

PHILIPS

NeoPix Ultra 2⁺

Home projector

User Manual



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Introduction

Dear customer

Thank you for purchasing this projector.

We hope you enjoy this product and the many functions it offers!

About this user manual

The quick start guide supplied with this product allows you to start using this product quickly and easily. Detailed descriptions can be found in the following sections of this user manual.

Read the entire user manual carefully. Follow all safety instructions in order to ensure proper operation of this product (**see General safety information, page 4**). The manufacturer accepts no liability if these instructions are not followed.

Symbols used

Notice



This symbol indicates tips that will help you use this product more effectively and easily.

DANGER!



Danger of personal injury!

This symbol gives warning of danger of personal injury. Physical injury or damage can result from improper handling.

CAUTION!

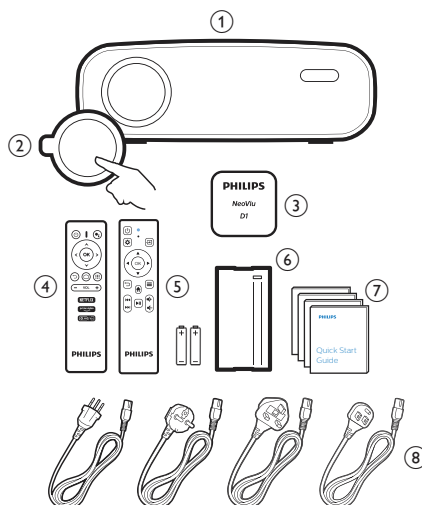


Damage to the product or loss of data!

This symbol gives warning of damage to the product and possible loss of data. Damage can result from improper handling.

What's in the box

- ① NeoPix Ultra 2⁺ projector (NPX645/INT)
- ② Lens cover
- ③ Android TV Dongle (NeoViu D1)
- ④ Android TV remote control with 2 AAA batteries
- ⑤ Projector remote control with 2 AAA batteries
- ⑥ AC adapter
- ⑦ Quick Start Guide
- ⑧ AC power cable with plug x 4
- ⑨ HDMI cable for connecting the dongle
- ⑩ Micro-USB cable for connecting the dongle
- ⑪ HDMI cable for connecting playback device



Customer service centre

The Support page, warranty card, and user manuals can be found here:

Web: www.philips.com/support

Support Contacts:

International Phone: +41 215 391 665

Please ask your provider for international call costs!

Mail: philips.projector.eu@screeneo.com

Access our FAQ websites:

<https://support.philipsprojection.com>

<https://community.philipsprojection.com>

1 General safety information

Take note of all warning and safety notes indicated. Do not make any changes or settings that are not described in this user manual. Incorrect operation, and improper handling can lead to physical injury, damage to the product or loss of data.

Setting up the product

This product is for indoor use only. Place the product securely on a stable, flat surface. To help avoid possible injuries to persons or damage to the product itself, position all cables in such a way that no one will trip over them.

Do not operate the product in damp rooms. Never touch the mains cable or the mains connection with wet hands.

Never operate the product immediately after moving it from a cold location to a hot location. When the product is exposed to such a change in temperature, moisture may condense on the crucial internal parts.

The product must have sufficient ventilation and must not be covered. Do not put the product in closed cabinets, boxes, or other enclosures when in use.

Protect the product from direct sunlight, heat, intense temperature fluctuations and moisture. Do not place the product in the vicinity of heaters or air conditioners. Observe the information on temperature listed in the technical data (**see Technical data, page 23**).

Prolonged operation of the product causes the surface to become hot. In case of overheating, the product automatically switches to standby mode.

Do not allow liquids to leak into the product. Turn off the product and disconnect it from the mains supply if liquids or foreign substances leaked into the product. Have the product inspected by an authorised service centre.

Always handle the product with care. Avoid touching the lens. Never place heavy or sharp objects on the product or on the power cable.

If the product gets too hot or emits smoke, shut it down immediately and unplug the power cable. Have your product checked by an authorised service centre. Keep the product away from open flames (e.g. candles).

! DANGER!



Risk of explosion with incorrect type of batteries!

There is a risk of explosion if the wrong battery type is used.

Do not expose the batteries (battery pack or embedded batteries) to excessive heat such as sunshine, or open fire.

Under the following conditions, a layer of moisture can appear inside the product which can lead to malfunctions:

- if the product is moved from a cold to a warm area;
- after a cold room is heated;
- when the product is placed in a damp room.

Proceed as follows to avoid any moisture buildup:

- 1 Seal the product in a plastic bag before moving it to another room, in order for it to adapt to room conditions.
- 2 Wait one to two hours before you take the product out of the plastic bag.

The product should not be used in a very dusty environment. Dust particles and other foreign objects may damage the product.

Do not expose the product to extreme vibrations. This may damage the internal components.

Do not allow children to handle the product without supervision. The packing materials should be kept out of the hands of children.

For your own safety, do not use the product during thunderstorms with lightning.

Repairs

Do not repair the product yourself. Improper maintenance can result in injuries or damage to the product. The product must be repaired by an authorised service centre.

Please find the details of authorised service centres on the warranty card supplied with this product.

Do not remove the type label from this product, as this will void the warranty.

Power supply

Use only a power adapter which is certified for this product (see **Technical data, page 23**). Check whether the mains voltage of the power supply matches the mains voltage available at the setup location. This product complies with the voltage type specified on the product.

The power outlet shall be installed near the product and shall be easily accessible.

CAUTION!



Always use the  button to turn the projector off.

Turn off the product and unplug from the power outlet before cleaning the surface (see **Cleaning, page 19**). Use a soft, lint-free cloth. Never use liquid, gaseous or easily flammable cleaners (sprays, abrasives, polishes, alcohol). Do not allow any moisture to reach the interior of the product.

DANGER!

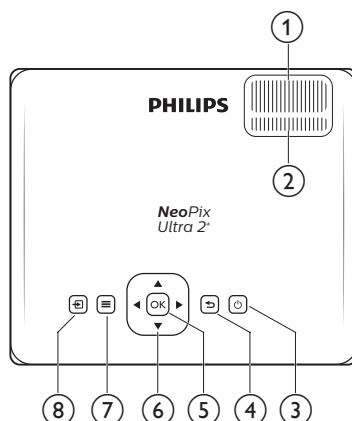







Risk of eye irritation!

This product is equipped with a high power LED (Light Emitting Diode), which emits very bright light. Do not look directly into the projector lens during operation. This could cause eye irritation or damage.

