transformer HD
with Built-in Wi-Fi

enhanced vision
A VISPERO® BRAND

Advanced Features and Functions

Transformer HD Packaging and Accessories

Transformer HD Packaging and Accessories

Take a few moments to familiarize yourself with the parts of the Transformer HD device and its accessories. These parts and accessories are illustrated and labeled on the previous page.

Parts

A.   Camera Head—Rotates 350°

B.   OCR Camera (OCR model only)

C.   Reading Light

D.   Battery Port & Battery Cover

E.   Transformer Main Body

F.   HDMI Type A Port

G.   USB 3.0 Type B Port

H.   Foldable Base Stand

I.   Suction Cup Base (optional and interchangeable with standard legs)

J.   Power Jack

Accessories

1.   (2) Transformer HD Batteries with (1) External Battery Charger (not pictured)

2.   HDMI Cable—6 ft or 1.8 m HDMI Type A to HDMI Type A Cable

3.   USB 3.0 Cable—3 ft or 1 m USB 3.0 Type B to USB 3.0 Type A Cable

4.   DVI-D Single Link Male to HDMI Female Adapter

5.   USB Flash Drive (with Transformer HD Software Installer)

6.   DC Adapter Power Supply—9V 2.6 amp

7.   Lens Cloth

8.   Carrying Case
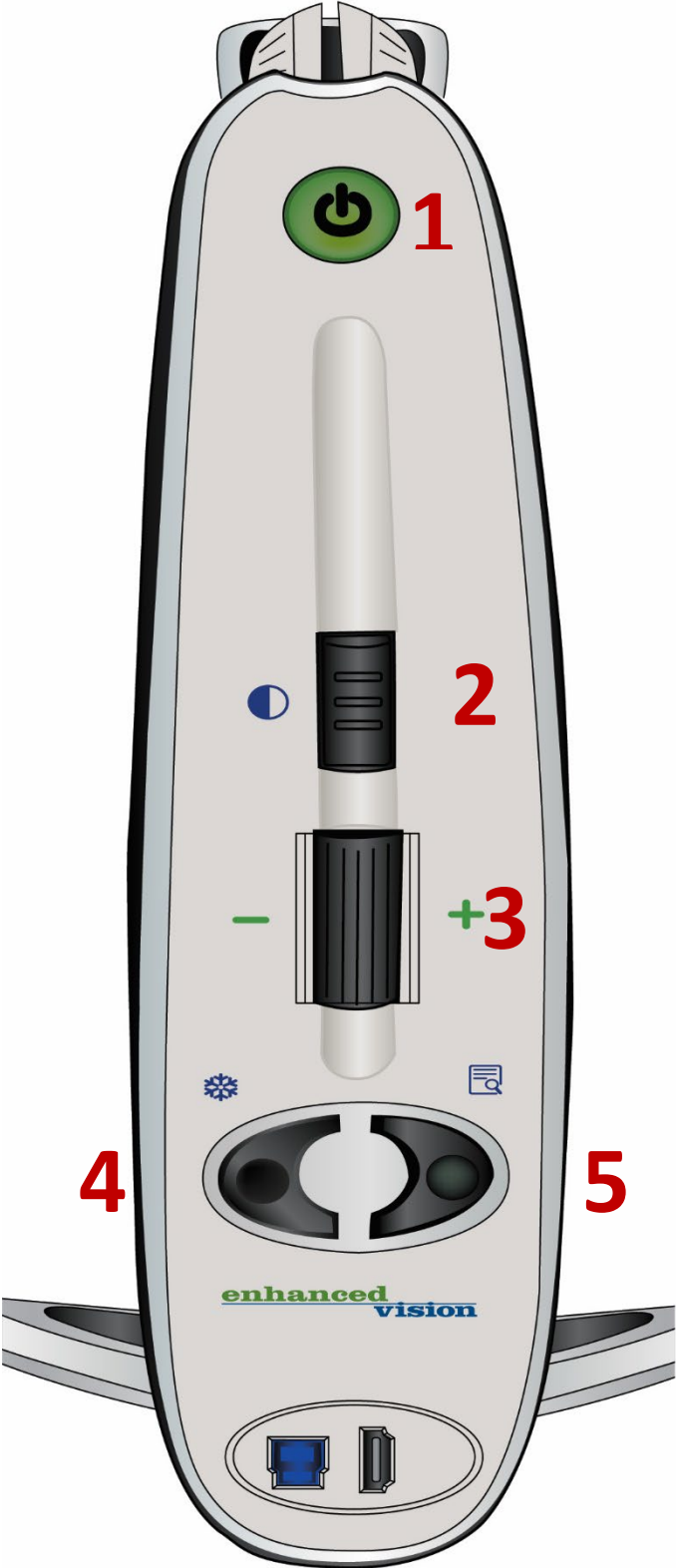
Buttons on the Transformer HD Device

To use this device, you need to be familiar with the buttons that are labeled on the previous page and described in the following table.

ID	Name	Description
1	Power	Press this button briefly to power on your device or place your device into standby if it is already on. Press and hold this button for more than five seconds to fully power off your device. **Note:** *Make sure your device is not connected to DC power when trying to fully power off.*
2	Color Mode	Press this button to toggle through different color schemes. Also use this button to confirm selections in the HDMI menu. For OCR devices only, press and hold this button for more than five seconds to switch to your secondary full-page OCR camera or back to CCTV camera.
3	Zoom Wheel	Slowly turn clockwise or counterclockwise to increase or decrease the zoom level. The Zoom Wheel is also used to navigate items in the HDMI menu.
4	Freeze	Press this button to capture an image. Press and hold the Freeze button to engage the menu when connected to an HDMI television or monitor. **Note:** *To turn the reading light on and off, press the Find and Freeze buttons simultaneously.*
5	Find	Press and hold to activate the Find feature, which minimizes your magnification level. When you release the button, it returns to your previous magnification level. **Note:** *You can use this feature to find your target easily, which is sometimes challenging at higher magnification levels. Additionally, you can press the Find and Freeze buttons simultaneously to turn the reading light on and off.*
