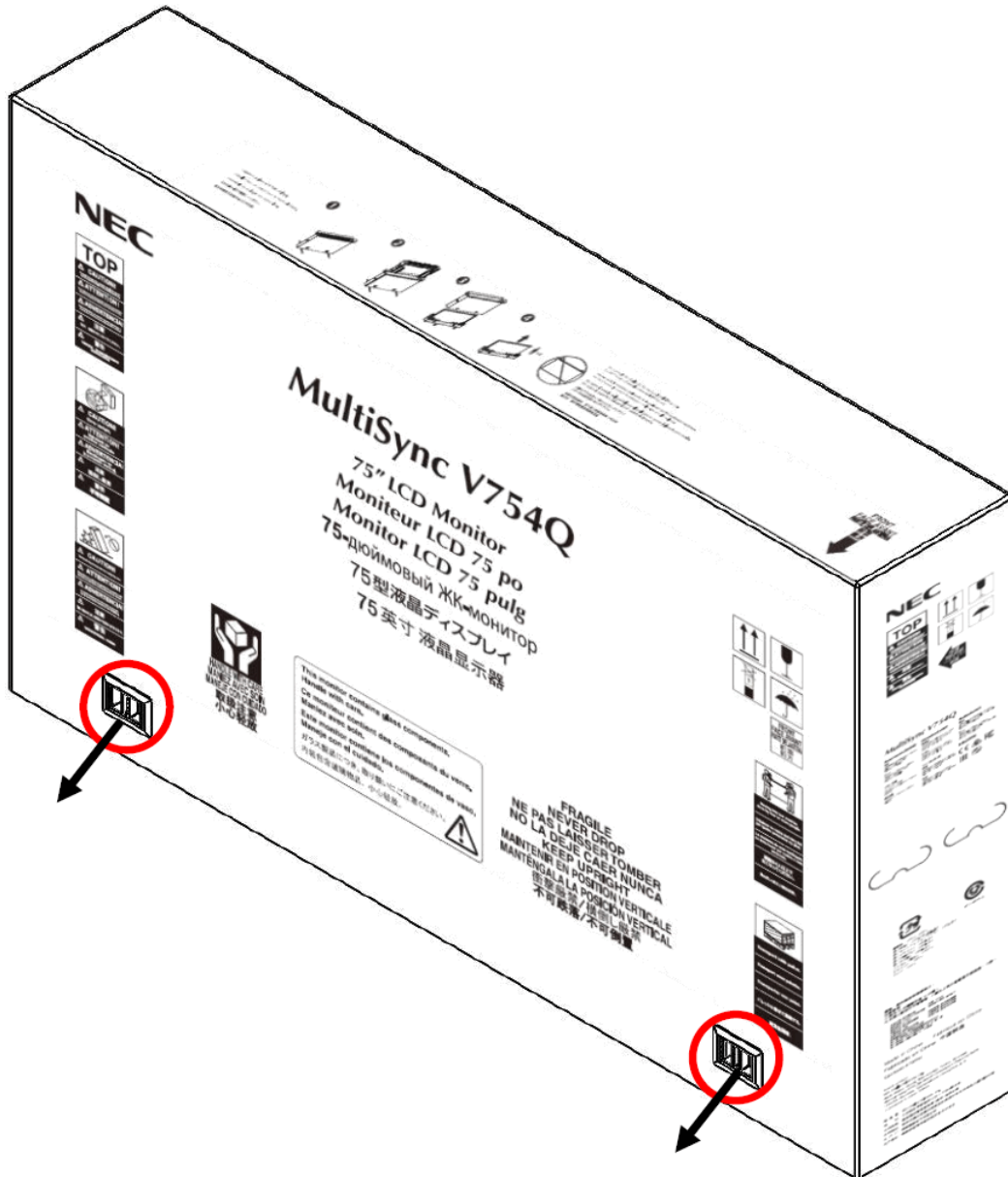
Unpack the display (V654Q IGB / V754Q IGB / V864Q IGB) from the carton box by removing the white clips on the bottom of the box.

**⚠ CAUTION:** Due to the weight of the product, for installation and handling, four people are required. DO NOT start unless you have enough people available. Working with fewer people may result in injuries and damaged the product.

Lift the carton box upwards. Make sure to have one additional person to secure the display from tipping over.

**NOTE:** Remember to save your original box and packing material to transport or ship the monitor.

For further instructions, please refer to the printed instructions on the carton box.





## Mounting the monitor

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This device cannot be used or installed without a mounting accessory for support. DO NOT mount the monitor yourself. For proper installation it is strongly recommended to use a trained, qualified technician. Please contact your supplier as they may be able to provide a list of qualified installation professionals. Mounting on a wall or ceiling and hiring a technician is the customer's responsibility.

Carefully inspect the location where the unit is to be mounted. Not all walls or ceilings are capable of supporting the weight of the unit. Product warranty does not cover damage caused by improper installation, re-modeling, or natural disasters. Failure to comply with these recommendations could result in voiding the warranty. Please refer to the specification tables ([page 19](#), [page 22](#), and [page 25](#)) for the monitor weight.

DO NOT block ventilated openings with mounting accessories or other accessories.

## For customers

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### CAUTION

DO NOT mount the monitor yourself.

### After installation maintenance

- Periodically check for loose screws, gaps, distortions, or other problems that may occur with the mounting equipment. If a problem is detected, please refer to qualified personnel for service.
- Regularly check the mounting location for signs of damage or weakness that may occur over time.

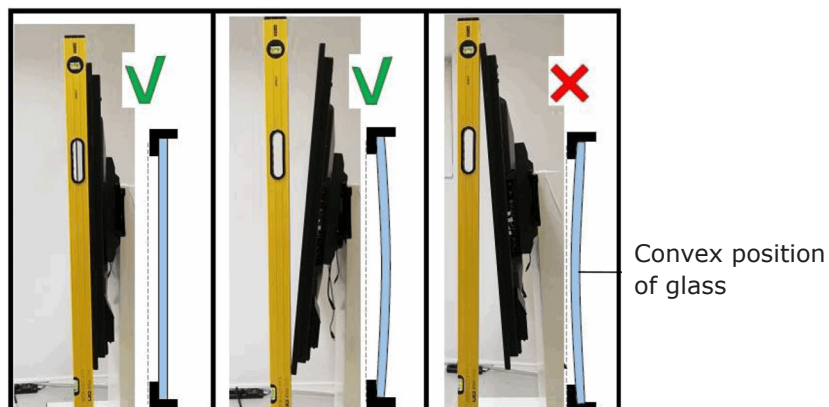
## For NEC qualified personnel

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### Stability hazard

To prevent personal injury and damage to the monitor, the monitor must be securely attached to the floor/wall in accordance with the installation instructions. If the monitor is not properly mounted and secured, it may fall, causing serious personal injury or death. To ensure a safe installation, use two or more brackets to mount the unit to at least two points on the installation location.

**NOTE:** For optimum performance of the touch screen technology, the monitor must be completely level. The monitor and touch screen only work correctly when the monitor is in the straight-upright or tilted-back position. If the monitor tilts to the front, it results in a convex position of the glass and might negatively impact the touch performance.



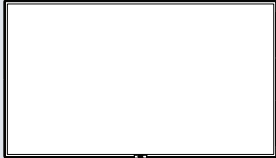
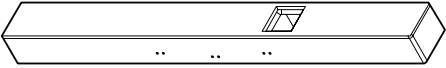
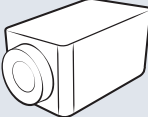
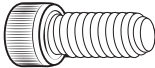



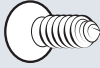
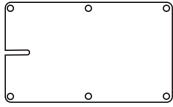
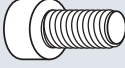


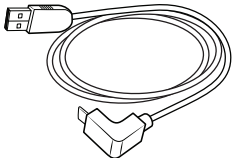
For further instructions, please refer to the base monitor model's full user's manual, which is available online at [www.necdisplay.com](http://www.necdisplay.com).

## Installing the camera, speakers, and OPS

This section includes:

- ⇒ "Parts list" on page 10
- ⇒ "Before you begin" on page 11
- ⇒ "Mount the camera in the speaker" on page 12
- ⇒ "Mount the speakers to the monitor" on page 13
- ⇒ "Install the OPS slot-in PC" on page 14
- ⇒ "Connect the cables" on page 15

### Parts list

Part	Quantity	Description
A	1	Monitor 
B	2	Speakers 
C	1	Camera 
D	1	1/4" x 16 screw 
E	1	Washer 
F	12	M4 x 12 countersunk screws 
G	6	Speaker brackets 
H	12	3.5 x 6 screws 
I	2	Backplates 
J	4	M4 x 12 screws 
K	4	Washers 
L	1	Mounting brackets 
M	1	USB 3.0 angled cable (2m) 
	*	Gasket strip *This part may be pre-installed when the monitor arrives

## Before you begin

The camera can be mounted to either the left or right speaker. Initially, the speaker cover with the camera window is on the left speaker. If you want the camera located on the right side of the monitor, swap the speaker covers between the left and right speakers.