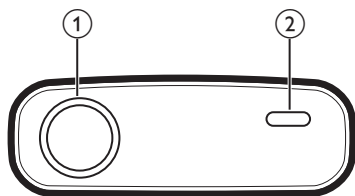
2 Overview

Top view



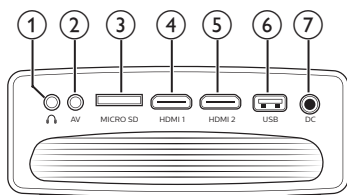
- ① **Focus adjustment knob**
Adjust image sharpness.
- ② **Keystone adjustment knob**
Adjust image shape.
- ③ 
 - Switch the projector on or to standby.
 - When the projector is on, the LED lights up in green. When the projector is on standby, the LED lights up in red.
- ④ 
Return to the previous screen or exit the current screen.
- ⑤ **OK**
Confirm a selection or change the current value on the screen.
- ⑥ **Navigation buttons (Up, Down, Left, Right)**
 - Navigate items on the screen.
 - Press  to change the value for the current setting.
- ⑦ 
Quick access to the setup options (e.g. picture and sound options).
- ⑧ 
Display all the input sources and allow you to switch to a different input source.

Front view



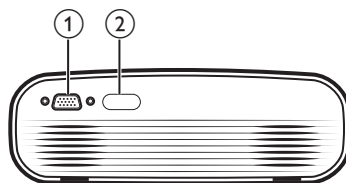
- ① **Projection lens**
- ② **Front IR sensor**

Side view



- ① **3.5 mm audio output**; connect to external speakers or headphones.
- ② **AV**
3.5 mm audio/video input; connect to the analogue audio jacks and/or composite video jack on a playback device.
- ③ **MicroSD card slot**
Connect to a microSD card for media playback.
- ④ **HDMI 1**
Connect to an HDMI output on a playback device.
- ⑤ **HDMI 2**
Connect to an HDMI output on a playback device.
- ⑥ **USB port**
Connect to a USB storage device for media playback.
- ⑦ **DC**
Connect to the AC adapter.

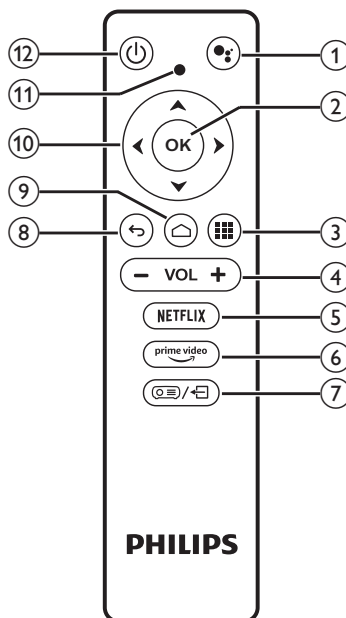
Rear view









- ① **VGA port**
Connect to the VGA port on a computer.
- ② **Rear IR sensor**

Remote controls

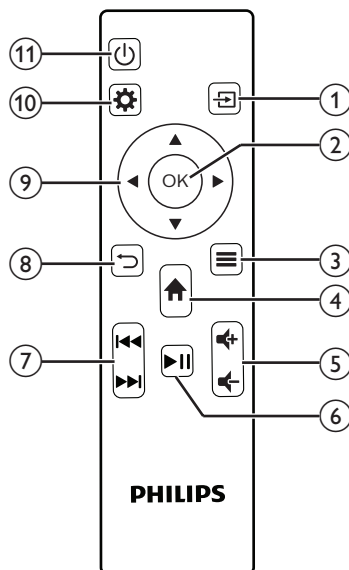
Android TV remote control












- ① Access the voice command or search function (Google Assistant).
- ② **OK**
Confirm a selection or entry, or turn an option on or off.
- ③ Display installed apps and access the app store.
- ④ **VOL +/-**
Increase or decrease the volume.

- ⑤ **NETFLIX**
Quick access to the Netflix service.
- ⑥ **prime video**
Quick access to the Amazon Prime Video service.
- ⑦ 
Enable or disable the remote control.
- ⑧ 
Return to the previous screen or exit the current screen.
- ⑨ 
Access the Android TV home screen.
- ⑩ **Navigation buttons (Up, Down, Left, Right)**
 - Navigate items on the screen.
 - Press   to move backward or forward in the current video.
- ⑪ **LED indicator**
 - Each time you press a button on the remote control, the LED lights up briefly then off.
 - Blue light indicates the remote control is enabled and you can use it to navigate the Android TV user interface.
 - Red light indicates the remote control is disabled and you cannot use it to navigate the Android TV user interface.
 - The LED flashes quickly when the remote control's batteries are low.
- ⑫ 
Switch the projector on or to standby.

Projector remote control




- ① 
Display all the input sources and allow you to switch to a different input source.
- ② **OK**
Confirm a selection or change the current value on the screen.
- ③ 
View or change the picture mode.
- ④ 
 - Access the Android TV home screen when the input source is NeoViu D1.
 - Access the projector home screen when the input source is not NeoViu D1.
- ⑤ 
Increase or decrease the volume.
- ⑥ 
Start, pause or resume media playback.
- ⑦ 
Skip to the previous or next video file.
- ⑧ 
Return to the previous screen or exit the current screen.
- ⑨ **Navigation buttons (Up, Down, Left, Right)**
 - Navigate items on the screen.
 - Press   to change the value for the current setting.

- ⑩ ⚙ Quick access to the setup options (e.g. picture and sound options).
- ⑪ ⏻ Switch the projector on or to standby.

3 Initial setup

Notice

 Make sure all devices are disconnected from their power supplies before establishing or changing any connections.

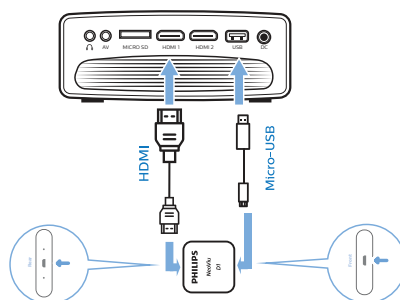
Place the projector

Place the projector on a flat surface such as a table in front of the projection surface.

Connect the Android TV Dongle

This projector comes with an Android TV Dongle (NeoViu D1), allowing you to easily watch videos over the internet. If you want to watch videos this way, you must connect the Android TV Dongle to the projector by following the steps below.

- 1 Connect the Android TV Dongle to the projector's HDMI 1 port using the supplied HDMI cable.
- 2 Connect the Android TV Dongle to the projector's USB port using the supplied Micro-USB cable.



Connect to power supply

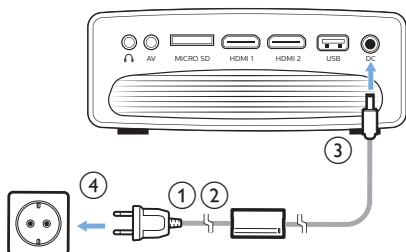
CAUTION!