6	Rotate	Press this button to rotate the image on the screen.
7	Reset	Press this button to perform a hard reset of the Transformer HD device.

Documentation and Product Updates

Product enhancements and revisions are integral to what we do here at Enhanced Vision. Visit us at https://www.enhancedvision.com/low-vision-product-line/transformer-hd-portable-electronic-magnifier.html and select your Enhanced Vision product. The most up-to-date version of this document is on the Downloads tab.

You can download product updates at https://www.enhancedvision.com/support/software/transformer-hd/update.html. A technical bulletin provides instructions for installing the updated firmware and software.

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Quick Start

This document provides instructions for setting up and using the Transformer HD device. How you get started depends on how you are connecting the device. A summary of the steps for each connection type follows:

HDMI	USB	Wi-Fi
1. Attach HDMI cable to TV/monitor and Transformer HD device.	1. Install Transformer HD application.	1. Install Transformer HD application.
2. Power on the TV/monitor.	2. Attach USB cable to computer and Transformer HD device.	2. Press Reset button on Transformer HD device. Green LED is solid.
3. Press Reset button on device. Green LED is solid.	3. Press Reset button on device. Green LED is solid.	3. Press Power button to start device.
4. Press Power button to start device.	4. Press Power button to start device.	4. Connect to Wi-Fi.
	5. Start the Transformer HD application.	5. Start the Transformer HD application.

Before You Use the Device

The following table provides an overview of the recommended steps that must be completed to begin using the device.

Step	Description	Page
1	Familiarize yourself with the Transformer HD device.	ii
2	Check your system for requirements and compatibility.	4
3	Learn how to care for your Transformer HD device.	66
4	Install the Transformer HD software (not applicable to HDMI). Go to the section that applies to your platform: • Tablet • Chromebook • Windows • Mac	6
5	Set up the Transformer HD device.	21
6	Set up your connection, based on its type: HDMI, USB, or Wi-Fi.	22
7	Power up the device.	29
8	Change camera orientations to view different objects.	32

About This Document

Reference the illustrations at the beginning of this document (pages ii-v) as you follow the instructions. The buttons and other device components are labeled in these graphics.