The speaker cover is attached with pins that automatically release when the cover is leveraged away from the speaker body. You will need a flathead screw driver to remove the speaker cover.

**NOTE:** The camera and speaker covers can be moved after mounting the speakers to the monitor.

First, if the speaker is not mounted to the monitor, lay the speaker flat with the cover facing up.

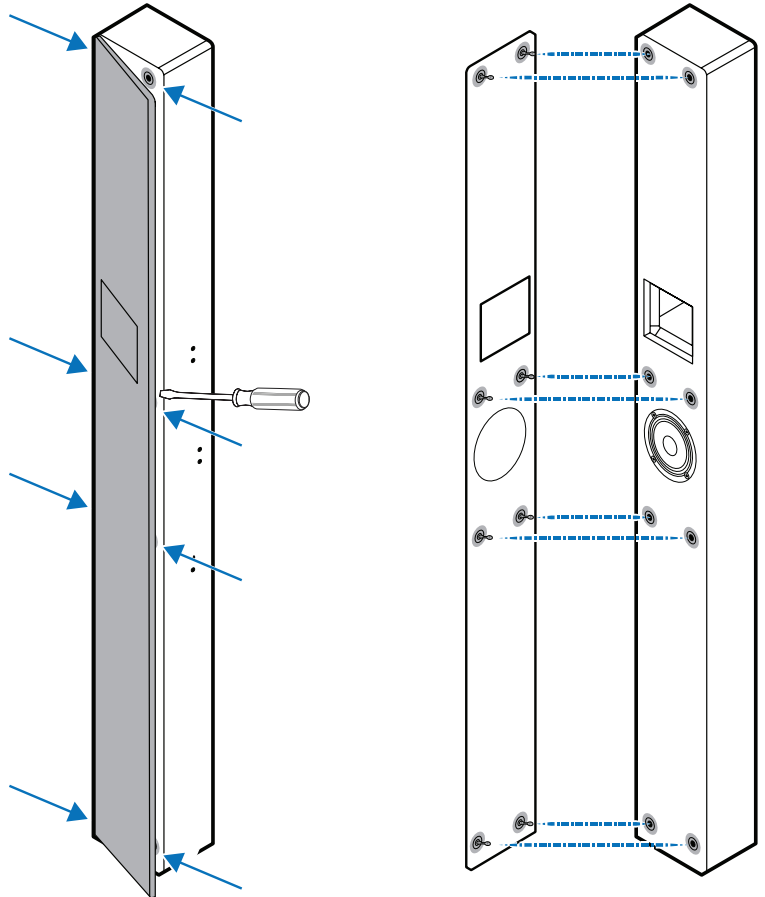
1. Insert the tip of the flat-head screwdriver between the speaker cover and speaker.

(See Figure 1 for approximate location of the pins)

2. Carefully lift the cover slightly. Stop when you hear the "click" that indicates a pin has released from the speaker.

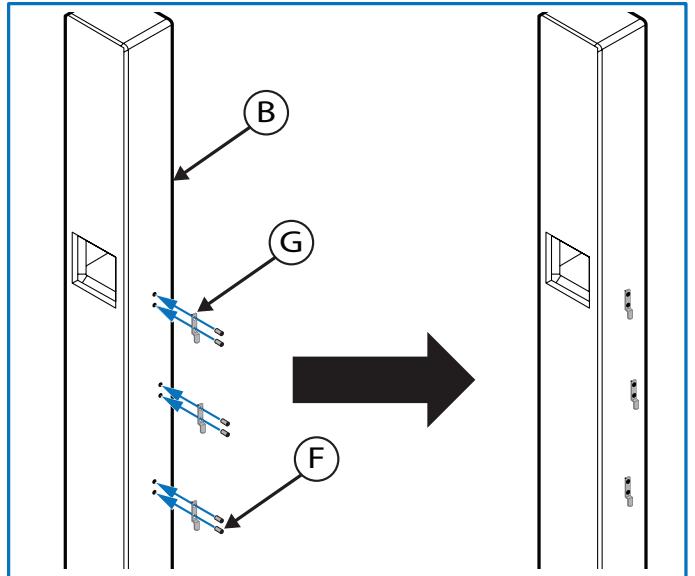
Use care when leveraging the cover away from the speaker as the speaker cover will break if it is lifted too high while pins are still locked to the speaker.

3. Going around the edge of the speaker, repeat steps 1 and 2 where each pin is located.
4. After removing both speaker covers, swap the speaker covers so that the camera window is on the right speaker. Carefully press down the speaker cover to lock the pins in place.



## Mount the camera in the speaker

1. Attach the speaker brackets **(G)** to the sides of the speakers **(B)** using the countersunk (flat) screws **(F)**.

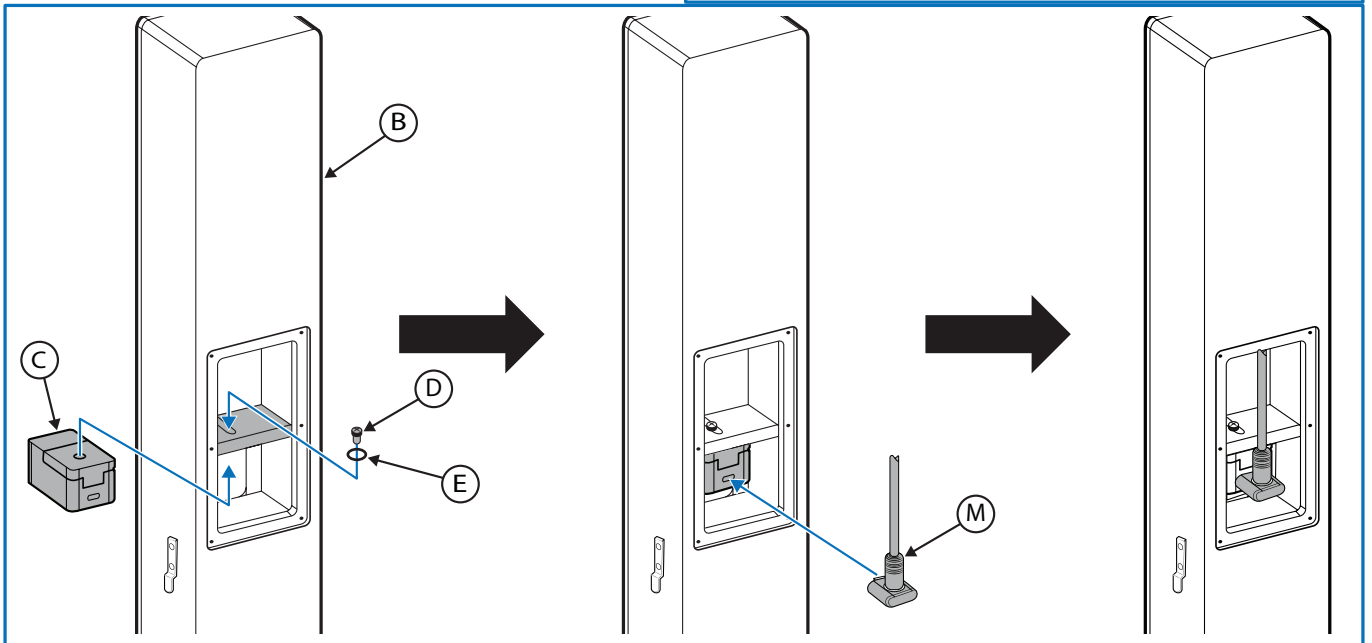


2. Place the camera **(C)** in the speaker housing.

Insert the screw **(D)** into the washer **(E)**, then insert the screw in to the camera to attach the camera to the bracket in the speaker.

**NOTE:** So that you can manually adjust the position of the camera after installation, do not torque the screw **(D)** (picture 2) too tight.