Always use the ⏻ button to turn the projector on and off.



- 1 Select a supplied power cable with the correct plug (EU/UK/US/CH).
- 2 Connect the power cable to the AC adapter.

- 3 Connect the AC adapter to the **DC** socket on the projector.
- 4 Connect the power cable to an electrical socket.
 - The LED on the projector lights up in red.



sensor on the projector, and make sure there is no obstacle between the remote control and the IR sensor.

Power on and set up the projector

- 1 Press  to turn on the projector. The LED on the projector turns from red to green.
 - To turn off the projector, press  twice. The projector enters standby mode and its LED turns from green to red. To fully shut down the projector, disconnect the power cable from the electrical socket.
 - The distance between the projector and the projection surface determines the actual screen size.

Prepare the remote controls

CAUTION!



The improper use of batteries can lead to overheating, explosion, risk of fire and injury. Leaking batteries can possibly damage the remote control.

Never expose the remote control to direct sunlight.

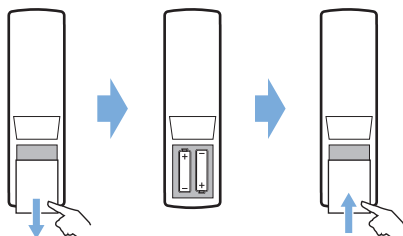
Avoid deforming, dismantling or charging the batteries.

Avoid exposure to open fire and water.

Replace empty batteries immediately.

Remove the batteries from the remote control if not in use for long periods of time.

- 1 Open the battery compartment.
- 2 Insert the supplied batteries (type AAA) with correct polarity (+/-) indicated.
- 3 Close the battery compartment.



- When using a remote control with infrared signals, point the remote control at the IR



Screen size adjustment

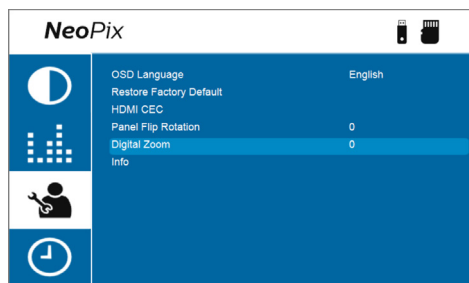
The projection screen size (or size of images) is determined by the distance between the lens of the projector and the projection surface.

This projector has a projection distance of 80 cm to 200 cm, and thus creates a screen size of 20" to 65".

Digital zooming

You can use the digital zooming to reduce the screen size.

- 1 Press  on the projector remote control to access the setup options and go to *Digital Zoom*.
- 2 Press  or the **OK** button to adjust the screen size.



Screen height adjustment

To adjust the screen height when placing the projector on a flat surface, turn the angle adjustment knob located at the bottom of the projector.

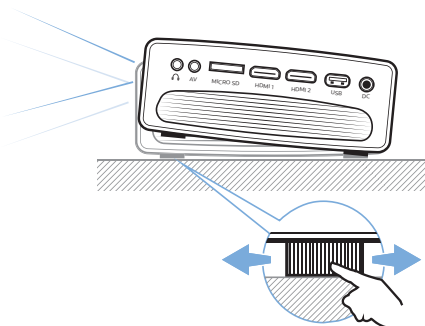


Image focus adjustment

To adjust image focus, turn the focus adjustment knob at the top of the projector.

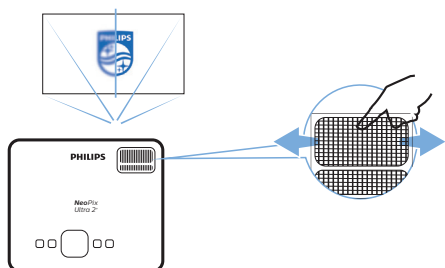
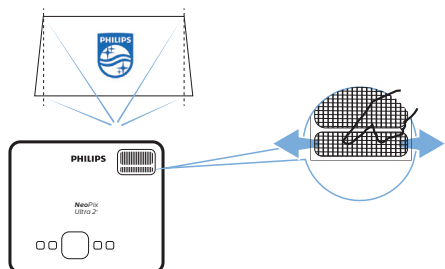


Image shape adjustment

To adjust image shape, turn the keystone adjustment knob at the top of the projector.



Set up Android TV

When you turn on the projector with the Android TV Dongle connected for the first time or after Android TV was reset to its factory default settings, Android TV will start and prompt you to set it up by making some basic settings.

After the setup, Android TV will sign in to your Google account and connect to a Wi-Fi network.

What you need

- A Wi-Fi internet connection
- A Google account

Step 1: Pair the remote control with the Android TV Dongle

Follow the on-screen instructions to pair the Android TV remote control with the Android TV Dongle.

After the pairing, the Welcome screen appears and you can use this remote control to navigate the on-screen user interface of Android TV and initiate voice commands or search queries.

Step 2: Select the display language

To select the display language for Android TV, press the down or up navigation button on the remote control to select your preferred language and press the **OK** button to confirm.



Note: The default display language is **English (United States)** and not all languages are available.

Step 3: Set up your Android TV

There are 2 options to set up your Android TV:

- Quick Start with an Android phone
- Set up with the Android TV remote control

Set up with Quick Start

- 1 When your Android TV says, "Quickly set up your TV with your Android phone?", use the Android TV remote control to choose **Continue**.
- 2 Ensure your Android phone has the Google app  installed and is connected to a Wi-Fi network.
- 3 On your phone, open the Google app  and sign in if you haven't already.

- 4 Type or say “set up my device.”
- 5 Follow the instructions on your phone until you get a code. Enter the code on your Android TV.
- 6 On your phone, tap the name of your Android TV when it shows up.
- 7 To finish setup, follow the instructions on your Android TV screen.

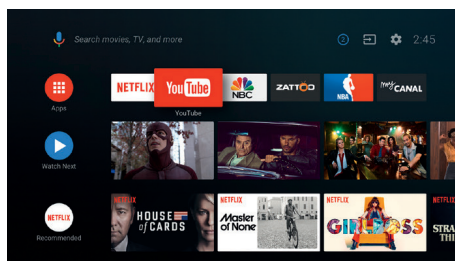
Tip: After the setup, your Android TV automatically signs in to your Google Account and connects to the same Wi-Fi network as your phone.