When steps refer to a button on the Transformer HD device, the button name is capitalized, such as the Zoom Wheel. When steps refer to text on a screen in the Transformer HD application, also called the viewer, the text is bold. For example, the **Markers** menu is in boldface, as well as the **Vertical Window Marker** icon on that menu.

Introduction to the Transformer HD

Transformer HD is a fully integrated and portable solution, offering the advantages of a CCTV (Closed Circuit Television Camera) and optional OCR combined into one system. Transformer HD's high definition camera and high contrast capabilities enable individuals with low vision to read, write, and see objects in the distance. It can also be used as a mirror, allowing you to magnify a reflection of yourself for personal grooming. Its unique portable design is perfect for school, work or home and can be used with a variety of platforms for maximum versatility.

Prior to using this system, carefully review and follow the instructions provided within this booklet. Your Transformer HD is ready to use right out of the box. By reviewing all the Transformer HD features and controls before use and following the directions carefully, you'll be able to enjoy all the great benefits from your purchase.

Enhanced Vision products are designed to give you the highest quality image, OCR accuracy, convenient easy-to-use features, and years of reliable service. Thank you for choosing the Enhanced Vision Transformer HD.

System Requirements and Compatibility

Transformer HD is intended to be used alongside a desktop/laptop computer, iOS tablet, Chromebook, or HDMI monitor. To get the best experience possible, ensure your system meets these minimum requirements.

Windows PCs and Laptops

- Windows 10 or Windows 11 (64-bit)
- Processor (one of the following):
  - Core i3 at 2.4GHz or higher
  - AMD A10 Series APU with 2.5GHz or higher
  - FX-7600P processor family with 2.7GHz or higher
- 4GB RAM or higher
- Graphics (one of the following):
  - ATI Radeon™ R6 graphics or higher
  - Intel HD graphics 4600 or higher
- Screen resolution (minimum) 1366 x 768 or higher
- USB 3.0 or SuperSpeed (SS)
- Mouse or another pointing device
- Freedom Scientific ZoomText 2019 or higher (optional)
  Note: *Not supported as a camera through ZoomText alone.*
- Freedom Scientific JAWS 2023 (optional)
  Note: *No voice accessibility support and mouse-only input.*
- Freedom Scientific Fusion 2023 (optional)
  Note: *Not supported as a camera through ZoomText alone. JAWS has no voice accessibility support and mouse-only input.*
- Dolphin SuperNova 21 (optional)

Apple Mac Computers and Laptops

- macOS Mojave 10.14 or Catalina 10.15
- 4GB RAM or higher
- Early 2013 model or later 1.3GHz CPU
- Screen resolution (minimum) 1366 x 768 or higher
- USB 3.0 or SuperSpeed (SS)
- Mouse or another pointing device

Note: *Mac Mx versions (such as M1, M2, etc.) are not supported. The latest Ventura releases are also not supported.*

Apple iPad Tablets (Wi-Fi only)

- iPadOS 16
- iPad Mini2 or higher
- iPad Air or higher
- iPad Pro (all versions)

Chromebooks

- Chrome OS v73 to v105 (64-bit only)
- Intel/AMD x86-64 bit processor-based Chromebooks only (e.g., Big Sur)
  Note: *No ARM processors (Mediatek, Exynos, Rockchip, or any other ARM processor) will work with Transformer HD.*
- Intel® HD graphics 400 or higher
- Screen resolution 1366x768 or higher
- 2GB RAM or higher
- 16GB storage or higher
- USB 3.0 or SuperSpeed (SS)

Note: *Chromebook is not compatible with OCR or TTS functions. No Wi-Fi connection is available for Chromebook.*

Monitor or TV (for HDMI Mode)

- HDMI/DVI input
  Note*: DVI input requires an HDMI to DVI adapter to use with the HDMI cable included with Transformer HD.*
- For 1080p camera viewing, a full HD (1920x1080p) compatible monitor is needed.
- For 720p camera viewing, an HD (1280x720p) compatible monitor is needed.

Software Installation on Transformer HD

Transformer HD uses viewer software to allow you to display the onboard camera live video when connected to a PC, Mac, Apple iPad tablet, or Chromebook. This viewer software package must be installed in your operating system—Windows, macOS, iOS, or Chrome OS. See pages 4-5 for detailed [system requirements](system%20requirements).