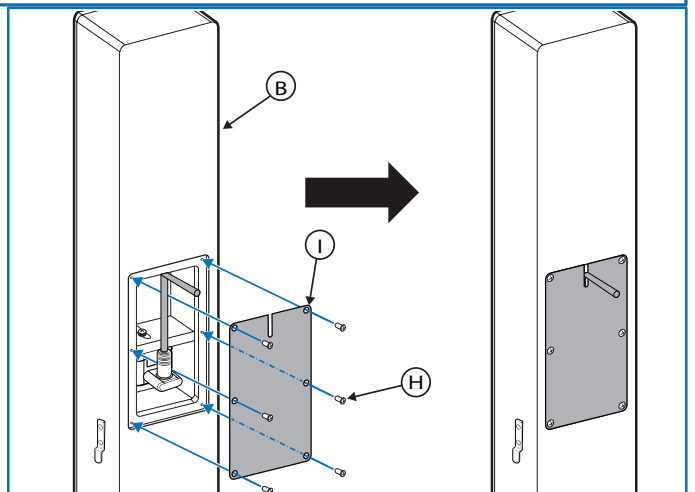
Connect the USB cable **(M)**, supplied with the Huddly camera, to the USB-C port on the camera.



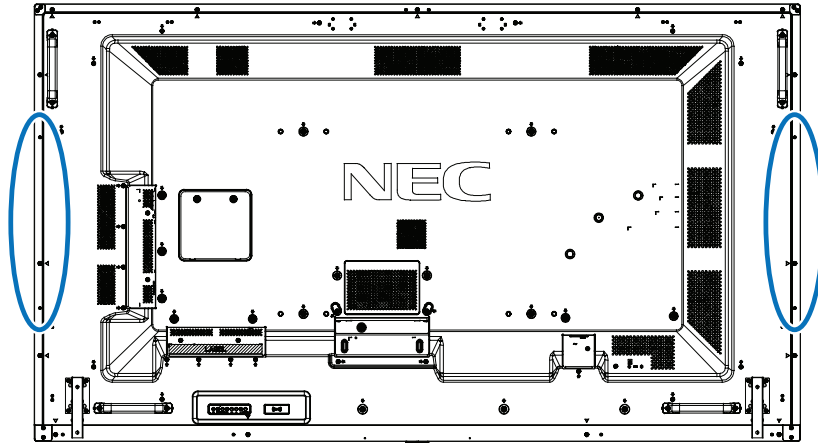
3. Place one backplate **(I)** on the speaker **(B)** and attach it with the 6 screws **(H)**.

**⚠ CAUTION:** Make sure the USB cable connected to the camera is resting in the notch on the backplate before placing the screws. The notch prevents the cable from being pinched.

Place the second backplate on the second speaker and attach it with the 6 screws.

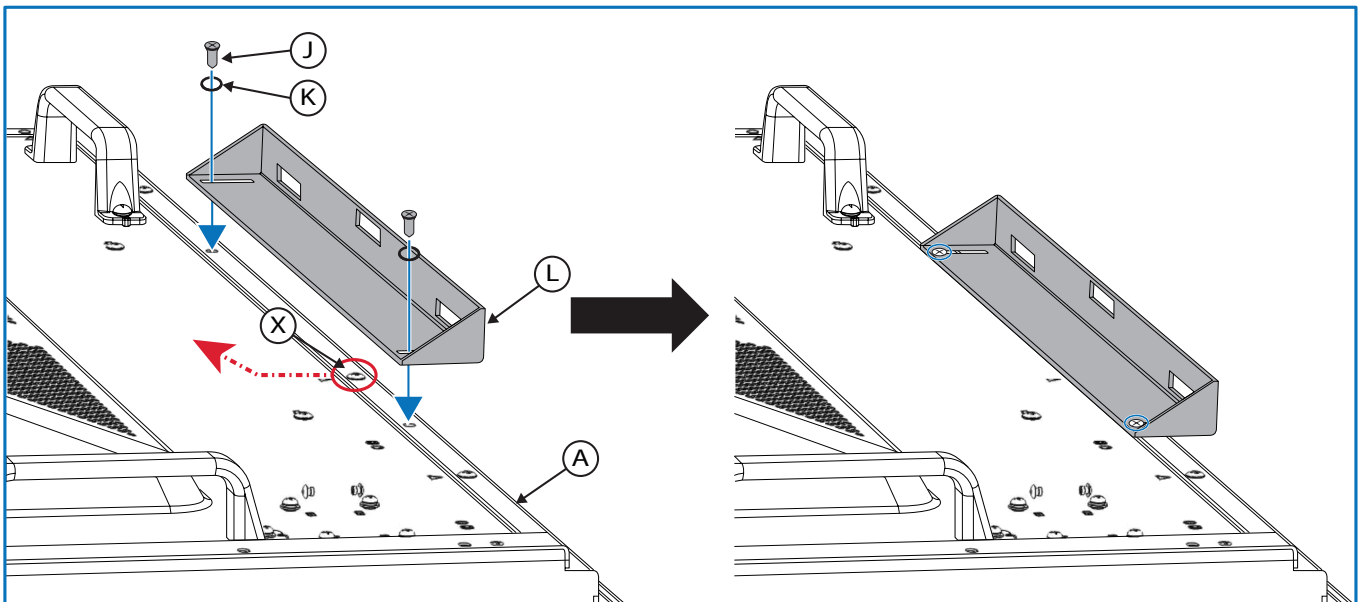


## Mount the speakers to the monitor



1. Remove screw (X) from the back of the display.
2. Using screws (J) and washers (K), attach the mounting brackets (L) to the back of the monitor on both the left and right side.

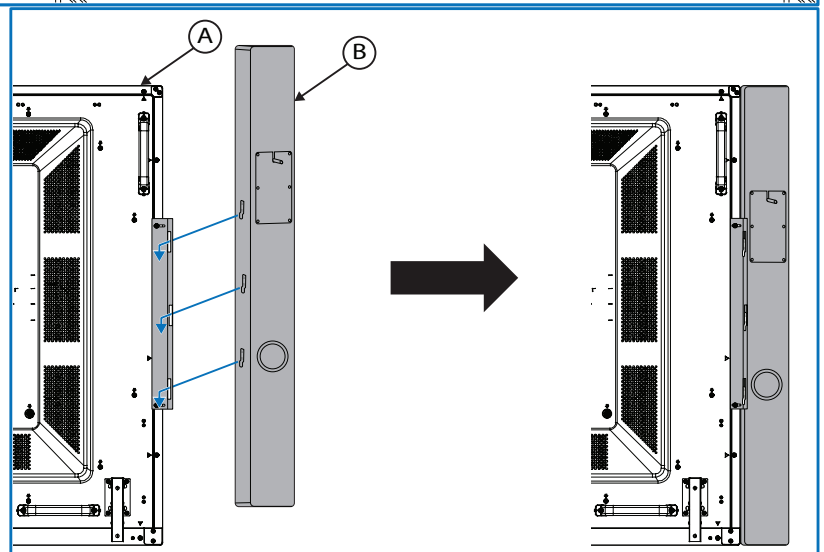
**NOTE:** Most monitors will have a gasket strip attached to the monitor. If your monitor does not have the gasket attached, it is a separate part in the box. Place a strip on each side of the monitor. The strip fills the space between the speaker and the monitor when the speaker is in place.



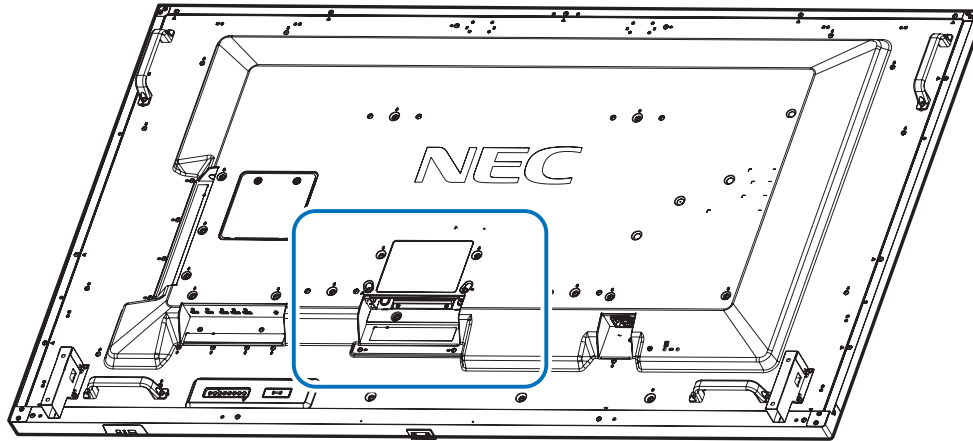
3. Insert the brackets on the side of the speaker with the slots in the mounting bracket on the monitor. Carefully slide the speaker down until it sits flush with the display.