Set up with the Android TV remote control

- 1 When your Android TV says, “Quickly set up your TV with your Android phone?”, use the Android TV remote control to choose **Skip**.
- 2 Connect your Android TV to a Wi-Fi network. **Note:** Your Android TV may need some time to update after it is connected to the internet.
- 3 Choose **Sign in**.
- 4 Sign in to your Google Account.
- 5 To finish setup, follow the on-screen instructions.

4 Use Android TV

You will see the Android TV home screen similar to the one below after completing the setup.




The Android TV home screen is the jumping-off point for starting all activities on your Android TV entertainment device. On this screen, you can browse for shows and movies to watch. You'll also find the shows and movies you've started, suggested videos, and personalized recommendations.

Android TV offers you various features, such as:




- Watch a wide range of movies and shows from across your favourite apps.
- Stream music from music apps.
- Get apps from Google Play.
- Play online games from Google Play Games.
- Voice input for commands and universal search across multiple services.

Tip:


Every time you turn on the projector with the Android TV Dongle correctly connected, Android TV will automatically start. If it doesn't or you want to return to it, press  on the projector remote control to bring up the input source list, and then select *HDMI1 NeoViu D1*.

Navigate Android TV



You can use the dedicated Android TV remote control to navigate the on-screen user interface of Android TV and initiate voice commands or search queries.

- Press  on the remote control to enable or disable the remote control.
- Press  on the remote control to access the Android TV home screen.
- Press  on the remote control to display

the installed apps and access the app store.

- Press  on the remote control to access voice search function.

Configure Android TV

On the home screen (press ) , you can navigate to select  in the upper right corner of the screen and access various Android TV related settings, e.g. apps/privacy/security management, picture and sound settings (see **Change Android TV settings, page 16**).


Use a wired keyboard/mouse

- Connect the USB plug of your wired mouse or keyboard to the USB port attached to the Micro-USB cable.
- Use the keys on the keyboard for screen navigation, selection and text input, just like the keyboard operation with a computer.
- Use the wheel and left button on the mouse for navigation and selection. Press the right button on the mouse to return to the previous screen.

Use a Bluetooth device

You can pair a Bluetooth device (keyboard, mouse, gamepad, speaker, etc.) with the Android TV Dongle. After completing the pairing, you can use the Bluetooth device with your Android TV.

To pair a Bluetooth device, follow the steps below:

- 1 On your Android TV, go to the home screen.
- 2 Select  in the upper right corner of the screen.
- 3 Select **Remotes & Accessories** and then **Add accessory**. On your screen, you'll see a list of nearby Bluetooth devices.
- 4 Put your Bluetooth device in pairing mode. The device will be added to the on-screen list.

- 5 Select your Bluetooth device.



- 6 When your Android TV says, "Pair with this device?", choose **Pair**. The device will be paired within a few seconds.


Cast content to Android TV

Your Android TV has Chromecast built-in. This allows you to cast content (e.g. videos, photos and music) from a mobile device (Android or iOS device) to your Android TV.

Important: You can only cast from the latest version of a Chromecast-enabled app or a Chrome browser on a device connected to the same Wi-Fi network as your Android TV.

To start casting, follow the steps below:

- 1 Connect your device to the same Wi-Fi network as your Android TV.
- 2 Open the app that has the content you want to cast.
- 3 In the app, find and select Cast .
- 4 On your device, select the name of your Android TV.
- 5 When Cast  changes color, you're successfully connected.

To stop casting, on your device, select Cast  and then **Disconnect**.

Notice



For better casting performance, use a 5GHz Wi-Fi network.

Copy-protected (DRM) content cannot be cast.

Tip: For more tips about using Android TV, visit <https://support.google.com/androidtv>.

Google, Google Play, YouTube, Android TV and other marks are trademarks of Google LLC. Google Assistant is not available in certain languages and countries.

5 Connect to playback devices

Notice

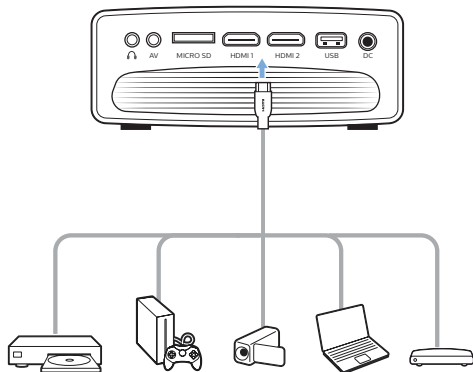



Make sure all devices are disconnected from their power supplies before establishing or changing any connections.

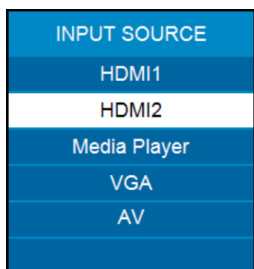
Connect to devices through HDMI

You can connect a playback device (e.g. a Blu-ray player, gaming console, camcorder, digital camera or PC) to the projector through HDMI connection. With this connection, images are shown on the projection screen, and audio is played on the projector.

- 1 Using the supplied HDMI cable, connect the **HDMI 1** or **HDMI 2** port on the projector to the HDMI output port on the playback device.



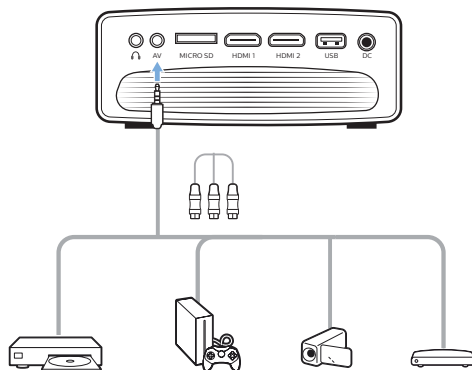
- 2 Press  on the projector remote control to bring up the input source list, and then select **HDMI1** or **HDMI2**.




Connect to devices through AV

You can connect a playback device (e.g. a DVD player, gaming console, camcorder or digital camera) to the projector through AV connection. With this connection, images are shown on the projection screen, and audio is played on the projector.

- 1 Using a RCA cable with 3.5 mm plug (not included in the box), connect the **AV** jack (3.5 mm) on the projector to the analogue audio output jacks (red and white) and/or composite video output jack on a playback device.




- 2 Press  on the projector remote control to display the input source list, and then select **AV**.

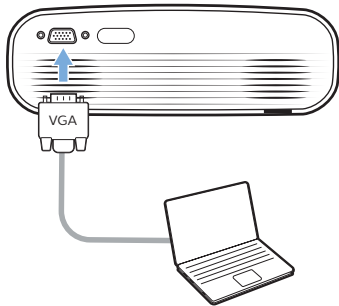
Connect to a computer through VGA

You can connect a computer (e.g. a desktop or laptop) to the projector through VGA connection. With this connection, images are shown on the projection screen.