When software upgrades become available, you can download them from our website at https://www.enhancedvision.com/support/software/transformer-hd.html.

iOS Tablet Installation

The language used on the tablet is the language that Transformer HD uses for OCR. To use OCR for text in a language other than the one on the tablet, you must go to the **Settings** menu in your tablet and change the language to match the language of the text you want to OCR.

Note: Asian languages are not supported on iOS tablets.

To install Transformer HD on a iOS tablet, follow these steps:

1. Go to the Apple App Store.

2. Search for "Transformer HD".

3. Click **Install**.

Chromebook Installation

To install Transformer HD on a Chromebook, follow these steps:

1. Go to the Chrome Web Store.

2. Select the **Apps** link.

3. Search for "Transformer HD".

4. On the Transformer HD page, click **Add to Chrome**.

5. In the pop-up window that is displayed, click **Add App**.

6. When the page refreshes, the application has finished downloading. Click **Launch App** to display Transformer HD.

Note: Chromebook is not compatible with OCR or TTS functions. No Wi-Fi connection is available for Chromebook.

Windows Installation

To install on a Windows PC, follow these steps:

Note: Do not connect the Transformer HD device until instructed to do so.
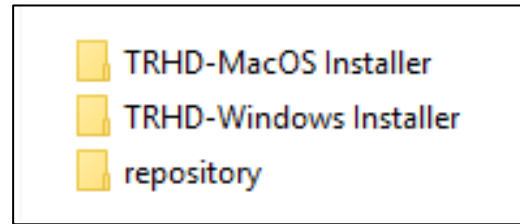
1. Insert your USB flash drive and locate the **TRHD-Windows Installer** folder.

   *Note: Do not open the **repository** folder. All files in that folder are installed automatically. If you make changes to files in this folder, then you may be unable to install the Transformer HD application.*