**NOTE:** The side-mounted speakers can be hooked onto the brackets after the monitor is mounted to the wall or trolley.

**CAUTION:** Never lift the monitor by the speaker or speaker brackets.



## Install the OPS slot-in PC



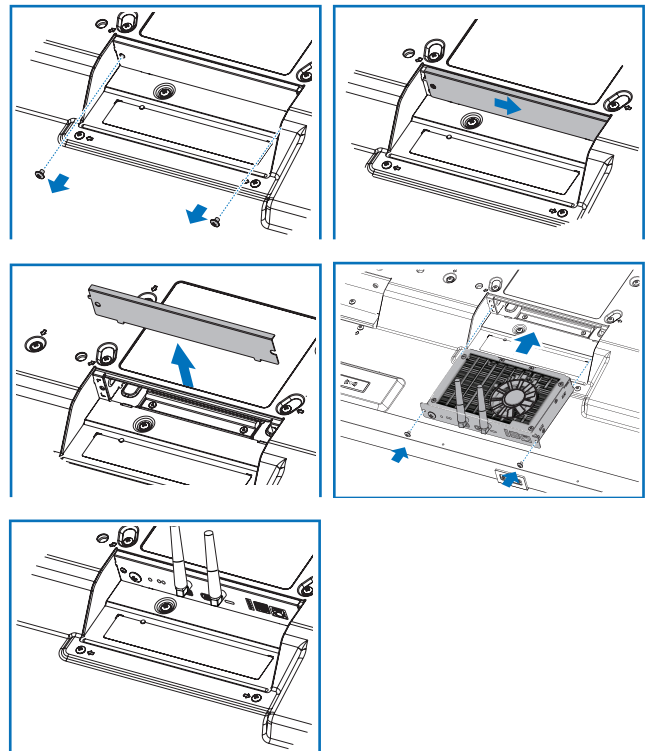
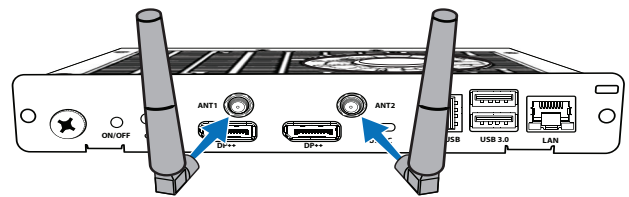
1. Write down the Windows 10 license code; this key is required to activate Windows.

The code is located on the rear-side of the OPS slot-in PC.

2. Turn off the main power switch on the monitor.
3. Attach the antennas to the OPS.
4. Remove the attached slot cover by unscrewing the installed screws, then slide the cover to the right and remove it.
5. Insert the OPS slot-in PC into the monitor, and then fasten it in place with the screws removed in step 4. (Recommended Fasten Force: 139 - 189N•cm)

**NOTE:** Do not apply excessive force when inserting the OPS and fastening it with screws. If the OPS cannot be fully inserted, or if its bracket does not align with the screw holes in the monitor, make sure that it is inserted in the correct orientation.

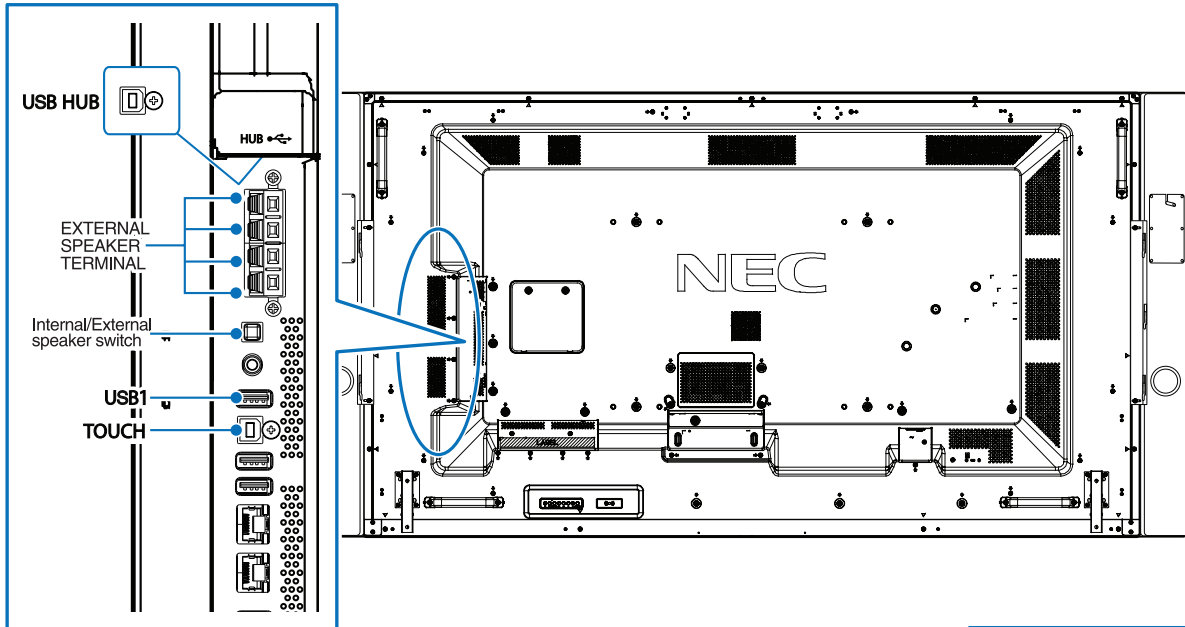
**CAUTION:** Ensure the OPS slot-in PC is securely attached with the screws. If the OPS is not securely installed, it may fall out and expose you to danger.



## Connect the cables

- NOTE:**
- Do not connect or disconnect cables when turning on the monitor's main power or other external equipment's power as this may result in a loss of image.
  - Do not use an attenuating (built-in resistor) audio cable. Using an audio cable with a built-in resistor will lower the sound level. Use an audio cable without a built-in resistor.

We recommend turning off the monitor's main power before connecting the speakers, external devices, or USB cables.



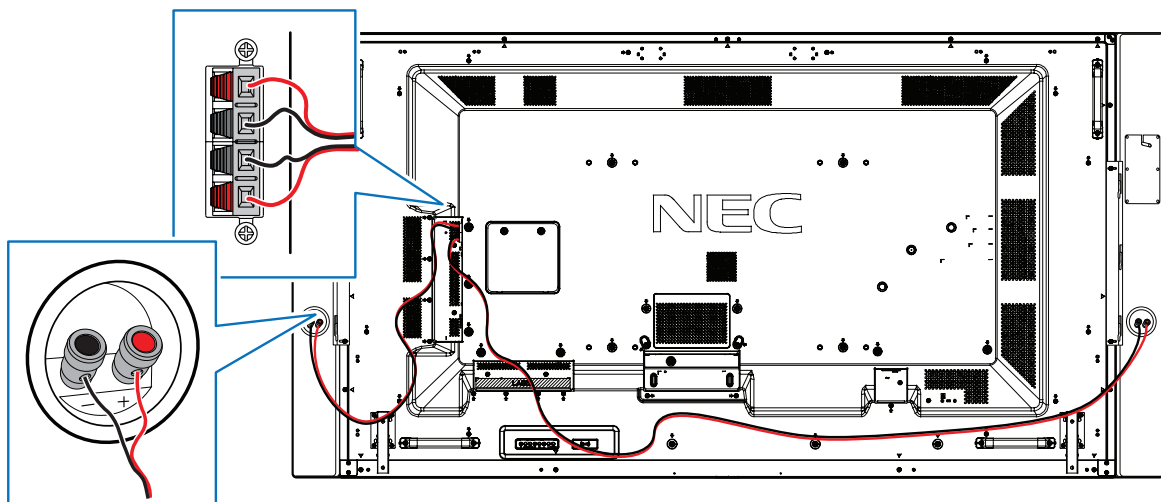
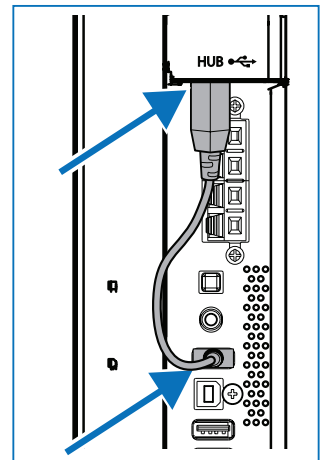
### 1. Connect the USB hub

- Connect one end of the 10cm USB cable, supplied with the monitor, to the USB Type-B input marked with "Hub," located above the external speaker terminals. Connect the other end to the USB Type-A input marked with "USB 1".
- The red LED on the USB hub will light up.