Notice


 Many laptops do not activate the external video output automatically when you connect a second display such as a projector. Check your laptop user manual to find out how to activate the external video output.

- 1 Using a VGA cable (not included in the box), connect the **VGA** port on the projector to the VGA output port on a computer.




- 2 Adjust your computer's screen resolution to the correct setting and switch the VGA signal to an external monitor. The following resolutions are supported:

	Resolution	Image refresh rate
VGA	640 x 480	60 Hz
SVGA	800 x 600	60 Hz
XGA	1024 x 768	60 Hz
WXGA	1280 x 768	60 Hz
HD	1280 x 720	60 Hz
FULL HD	1920 x 1080	60 Hz

- 3 Press  on the projector remote control to display the input source list, and then select VGA.

Connect to external speakers or headphones

You can connect external speakers or headphones to the projector. With this connection, audio from the projector is played through the external speakers or headphones.





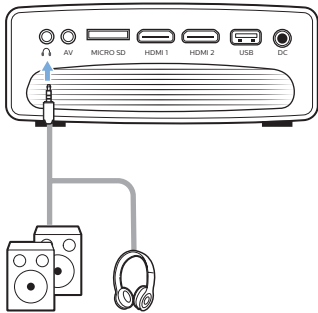
DANGER!

Danger of hearing damage!

Before connecting the headphones, turn down the volume on the projector.

Do not use the projector over a longer time at high volume – especially when using headphones. This could lead to hearing damage.

- 1 Using a 3.5 mm audio cable, connect the  jack on the projector to the analogue audio input (3.5 mm jack, or red and white jacks) on external speakers. Or connect the  jack on the projector to headphones.
 - The internal speakers of the projector are deactivated automatically when external speakers or headphones are connected to the projector.



- 2 After connecting the speakers or headphones, press the volume control buttons on a remote control to adjust the volume to the desired level.

6 Play videos from storage devices

Using the projector, you can access and play video files stored on a local storage device.

Notice



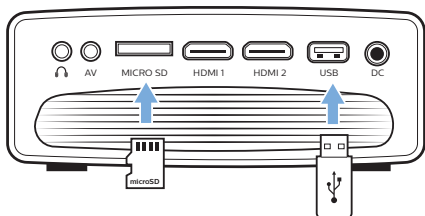
The projector supports a USB storage device that is formatted for FAT16 or FAT32 file system.

Supported file formats

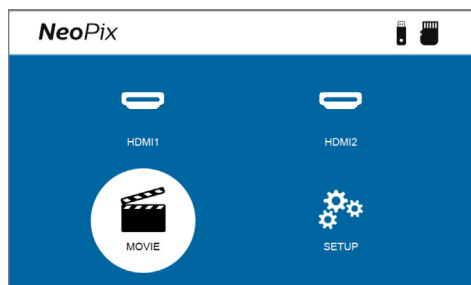
The following file formats are supported:

.dat/.mpg/.mpeg/.ts/.trp/.tp/.vob/.mp4/.mkv/.avi/.flv/.3gp

- 1 Connect a USB storage device to the **USB** port on the projector.
 - Or insert a MicroSD card into the **MicroSD** slot on the projector.



- 2 Go to the projector home screen by pressing **Home** on the projector remote control and then select **MOVIE**.

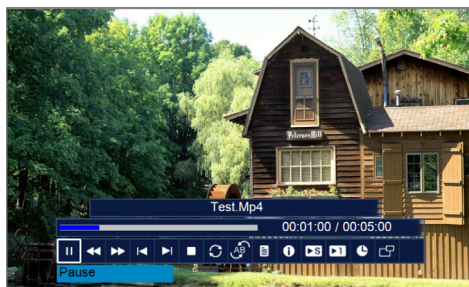


- 3 Select **USB** to open the USB storage device or **TF** to open the MicroSD card. **Note:** Only supported video files are displayed on the screen. All folders and files are ordered alphabetically by name.
- 4 Press the navigation buttons on the projector remote control to select a video

file or a folder. To open a selected folder, press the **OK** button. To return to the parent folder, select **Up Folder** on the screen. To exit the current folder and storage device, press **Return** on the remote control or select **RETURN** on the screen. If you select a video file and wait more than 3 seconds, the projector will begin playing a preview of the video from the beginning.

- 5 Press the **OK** button or **Play/Pause** on the remote control to start playing a selected video file.
- 6 During video playback, press **Play/Pause** on the remote control to start, pause or resume playback. Press **Previous/Next** on the remote control to skip to the previous/next video file in the current folder.

While a video file is playing, you can press the **OK** button on the remote control to bring up the control bar at the bottom of the screen. To instantly hide the control bar, press **Down** or **Return**.



While the control bar is visible, press **Left/Right** on the remote control to select an option and then press **OK** to confirm the action or change the value. To close the dialog box of an option, press **Return**.

The following options are available on the control bar:

- **Play/Pause:** Plays or pauses the video.
- **FB:** Rewinds the video quickly. The rewinding speeds range from 2X to 32X. When you move to the point you want, press **Play/Pause** to start playing at normal speed.
- **FF:** Fast-forwards the video. The forward speeds range from 2X to 32X. When you move to the point you want, press **Play/Pause** to start playing at normal speed.
- **Prev.:** Skips to the previous video in the current folder.
- **Next:** Skips to the next video in the

current folder.

- **Stop:** Stops playing the video and returns to the list of video files in the current folder.
 - **Repeat:** Toggles between the repeat options. If **Repeat None** is selected, the projector will stop playing videos after the last video file in the current folder has been played. If **Repeat 1** is selected, the projector will play the current video continuously. If **Repeat ALL** is selected, the projector will cycle through all the video files in the current folder continuously.
 - **Set A/Set B/None:** Use this option to loop a segment of the video. To set the start point for the loop, press the **OK** button when you see **Set A**. Then **Set B** appears and you can press the **OK** button again to set the end point of the loop. After these 2 steps, the video will start playing in this loop. To deactivate the loop, press the **OK** button when you see **None**.
 - **Playlist:** Select this option to pull up the list of all video files in the current folder in order to switch to another video or view the list without having to stop the playback.
 - **Info:** Displays the information about the current video including resolution and size.
 - **Slow Forward:** Plays the video in slow motion with a speed between 2X and 16X. Press **▶II** to return to the normal playing speed.
 - **Step Forward:** Freezes the video and allows you to play it frame by frame by pressing the **OK** button.
 - **Aspect Ratio:** Toggles between the available aspect ratios (16:9, 4:3 and Auto).
- 7 To stop playing a video file and return to the list of files in the current folder, press **↶** on the remote control.