2. In the **TRHD-Windows Installer** folder, double-click the **.exe** file to begin the installation.

3. Click **Yes** to confirm that the TRHD app can make changes to your device.
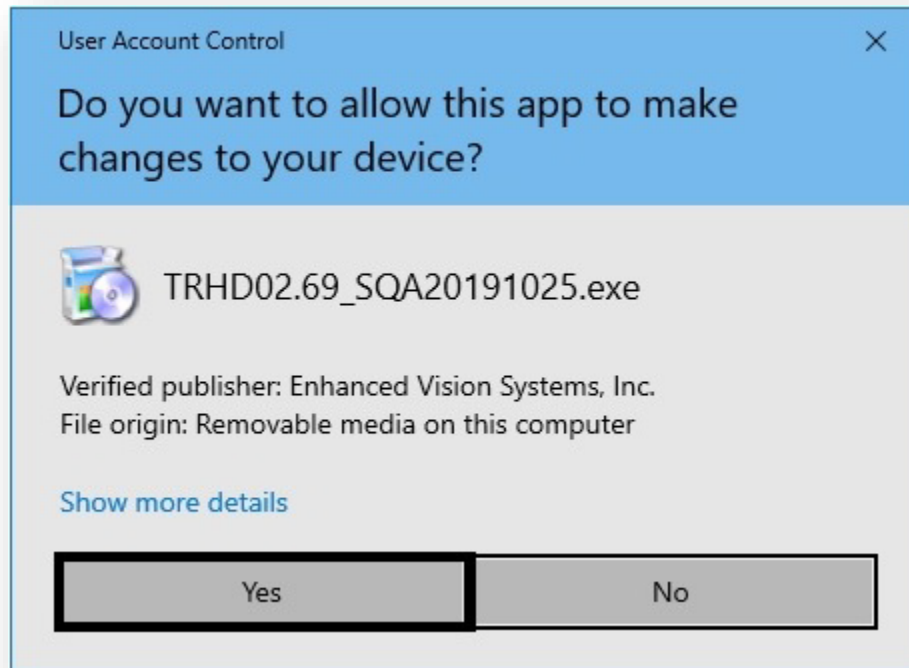

4. In the **Setup – Transformer HD** window, click **Next.**

5. In the **Installation Folder** window, specify the directory where Transformer HD will be installed, then click **Next**.
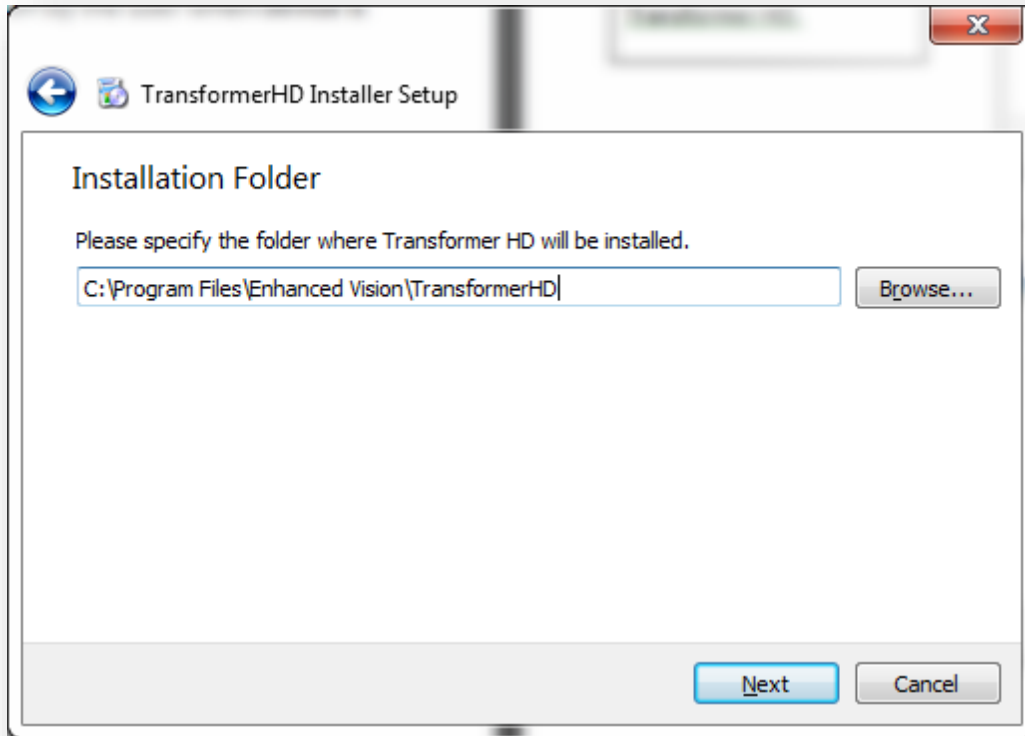

6. Select your desired language(s) for OCR and on-screen menus, and then click **Next**. You can select more than one language within a group. To see the available languages, click on the arrows to the left of **Group 1** or **Group 2**.