**NOTE:** If connecting to an external PC, use the 3m USB cable supplied with the monitor. Connect the USB cable to the USB Type-B input marked with "Hub" to a USB Type-A input in the external PC.

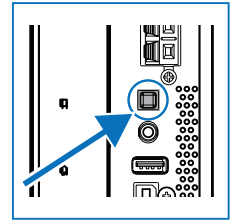
### 2. Connect the external speakers

- Connect the audio cables to the terminals on each speaker and to the speaker terminals on the side of the InfinityBoard®.
- The red terminal is plus (+), and the black terminal is minus (-).



3. **Activate the external speakers**

- To enable the speakers, push the "Internal/External speaker switch" below the speaker terminals.



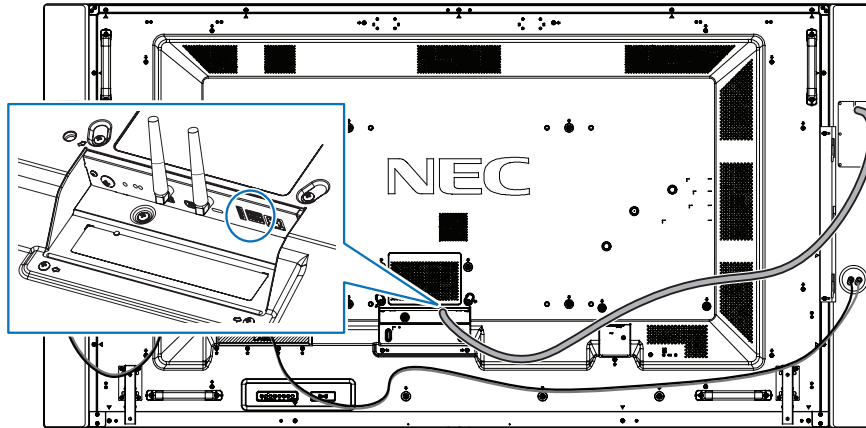
4. **Enable the touch function** (external PC)

- When used with an OPS slot-in PC, no external USB cable is needed to activate the touch function.

**NOTE:** If connecting to an external PC, use the 3m USB cable supplied with the monitor. Connect the USB Type-B input marked with "Touch" to a USB Type-A input in the external PC.

5. **Connect the Huddly camera**

- Connect the camera's USB cable (see [page 12](#)), to the USB input on the OPS slot-in PC.

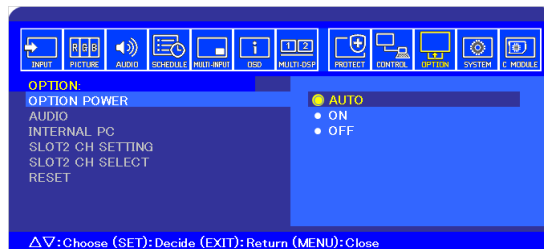


**NOTE:** If connecting to an external PC, NEC can provide the Huddly certified USB extension cable to connect the huddly camera to the external PC.

6. **Enable power to the OPS** (skip this step if using an external PC)

If you are using the OPS slot-in PC, the function for the monitor to supply power to the OPS needs to be enabled.

- Press the **MENU** button on the IR remote control to open the OSD.
- Navigate to the [OPTION] menu and under [OPTION POWER] select [AUTO].





## Setting up the OPS slot-in PC

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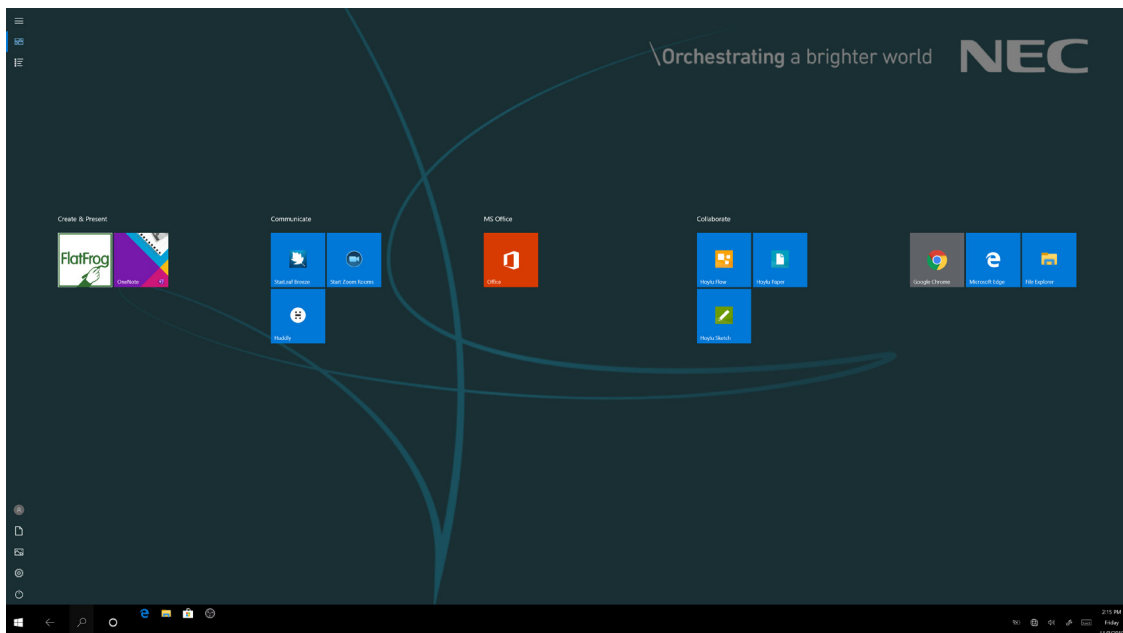
This section includes:

- ⇒ "Installing Windows 10" on page 17
- ⇒ "Selecting the speakers" on page 18

### Installing Windows 10

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1. Press the **OPTION** button on the IR remote control to change the video input to the OPS slot-in PC.
2. Follow the Windows installation process.
3. Activate Windows using the code provided with the OPS slot-in PC. (See step 1 in "Install the OPS slot-in PC" on page 14)
4. When activation is complete, you will see the following screen:



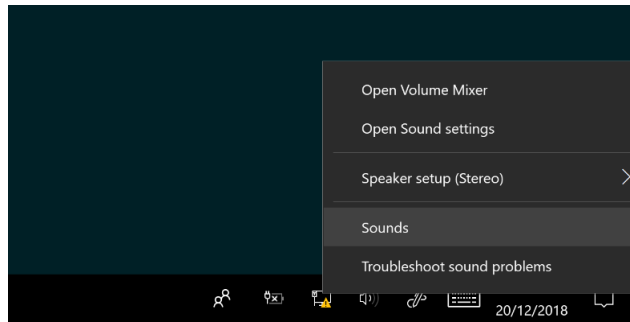
- FlatFrog Whiteboard (permanent license)
- Microsoft OneNote
- Huddly App for camera control
- Hoylu Suite: Flow, Sketch, Paper (single screen license)

For further information please visit: <https://hoylu.com/> or [contact hello@hoylu.com](mailto:hello@hoylu.com).

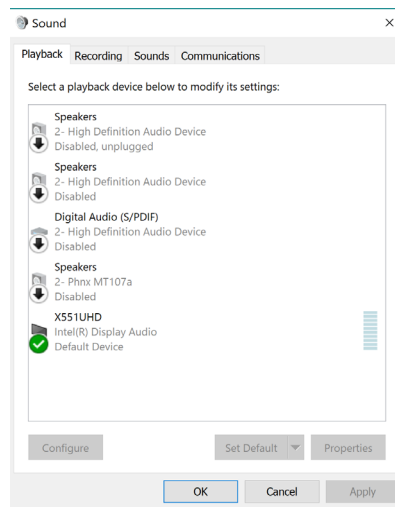
## Selecting the speakers

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1. Open the **Sound** settings in Windows by clicking on the speaker icon in the Windows task bar.



2. Open the **Playback** tab in the **Sound** settings and select the V654Q, V754Q or V864Q monitor as the **Default Device**. This will enable the side-mounted passive speakers.



**NOTE:** We recommend disabling all other speaker options.

## Selecting a Microphone

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Open the "Recording" tab in the "Sound" settings and select the external microphone of your choice.

**NOTE:** The 65", 75" and 86" InfinityBoard® 2.1 do not have a built-in microphone. We recommend choosing a microphone based on the room size, room acoustics, and the number of people in the room.