7 Change settings

This section helps you change the settings of the following two systems:

- Android TV
- Projector

Change Android TV settings

- 1 On the home screen (press **⏏**), use the **Navigation buttons** on the remote control to select **⚙** in the upper right corner and then press the **OK** button to access various setting options.
- 2 Use the **Navigation buttons** and the **OK** button to select and change settings.

Wi-Fi settings

Go to *Network & Internet* to connect the projector to a Wi-Fi network. Use the pop-up virtual keyboard or voice input to input letters and digits.

Google account settings

Go to *Accounts & Sign In* to sign in or add a Google account.

Language settings

Go to *Device Preferences - Language* to select a language for on-screen menus.

Date and time settings

Go to *Device Preferences - Date & time* to access the following settings.

- Automatically update date and time, or manually set date, time and time zone.

Keyboard settings

Go to *Device Preferences - Keyboard* to access various settings for keyboard.

Bluetooth settings

Go to *Remotes & Accessories* to pair the projector with the projector's remote control, or a Bluetooth keyboard/mouse/gamepad/speaker.

Apps settings

Go to *Apps* to access the following settings.

- View all the installed and system apps, and the storage used by each app.
- Set various permissions for the installed apps, e.g. location, contacts, camera, microphone, phone and SMS.
- Set security and restrictions for app installation.
- Check an app's version, storage used, cache size, etc.
- Clear an app's cache, disable or uninstall an app, view an app's permissions, etc.

Display settings

Go to *TV settings* – *Display* to access the following settings.

- *Screen resolution*: Select a screen resolution to best support your video.
- *Screen position*: Scale down the projection image.

Sound options

Internal speaker

Go to *Device Preferences* – *Sound* to access the following settings.

- *System Sound*: Turn the system sound on or off.
- *Surround Sound*: Enable or disable surround sound. You can let Android TV automatically select the formats supported by the projector or manually select the formats.

Audio output

Go to *TV settings* – *Audio Output* to access the setting below.

- *Dolby DRC Mode*: Select a DRC (Dynamic Range Compression) mode for reducing dynamic range of sound output. You can therefore watch movies without having to constantly readjust the volume with the remote control.

Display Netflix activation code

- Go to *TV settings* – *Netflix ESN* to display the Netflix activation code.

Factory reset Android TV Dongle

- 1 Go to *Device Preferences* – *About* – *Factory reset* and select *Factory reset*.
- 2 Follow the on-screen instructions to start factory resetting the Android TV Dongle.

Notice



A factory reset erases all your personal information and downloaded apps and you can't reverse this action.



Other system settings

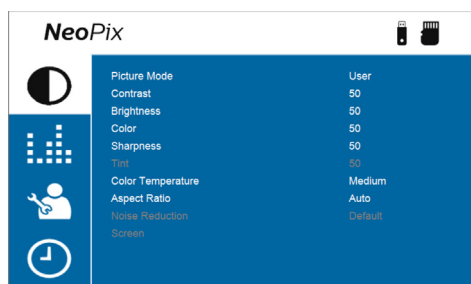
Go to *Device Preferences* to access the following settings.

- *About*: View information about, update, or reset the Android TV Dongle.
- *Storage*: Check the total, used and available space of the internal storage and removable storage.
- *Home screen*: Customize and organize the home screen.
- *Google Assistant*: Select the active Google account and customize Google Assistant's behaviour.
- *Chromecast built-in*: View information about Chromecast.
- *Screen saver*: Set the type of screen saver and how soon to activate the screen saver or put the Android TV Dongle to sleep.
- *Location*: Check your location status and view the recent location requests.
- *Usage and Diagnostics*: Choose whether you want the Android TV Dongle to automatically send diagnostic information to Google.
- *Accessibility*: Configure a variety of accessibility options, including captions and text to speech.
- *Reboot*: Restart the Android TV Dongle.



Change projector settings

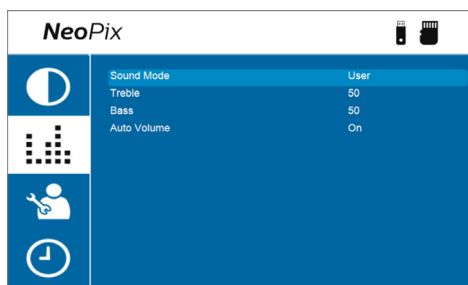
Picture settings

- 1 Press  on the projector remote control.
- 2 Select a picture option, and then press  or the **OK** button to change the value.
 - **Picture Mode**: Select predefined color settings for picture or video display. Select **User** to customize the following settings:
 - **Contrast**: Set color contrast.
 - **Brightness**: Set color brightness.
 - **Color**: Set color saturation.
 - **Sharpness**: Set image sharpness.
 - **Color Temperature**: Set the color temperature.
 - **Aspect Ratio**: Set the screen aspect ratio.
 - **Noise Reduction**: Set the noise reduction level. This option is enabled only when you play a video or use Android TV.




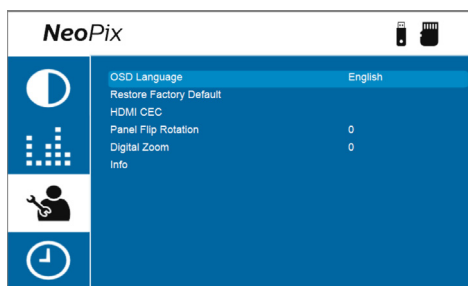
Sound settings

- 1 Press  on the projector remote control.
- 2 Select a sound option, and then press  or the **OK** button to change the value.
 - **Sound Mode**: Select predefined sound settings for your video or music. Select **User** to customize the following settings:
 - **Treble**: Set the treble level.
 - **Bass**: Set the bass level.
 - **Auto Volume**: Turn this on to reduce sudden changes in volume.





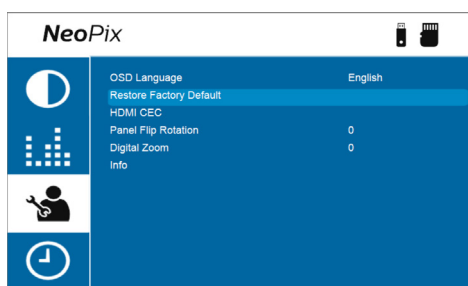
Language settings

- 1 Press  on the projector remote control.
- 2 Select **OSD Language**, and then press the navigation buttons on the remote control to select your desired language for on-screen menu.




Restore default settings

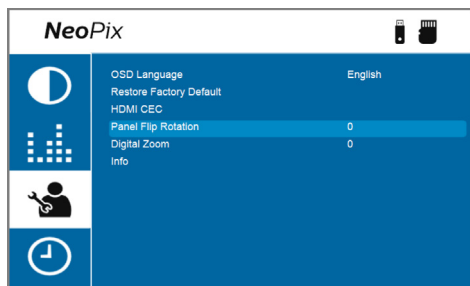
- 1 Press  on the projector remote control.
- 2 Select **Restore Factory Default**, and then press the **OK** button.
- 3 Press  to start restoring the projector to its factory default settings. The projector will turn off after the restoration.



Rotate/flip projection screen

- 1 Press  on the projector remote control.
- 2 Select **Panel Flip Rotation**, and then press

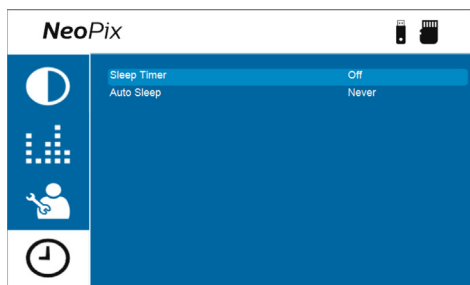
◀▶ or the **OK** button to rotate or flip the projection screen.



Set sleep timer

Select a period of time after which the projector turns off automatically. The default value is **Off**.

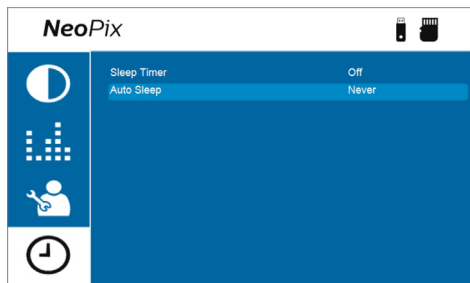
- 1 Press on the projector remote control.
- 2 Select *Sleep Timer*, and then press ◀▶ or the **OK** button to select a period of time (in minutes).



Set auto sleep

Select a period of time so that the projector turns off automatically after the selected period of inactivity. The default value is **Never**.

- 1 Press on the projector remote control.
- 2 Select *Auto Sleep*, and then press ◀▶ or the **OK** button to select a period of time (in hours).



8 Maintenance

Cleaning

DANGER!



Follow the following instructions when cleaning the projector:

Use a soft, lint-free cloth. Never use liquid or easily flammable cleansers (sprays, abrasives, polishes, alcohol, etc.). Do not allow any moisture to reach the interior of the projector. Do not spray the projector with any cleaning fluids.

Wipe over the surfaces gently. Be careful that you do not scratch the surfaces.

Cleaning the lens

Use a soft brush or lens cleaning paper for cleaning the lens of the projector.

DANGER!



Do not use any liquid cleaning agents!

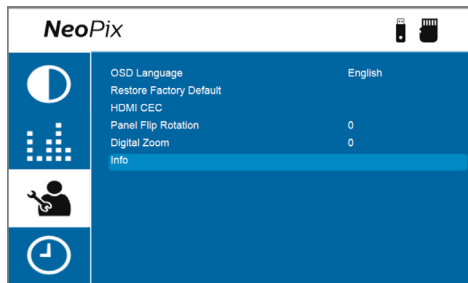
Do not use any liquid cleaning agents for cleaning the lens, to avoid damaging the coating film on the lens.

Update software

The latest software for the projector can be found on www.philips.com/support for you to get the best features and support from the projector.

Before you update the software of the projector, check the current software version:

- Press on the projector remote control and then select *Info*.



CAUTION!



Do not turn off the projector or remove the USB flash drive during a software update.



Update software through USB


- 1 Check the latest software version on www.philips.com/support. Find your product (model number: NPX645), and locate 'Software and drivers'.
- 2 Download the software installation file to a USB flash drive. Unzip the downloaded file and save the resulting file in the root directory of the USB flash drive.
- 3 Turn off the projector and then connect the USB flash drive to the projector.
- 4 Turn on the projector and the software update will start automatically. The LED on the projector blinks during the update.
- 5 Wait about 15 seconds for the update to complete. The projector will turn off by itself after the update.
- 6 Disconnect the USB flash drive from the projector.

9 Troubleshooting

Power cycling

If a problem occurs and you cannot resolve it using the instructions in this user manual, try the following steps to resolve the problem.

- 1 Turn the projector off by pressing  twice.
- 2 Wait at least ten seconds.
- 3 Turn the projector on by pressing  once.
- 4 If the problem persists, contact our technical service center or your dealer.

Problem	Solution
The projector cannot be turned on.	<ul style="list-style-type: none">• Disconnect and reconnect the power cable, and try to turn the projector on again.
The projector cannot be turned off.	<ul style="list-style-type: none">• Press and hold  longer than ten seconds. If this does not work, disconnect the power cable.
No image from the external HDMI device.	<ul style="list-style-type: none">• Check if the correct HDMI input is selected (HDMI 1 or HDMI 2).• Disconnect the HDMI cable or switch off the HDMI device.• Wait three seconds.• Reconnect the HDMI cable or switch on the HDMI device again.
No sound from the external connected device.	<ul style="list-style-type: none">• Check the cables to the external device.• Check that the sound is activated on the external device.• Only the original cables from the device manufacturer may function.
No sound from external HDMI output device.	<ul style="list-style-type: none">• On the HDMI output device, set the audio setting to Multichannel (Raw data) & Stereo (PCM).
No sound when you connect your computer via HDMI cable.	<ul style="list-style-type: none">• Check that the sound is activated on the computer.
Only the home menu appears and not the image from the external device.	<ul style="list-style-type: none">• Check if the cables are connected to the correct sockets.• Check that the external device is turned on.• Check if the video output of the external device is turned on.
Only the home menu appears and not the image from the connected computer.	<ul style="list-style-type: none">• Check that the VGA output of the computer is turned on.• Check if the resolution of the computer is set to 1920*1080 (for VGA connection) or 1080P (for HDMI connection).
The projector turns itself off.	<ul style="list-style-type: none">• When the projector is running for a long period of time, the surface becomes hot.• Check that the power cable is connected correctly.