## Specifications

This section includes:

- ⇒ "65" InfinityBoard® 2.1 specifications" on page 19
- ⇒ "75" InfinityBoard® 2.1 specifications" on page 22
- ⇒ "86" InfinityBoard® 2.1 specifications" on page 25

### 65" InfinityBoard® 2.1 specifications

Product information				
Product name	NEC 65" InfinityBoard® 2.1			
Product group	LCD 65" all-in-one collaboration solution			
Order code	40001301			
Display				
Panel technology	IPS with edge LED backlights			
Active screen area (W x H)	1,428.48 mm x 803.55 mm			
Screen size	65 inches / 164 mm diagonal			
Brightness	500 cd/m <sup>2</sup> (shipment setting: 350)			
Contrast ratio (typ.)	1200:1			
Viewing angle	178° / 178° (at contrast ratio > 10:1)			
Color depth	1,073,741,824 (10-bit)			
Response time	8 ms (grey-to-grey typ.)			
Haze level	Pro (28%)			
Supported orientation	Face-up, landscape, portrait			
Synchronization rate				
Horizontal frequency (kHz)	31.4 to 91.1			
Vertical frequency (Hz)	24 to 85			
Resolution				
Native resolution	3840 x 2160			
Supported resolutions	4096 x 2160	3840 x 2160	1920 x 2160	1920 x 1080
Connectivity				
Input video (digital)	DisplayPort x2 (with HDCP), HDMI x3 (with HDCP)			
Input audio (analog)	3.5 mm jack			
Input audio (digital)	DisplayPort, HDMI			
Input control	LAN 100Mbit, remote control (3.5 mm jack), RS232			
Input data	microSD (value), USB 2.0 (downstream), USB 2.0 (Media Player), USB type-B (upstream), USB 2.0 x2 (Compute Module, 5V/2A powered x1)			
Output video (digital)	DisplayPort x1 (loop through: DisplayPort, OPS slot-in PC)			
Output audio (analog)	3.5 mm jack			
Output control	LAN 100Mbit			
Open modular intelligence				
OPS slot technology	Open pluggable specification (NEC / Intel OPS standard)			
OPS max. current	4.7 A			
OPS power consumption	75 W			
Compute Module technology	Compute Module slot (NEC proprietary standard)			
Sensors				
Human sensor	Optional, external, 4-5m range, triggered actions programmable			
Temperature sensor	Integrated, 3 sensors, triggered actions programmable			
Electrical				
Power consumption	230W (settings as shipped), 410W (max)			

Power savings mode	≤0.5W, ≤2W (networked standby)	
Power management	VESA DPMS	
<b>Environmental conditions</b>		
Operating temperature	0°C to 35°C	
Operating humidity	20% to 80%	
<b>Mechanical</b>		
Dimensions (W x H x D)	1457.1 mm x 832.1 mm x 79.4 mm	
Weight	40.6 kg (89.5 lbs)	
Bezel width	12.9mm (left and right), 13.1mm (top and bottom)	
VESA mounting	M8, 4 holes, configuration 400 mm x 400 mm (FDMI) or 600 mm x 400 mm (FDMI)	
Ingress protection	IP5x (front), IP2x (back)	
Package dimensions (W x H x D)	Box 1: 1,430 mm x 250 mm x 920 mm	Box 2: 1,400 mm x 250 mm x 250 mm
Package weight	Box 1: 67.50 kg	Box 2: 9.03 kg
<b>Glass</b>		
Thickness	3 mm	
Type	Premium toughened glass, anti-glare coating	
Light transmission	88% (± 1%)	
<b>Touch</b>		
Touch technology	InGlass™ Touch	
Number of touches	Real multi-touch up to 20 touches	
Response time	≤ 15 ms	
Touch method	Finger, gloves, stylus (≥ 2 mm)	
Supported operating systems	Native multi-touch: Windows 7, Windows 8, Windows 10, Linux, Android Default mouse: Windows XP, Windows Vista, macOS X	
Data interface	USB-HID	
Accuracy	< 1 mm	
<b>Media Player</b>		
Supported image formats	JPG (baseline, progressive, RGB, CMYK), max res: 5000 x 5000 PNG (interlace, alpha channel), max res: 4000 x 4000	
Supported video formats	MP4 / MOV / FLV (video H.264, audio MP3/AAC), max. res. 1080p @ 30Hz / 1080i @ 60Hz MPG (video 1/2, audio mpeg audio layer 2/3, AAC-LC), MP@ML, MP@HL WMV (video H.264, wmv advanced L3, wmv simple / main, audio mp3, wmv std), max. res. 1080p @ 30Hz / 1080i @ 60Hz	
Supported audio formats	MP3 (MP3), max. bit-rate 320 kBit/s WAV (LPCM), max. 48kHz sampling	
Supported file storage/system	FAT16, FAT32	
<b>Video conference camera</b>		
Viewing angle	150° diagonal / 120° horizontal / 90° vertical	
Resolution (megapixels)	Sensor 16; Output 720p 30fps	
Aspect ratio	16:9	
Optical capabilities	Digital pan / tilt / zoom with 3x lossless digital zoom	
Driver	Plug&Play, driverless install	
Connectivity	SuperSpeed USB	
Software	3DNR sensor-model-based visual noise reduction, high-quality video scaling and de-warping flicker elimination, optical aberration correction, robust automatic white balance, spatio-temporal noise filtering	
<b>Conference speakers</b>		
Input	40 W max.	
Rated speaker impedance	8Ω	
Frequency response rate	70Hz to 15kHz	
Sound pressure level	82.1dB (2.83 V)	
<b>OPS slot-in PC</b>		
CPU	Intel® Core i7, 8M cache 4x3 Ghz	
Graphics	Intel® HD graphics 630	
SSD	SATA SSD (Msata) 2Gb/s (MLC), 128 GB	
RAM	8 GB (DDR4), dual channel mode	

Operating system	Microsoft Windows 10 Professional
Interfaces (frontside)	x1 micro sim card, x1 USB 2.0, x1 USB 3.1 Gen 1 Type-C, x2 antenna for Wi-Fi, x2 DisplayPort 1.2++, x2 USB 3.0, RJ-45 10/100/1000 Mbps
Interfaces (backside)	Internal HDMI 1.4 or DisplayPort 1.2, internal OPS interface to OPS slot-in PC (JAE 80-pin connector)
Wi-Fi	Intel Dual Band Wireless-AC 8260 802.11ac, dual band, Wi-Fi and Bluetooth 4.2 adapter
Security	TPM (Trusted Platform Module)
EDID/DDC support	Internal OPS interface DisplayPort up to 4096 x 2160 @ 60hz
<b>Available optional accessories</b>	
Cart	SmartMount® Motorized Height Adjustable Flat Panel Cart
Compute module	NEC Compute Module Interface Board with NEC Raspberry Pi Compute Module NEC Compute Module Interface Board with Raspberry Pi Compute Module 1 or 3
<b>Green features</b>	
Energy efficiency	Annul energy consumption: 248 kWh (based on 4 operating hours per day), carbon savings meter, ECO mode, energy efficiency class A, local dimming
<b>Additional features</b>	
Special characteristics	12-bit LUT (Look Up Table), AMX NetLinx support, ASCII control commands, auto ID assignment, auto-tiling function, automated email alert, CEC support, Cisco WebEx kit compatible, CRESTRON connected support, DICOM simulation, display browser control, emergency notification, HDMI with UHD at 60Hz, HDR gamma support (HLG, PQ), key guide, Media Player with browser control, NaViSet Administrator 2, OmniColor control, OSD rotation, PIN theft protection, PJLink support, powered USB port, removable logo, scheduler, slim LED indicator, SNMP support, TileMatrix (10x10), user readable log
Safety and ergonomics	CE, EMC, Class B, RoHS
Shipping content	CD-ROM (user guides/manuals), display, DisplayPort cable, IR remote control, USB cable
Warranty	3-years including backlight, optional 4 + 5 year warranty extension.
Operating hours	24/7

**NOTE:** Technical specifications are subject to change without notice.

## 75" InfinityBoard® 2.1 specifications

Product information				
Product name	NEC 75" InfinityBoard® 2.1			
Product group	LCD 75" all-in-one collaboration solution			
Order code	40001303			
Display				
Panel technology	IPS with edge LED backlights			
Active screen area (W x H)	1,649.7 mm x 927.9 mm			
Screen size	75 inches / 189 cm diagonal			
Brightness	500 cd/m <sup>2</sup> (shipment setting: 350)			
Contrast ratio (typ.)	1200:1			
Viewing angle	178° / 178° (at contrast ratio > 10:1)			
Color depth	1,073,741,824 (10-bit)			
Response time	8 ms (grey-to-grey typ.)			
Haze level	Pro (28%)			
Supported orientation	Face-up, landscape, portrait			
Synchronization rate				
Horizontal frequency (kHz)	31.4 to 91.1			
Vertical frequency (Hz)	24 to 85			
Resolution				
Native resolution	3840 x 2160			
Supported resolutions	4096 x 2160	3840 x 2160	1920 x 2160	1920 x 1080
Connectivity				
Input video (digital)	DisplayPort x2 (with HDCP), HDMI x3 (with HDCP)			
Input audio (analog)	3.5 mm jack			
Input audio (digital)	DisplayPort, HDMI			
Input control	LAN 100Mbit, remote control (3.5 mm jack), RS232			
Input data	microSD (value), USB 2.0 (downstream), USB 2.0 (Media Player), USB type-B (upstream), USB 2.0 x2 (Compute Module, 5V/2A powered x1)			
Output video (digital)	DisplayPort x1 (loop through: DisplayPort, OPS slot-in PC)			
Output audio (analog)	3.5 mm jack			
Output control	LAN 100Mbit			
Open modular intelligence				
OPS slot technology	Open pluggable specification (NEC / Intel OPS standard)			
OPS max. current	4.7 A			
OPS power consumption	75 W			
Compute Module technology	Compute Module slot (NEC proprietary standard)			
Sensors				
Human sensor	Optional, external, 4-5m range, triggered actions programmable			
Temperature sensor	Integrated, 3 sensors, triggered actions programmable			
Electrical				
Power consumption	167W (settings as shipped)			
Power savings mode	≤0.5W, ≤2W (networked standby)			
Power management	VESA DPMS			
Environmental conditions				
Operating temperature	0°C to 35°C			
Operating humidity	20% to 80%			
Mechanical				
Dimensions (W x H x D)	1,944.6 mm x 1,003 mm x 86 mm			
Weight	80.3kg			
Bezel width	18.8 mm (left and right), 18.8 mm (top and bottom)			
VESA mounting	M8, 4 holes, configuration 400 mm x 400 mm (FDMI) or 600 mm x 400 mm (FDMI)			
Ingress protection	IP5x (front), IP2x (back)			
Package dimensions (W x H x D)	Box 1: 1,830 mm x 1,190 mm x 280 mm	Box 2: 1,400 mm x 250 mm x 250 mm		

Package weight	Box 1: 84.5 kg	Box 2: 9.63 kg
<b>Glass</b>		
Thickness	3 mm	
Type	Premium toughened glass, anti-glare coating	
Light transmission	88% (± 1%)	
<b>Touch</b>		
Touch technology	InGlass™ Touch	
Number of touches	Real multi-touch up to 20 touches	
Response time	≤ 15 ms	
Touch method	Finger, gloves, stylus (≥ 2 mm)	
Supported operating systems	Native multi-touch: Windows 7, Windows 8, Windows 10, Linux, Android Default mouse: Windows XP, Windows Vista, macOS X	
Data interface	USB-HID	
Accuracy	< 1 mm	
<b>Media Player</b>		
Supported image formats	JPG (baseline, progressive, RGB, CMYK), max res: 5000 x 5000 PNG (interlace, alpha channel), max res: 4000 x 4000	
Supported video formats	MP4 / MOV / FLV (video H.264, audio MP3/AAC), max. res. 1080p @ 30Hz / 1080i @ 60Hz MPG (video 1/2, audio mpeg audio layer 2/3, AAC-LC), MP@ML, MP@HL WMV (video H.264, wmv advanced L3, wmv simple / main, audio mp3, wmv std), max. res. 1080p @ 30Hz / 1080i @ 60Hz	
Supported audio formats	MP3 (MP3), max. bit-rate 320 kBit/s WAV (LPCM), max. 48kHz sampling	
Supported file storage/system	FAT16, FAT32	
<b>Video conference camera</b>		
Viewing angle	150° diagonal / 120° horizontal / 90° vertical	
Resolution (megapixels)	Sensor 16; Output 720p 30fps	
Aspect ratio	16:9	
Optical capabilities	Digital pan / tilt / zoom with 3x lossless digital zoom	
Driver	Plug&Play, driverless install	
Connectivity	SuperSpeed USB	
Software	3DNR sensor-model-based visual noise reduction, high-quality video scaling and de-warping flicker elimination, optical aberration correction, robust automatic white balance, spatio-temporal noise filtering	
<b>Conference speakers</b>		
Input	40 W max.	
Rated speaker impedance	8Ω	
Frequency response rate	70Hz to 15kHz	
Sound pressure level	82.1dB (2.83 V)	
<b>OPS slot-in PC</b>		
CPU	Intel® Core i7, 8M cache 4x3 Ghz	
Graphics	Intel® HD graphics 630	
SSD	SATA SSD (Msata) 2Gb/s (MLC), 128 GB	
RAM	8 GB (DDR4), dual channel mode	
Operating system	Microsoft Windows 10 Professional	
Interfaces (frontside)	x1 micro sim card, x1 USB 2.0, x1 USB 3.1 Gen 1 Type-C, x2 antenna for Wi-Fi, x2 DisplayPort 1.2+, x2 USB 3.0, RJ-45 10/100/1000 Mbps	
Interfaces (backside)	Internal HDMI 1.4 or DisplayPort 1.2, internal OPS interface to OPS slot-in PC (JAE 80-pin connector)	
Wi-Fi	Intel Dual Band Wireless-AC 8260 802.11ac, dual band, Wi-Fi and Bluetooth 4.2 adapter	
Security	TPM (Trusted Platform Module)	
EDID/DDC support	Internal OPS interface DisplayPort up to 4096 x 2160 @ 60hz	
<b>Available optional accessories</b>		
Cart	SmartMount® Motorized Height Adjustable Flat Panel Cart	
Compute module	NEC Compute Module Interface Board with NEC Raspberry Pi Compute Module NEC Compute Module Interface Board with Raspberry Pi Compute Module 1 or 3	

<b>Green features</b>	
Energy efficiency	Annul energy consumption: 248 kWh (based on 4 operating hours per day), carbon savings meter, ECO mode, energy efficiency class A, local dimming
<b>Additional features</b>	
Special characteristics	12-bit LUT (Look Up Table), AMX NetLinx support, ASCII control commands, auto ID assignment, auto-tiling function, automated email alert, CEC support, Cisco WebEx kit compatible, CRESTRON connected support, DICOM simulation, display browser control, emergency notification, HDMI with UHD at 60Hz, HDR gamma support (HLG, PQ), key guide, Media Player with browser control, NaViSet Administrator 2, OmniColor control, OSD rotation, PIN theft protection, PLink support, powered USB port, removable logo, scheduler, slim LED indicator, SNMP support, TileMatrix (10x10), user readable log
Safety and ergonomics	CE, EMC, Class B, RoHS
Shipping content	CD-ROM (user guides/manuals), display, DisplayPort cable, IR remote control, USB cable
Warranty	3-years including backlight, optional 4 + 5 year warranty extension.
Operating hours	24/7



## 86" InfinityBoard® 2.1 specifications

Product information				
Product name	NEC 86" InfinityBoard® 2.1			
Product group	LCD 86" all-in-one collaboration solution			
Order code	40001305			
Display				
Panel technology	IPS with edge LED backlights			
Active screen area (W x H)	1,895 mm x 1,065.9 mm			
Screen size	86 inches / 217 cm diagonal			
Brightness	500 cd/m <sup>2</sup> (shipment setting: 350)			
Contrast ratio (typ.)	1200:1			
Viewing angle	178° / 178° (at contrast ratio > 10:1)			
Color depth	1,073,741,824 (10-bit)			
Response time	8 ms (grey-to-grey typ.)			
Haze level	Pro (28%)			
Supported orientation	Face-up, landscape, portrait			
Synchronization rate				
Horizontal frequency (kHz)	31.4 to 91.1			
Vertical frequency (Hz)	24 to 85			
Resolution				
Native resolution	3840 x 2160			
Supported resolutions	4096 x 2160	3840 x 2160	1920 x 2160	1920 x 1080
Connectivity				
Input video (digital)	DisplayPort x2 (with HDCP), HDMI x3 (with HDCP)			
Input audio (analog)	3.5 mm jack			
Input audio (digital)	DisplayPort, HDMI			
Input control	LAN 100Mbit, remote control (3.5 mm jack), RS232			
Input data	microSD (value), USB 2.0 (downstream), USB 2.0 (Media Player), USB type-B (upstream), USB 2.0 x2 (Compute Module, 5V/2A powered x1)			
Output video (digital)	DisplayPort x1 (loop through: DisplayPort, OPS slot-in PC)			
Output audio (analog)	3.5 mm jack			
Output control	LAN 100Mbit			
Open modular intelligence				
OPS slot technology	Open pluggable specification (NEC / Intel OPS standard)			
OPS max. current	4.7 A			
OPS power consumption	75 W			
Compute Module technology	Compute Module slot (NEC proprietary standard)			
Sensors				
Human sensor	Optional, external, 4-5m range, triggered actions programmable			
Temperature sensor	Integrated, 3 sensors, triggered actions programmable			
Electrical				
Power consumption	242W (settings as shipped)			
Power savings mode	≤0.5W, ≤2W (networked standby)			
Power management	VESA DPMS			
Environmental conditions				
Operating temperature	0°C to 35°C			
Operating humidity	20% to 85%			
Mechanical				
Dimensions (W x H x D)	2,192 mm x 1,142 mm x 86 mm			
Weight	91.7 kg			
Bezel width	19.8 mm (left and right), 20.3 mm (top and bottom)			
VESA mounting	M8, 4 holes, configuration 400 mm x 400 mm (FDMI) or 600 mm x 400 mm (FDMI)			
Ingress protection	IP5x (front), IP2x (back)			
Package dimensions (W x H x D)	Box 1: 2,157 mm x 1,290 mm x 320 mm		Box 2: 1,400 mm x 250 mm x 250 mm	