Problem	Solution
The projector cannot read the USB storage device.	<ul style="list-style-type: none"> • The projector does not support the exFAT file system. • Format the USB storage device in FAT32 or NTFS format, then use it.
The projector does not react to remote control commands.	<ul style="list-style-type: none"> • Check the batteries of the remote control.
Screen Mirroring does not work anymore after a firmware update of an Android or iOS device.	<ul style="list-style-type: none"> • We recommend checking regularly for new firmware of your projector (see Update software, page 19).
Screen mirroring does not work with the available Android device.	<ul style="list-style-type: none"> • In order to allow screen mirroring, your device must support Miracast. Not all Android devices support this function. The function name can be also known as Screencast, Screen Sharing, Wi-Fi Direct, Wireless Display, etc.. • Please refer to the user manual of your Android device to check if this function is supported and how it can be enabled.
When I view videos, the sound or the picture is sometimes distorted or the sound is not synchronized to the picture.	<ul style="list-style-type: none"> • The available Wi-Fi bandwidth is insufficient for sending the video flawlessly from the smartphone to the projector. This can happen if one or more Wi-Fi networks operate in the same frequency range nearby. Certain IoT devices (e.g. ZigBee enabled devices) also operate in this frequency range. • Your smartphone is not fast enough to compress the screen data and send it simultaneously over Wi-Fi. • Your smartphone may maintain parallel connections to your home network and the projector. This will reduce the available bandwidth. Disabling temporarily the connection to your home network may help.
The temperature of the projector's surface is warm.	<ul style="list-style-type: none"> • For this projector it is normal to generate moderate heat during operation.
The projector does not work after I connect it to a laptop.	<ul style="list-style-type: none"> • Check that the HDMI cable is plugged in correctly. • Make sure that the laptop has been switched to projector display.

10 Appendixes

Technical data

Technology/optical

Display technology	LCD
Light source	LED
Resolution	1920 × 1080 pixel
LED lifetime	over 30,000 hours
Contrast ratio	3000:1
Aspect ratio	16:9
Throw ratio	1.4:1
Screen size (diagonal)	20" to 65"
Screen distance	80 cm – 200 cm / 24" – 60"
Keystone correction	manual
Projection modes	4
Focus adjustment	manual
Digital zoom	yes (60–100%)
Integrated media player	yes

Sound

Built-in speakers	2 x 5W
Surround mode	yes
Equalization	yes

Connection

Wi-Fi (via dongle)	802.11a/b/g/n/ac, 2.4+5GHz
Google Cast, Google Assistant	
Bluetooth (via dongle)	Bluetooth speakers, earphones, remote, gamepad, mouse or keyboard
USB (mass storage for multimedia player)	x1
MicroSD	x1
HDMI in	x2
VGA in	x1
AV in	x1
3.5 mm audio out	x1

Power source

Power consumption	operating: 100 W
.....	Standby: 0.3 W
Power adapter	
.....	Input: AC 100–240V, 50/60Hz, 1.4A (Max)
.....	Output: DC 24.0V, 3.0A, 72.0W

External Dongle

Android TV™ / Full catalog of Apps	
Operating system	Android TV
CPU	AMT972 QuadCore

Integrated Media Player

Thousand of codecs supported via VLC built-in players

Dimensions and weight

Unpacked (WxDxH)	220 x 170 x 90 mm / 8.6 x 6.6 x3.5 inch
Packed (W x D x H)	267 x 216 x 148 mm
Weight	1.2kg / 2.69lbs

Temperature requirements

Operating temperature	5 °C – 35 °C
Storage temperature	< 60 °C

Package content

1. NeoPix Ultra 2⁺ projector
2. Android TV Dongle (NeoViu D1)
3. Projector remote control
4. Android TV remote control
5. AC adapter
6. Power cables (EU, UK, US, CH)
7. HDMI cable for connecting the dongle
8. Micro-USB cable for connecting the dongle
9. HDMI cable for connecting playback device
10. Lens cover
11. AAA batteries for remote controls
12. Quick Start Guide
13. Warranty card

Model

NPX645/INT
EAN: 7640186960601
UPC: 793565993602

CE statement

- The product shall only be connected to a USB interface of version USB 2.0 or higher.
- Adapter shall be installed near the equipment and shall be easily accessible.

- The operating temperature of the EUT can't exceed 35°C and shouldn't be lower than 5°C.
- The plug is considered as disconnect device of adapter.
- The UNII Band 5150-5250 MHz is for indoor use only.
- The device complies with RF specifications when the device is used at 20 cm from your body.

Hereby, Screeneo Innovation SA declares that this product is in compliance with essential requirements and other relevant provisions of Directive 2014/53/EU.



The Declaration of Compliance can be consulted on the site www.philips.com.

Frequency bands	Maximum output power
BT EDR (EIRP)	9.09 dBm
BT BLE (EIRP)	4.85 dBm
Wi-Fi 2.4GHz (EIRP)	17.88 dBm
Wi-Fi 5GHZ (EIRP)	17.89 dBm

FCC statement

15.19 Labeling requirements.

This device complies with part 15 of the 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.

15.21 Information to the user.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.105 Information to user.

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.

During operation, the separation distance between the user and the antenna shall be at least 20 cm. This separation distance will ensure that there is sufficient distance from a properly installed externally-mounted antenna to satisfy the RF exposure requirements.

FCC ID: 2ASRT-NPX645/INT

Canada regulatory compliance

This device complies with Industry Canada CAN ICES-3 (B)/NMB-3(B)

RSS-Gen & RSS-247 statement: This device complies with Industry Canada RSS standard(s).

Operation is subject to the following two conditions:

- 1 This device may not cause interference, and
- 2 This device must accept any interference, including interference that may cause undesired operation of the device.

RF Radiation Exposure statement: The device meets the exemption from the routine evaluation limits in section 2.5 of RSS102 and users can obtain Canadian information on RF exposure and compliance.

This device should be installed and operated with a minimum distance of 7.8 inches (20 centimetres) between the device and your body.

Other notice

Preservation of the environment as part of a sustainable development plan is an essential concern of Screeneo Innovation SA. The desire of Screeneo Innovation SA is to operate systems respecting the environment and consequently it has decided to integrate environmental performances in the life cycle of these products, from manufacturing to commissioning use and elimination.



Packaging: The presence of the logo (green dot) means that a contribution is paid to an approved national organisation to improve package recovery and recycling infrastructures. Please respect the sorting rules set up locally for this kind of waste.

Batteries: If your product contains batteries, they must be disposed of at an appropriate collection point.



Product: The crossed-out waste bin symbol on the product means that the product belongs to the family of electrical and electronic equipment. In this respect, the European regulations ask you to dispose of it selectively:

- At sales points in the event of the purchase of similar equipment.
- At the collection points made available to you locally (drop-off centre, selective collection, etc.).

In this way you can participate in the reuse and upgrading of Electrical and Electronic Equipment Waste, which can have an effect on the environment and human health.

The paper and cardboard packaging used can be disposed of as recyclable paper. Have the plastic wrapping recycled or dispose of it in the non-recyclable waste, depending on the requirements in your country.

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NeoPix Ultra 2⁺

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