Package weight	Box 1: 98 kg	Box 2: 10.13 kg
<b>Glass</b>		
Thickness	3 mm	
Type	Premium toughened glass, anti-glare coating	
Light transmission	88% (± 1%)	
<b>Touch</b>		
Touch technology	InGlass™ Touch	
Number of touches	Real multi-touch up to 20 touches	
Response time	≤ 15 ms	
Touch method	Finger, gloves, stylus (≥ 2 mm)	
Supported operating systems	Native multi-touch: Windows 7, Windows 8, Windows 10, Linux, Android Default mouse: Windows XP, Windows Vista, macOS X	
Data interface	USB-HID	
Accuracy	< 1 mm	
<b>Media Player</b>		
Supported image formats	JPG (baseline, progressive, RGB, CMYK), max res: 5000 x 5000 PNG (interlace, alpha channel), max res: 4000 x 4000	
Supported video formats	MP4 / MOV / FLV (video H.264, audio MP3/AAC), max. res. 1080p @ 30Hz / 1080i @ 60Hz MPG (video 1/2, audio mpeg audio layer 2/3, AAC-LC), MP@ML, MP@HL WMV (video H.264, wmv advanced L3, wmv simple / main, audio mp3, wmv std), max. res. 1080p @ 30Hz / 1080i @ 60Hz	
Supported audio formats	MP3 (MP3), max. bit-rate 320 kBit/s WAV (LPCM), max. 48kHz sampling	
Supported file storage/system	FAT16, FAT32	
<b>Video conference camera</b>		
Viewing angle	150° diagonal / 120° horizontal / 90° vertical	
Resolution (megapixels)	Sensor 16; Output 720p 30fps	
Aspect ratio	16:9	
Optical capabilities	Digital pan / tilt / zoom with 3x lossless digital zoom	
Driver	Plug&Play, driverless install	
Connectivity	SuperSpeed USB	
Software	3DNR sensor-model-based visual noise reduction, high-quality video scaling and de-warping flicker elimination, optical aberration correction, robust automatic white balance, spatio-temporal noise filtering	
<b>Conference speakers</b>		
Input	40 W max.	
Rated speaker impedance	8Ω	
Frequency response rate	70Hz to 15kHz	
Sound pressure level	82.1dB (2.83 V)	
<b>OPS slot-in PC</b>		
CPU	Intel® Core i7, 8M cache 4x3 Ghz	
Graphics	Intel® HD graphics 630	
SSD	SATA SSD (Msata) 2Gb/s (MLC), 128 GB	
RAM	8 GB (DDR4), dual channel mode	
Operating system	Microsoft Windows 10 Professional	
Interfaces (frontside)	x1 micro sim card, x1 USB 2.0, x1 USB 3.1 Gen 1 Type-C, x2 antenna for Wi-Fi, x2 DisplayPort 1.2+ +, x2 USB 3.0, RJ-45 10/100/1000 Mbps	
Interfaces (backside)	Internal HDMI 1.4 or DisplayPort 1.2, internal OPS interface to OPS slot-in PC (JAE 80-pin connector)	
Wi-Fi	Intel Dual Band Wireless-AC 8260 802.11ac, dual band, Wi-Fi and Bluetooth 4.2 adapter	
Security	TPM (Trusted Platform Module)	
EDID/DDC support	Internal OPS interface DisplayPort up to 4096 x 2160 @ 60hz	
<b>Available optional accessories</b>		
Cart	SmartMount® Motorized Height Adjustable Flat Panel Cart	
Compute module	NEC Compute Module Interface Board with NEC Raspberry Pi Compute Module NEC Compute Module Interface Board with Raspberry Pi Compute Module 1 or 3	

Green features	
Energy efficiency	Annul energy consumption: 248 kWh (based on 4 operating hours per day), carbon savings meter, ECO mode, energy efficiency class A, local dimming
Additional features	
Special characteristics	12-bit LUT (Look Up Table), AMX NetLinx support, ASCII control commands, auto ID assignment, auto-tiling function, automated email alert, CEC support, Cisco WebEx kit compatible, CRESTRON connected support, DICOM simulation, display browser control, emergency notification, HDMI with UHD at 60Hz, HDR gamma support (HLG, PQ), key guide, Media Player with browser control, NaViSet Administrator 2, OmniColor control, OSD rotation, PIN theft protection, PLink support, powered USB port, removable logo, scheduler, slim LED indicator, SNMP support, TileMatrix (10x10), user readable log
Safety and ergonomics	CE, EMC, Class B, RoHS
Shipping content	CD-ROM (user guides/manuals), display, DisplayPort cable, IR remote control, USB cable
Warranty	3-years including backlight, optional 4 + 5 year warranty extension.
Operating hours	24/7

**NOTE:** Technical specifications are subject to change without notice.

## Manufacturer's Recycling and Energy Information

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We are strongly committed to environmental protection and sees recycling as one of the company's top priorities in trying to minimize the burden placed on the environment. We are engaged in developing environmentally-friendly products, and always strive to help define and comply with the latest independent standards from agencies such as ISO (International Organization for Standardization) and TCO (Swedish Trades Union).

### Disposing of your old NEC product

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The aim of recycling is to gain an environmental benefit by means of re-use, upgrading, reconditioning or reclamation of material. Dedicated recycling sites ensure that environmentally harmful components are properly handled and securely disposed. To ensure the best recycling of our products, we offer a variety of recycling procedures and gives advice on how to handle the product in an environmentally sensitive way, once it has reached the end of its life.

All required information concerning the disposal of the product and country-specific information on recycling facilities can be found on our following websites:

<https://www.sharpnecdisplays.eu/p/greenvision/en/greenvision.xhtml> (in Europe)

<https://www.sharp-nec-displays.com/jp/> (in Japan)

<https://www.sharpnecdisplays.us/> (in USA)

### Energy Saving

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This monitor features an advanced energy saving capability. When a Display Power Management signal is sent to the monitor, the Energy Saving mode is activated. The monitor enters a single Energy Saving mode.

For additional information visit:

<https://www.sharpnecdisplays.us/> (in USA)

<https://www.sharpnecdisplays.eu/p/hq/en/home.xhtml> (in Europe)

<https://www.sharp-nec-displays.com/global/index.html> (Global)

For Energy Saving information: [Default setting: Quick recovery Off]

For ErP requirement/For ErP (Network standby) requirement:

Exceptions to the power consumption conditions below:

The monitor is using an Option Board.  
[INPUT DETECT] is set to a setting other than [NONE].  
[USB POWER] is set to [ON].  
DisplayPort in the [TERMINAL SETTINGS] is set to [MST].

Power consumption (Glowing amber): 2.0 W or less (with 1 port connection)/3.0 W or less (with all ports connection).

Time for power management function: 10 sec. (Default setting)

Power consumption (Blinking amber): 0.5 W or less.

Time for power management function: 3 min. (Default setting) (Except for a condition that the monitor has plural signal inputs.)

## WEEE Mark (European Directive 2012/19/EU and amendments)

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### Disposing of your used product: In the European Union



EU-wide legislation as implemented in each Member State requires that used electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you dispose of such products, please follow the guidance of your local authority or ask the shop where you purchased the product, or if applicable, follow applicable legislation or agreement you may have. The mark on electrical and electronic products may only apply to the current European Union Member States.



### Outside the European Union

If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority and ask for the correct method of disposal.