   ***Note:*** *You can only select languages from one group. For example, you cannot select French from Group 1 and Japanese from Group 2. However, you can select French and Spanish from Group 1, or you can select Japanese and Korean from Group 2.*
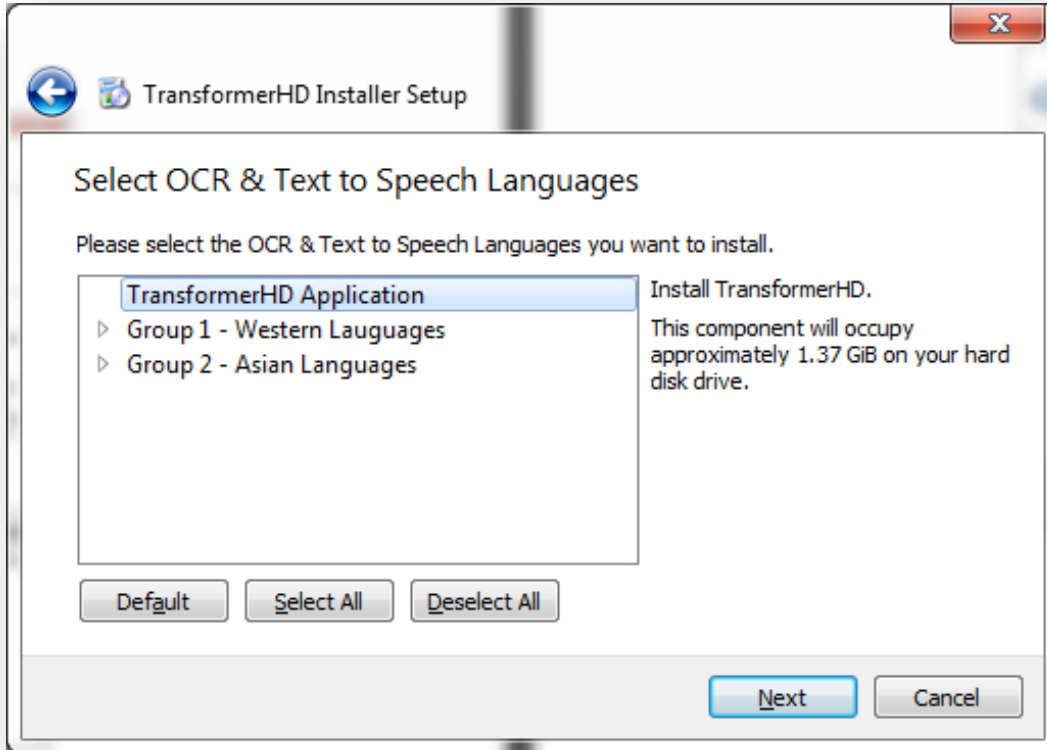
7. Select **I accept the license** to accept the Transformer HD License Agreement and click **Next**.
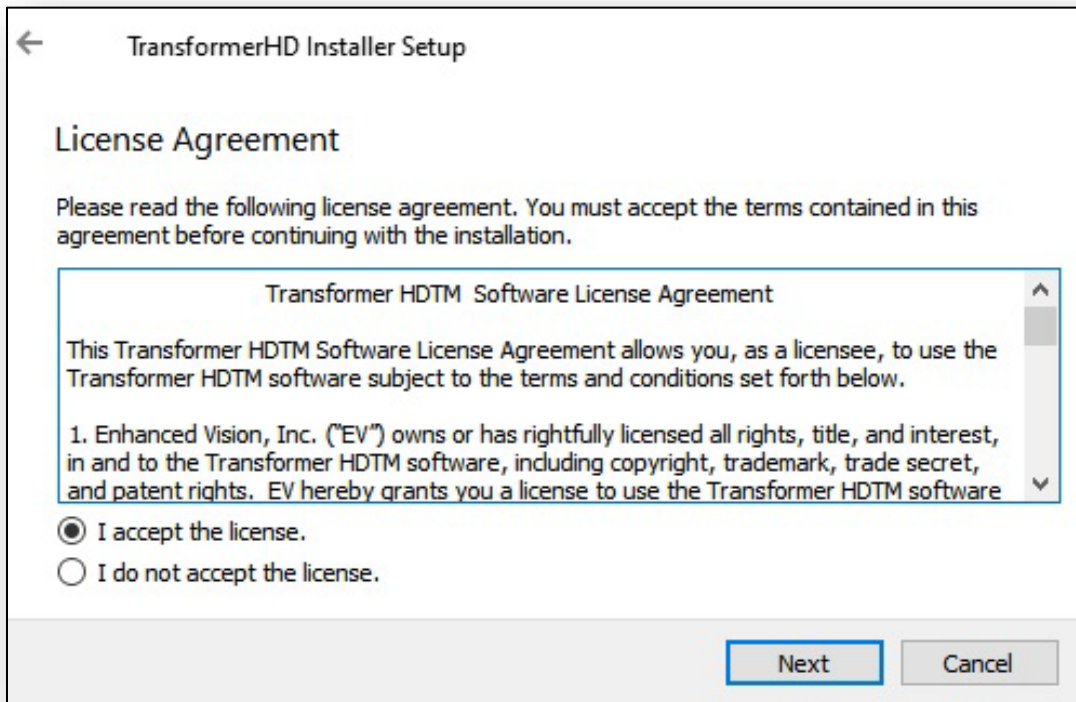
8. Select or type the name of the folder that will be used for launching the Transformer HD application. Click **Next**.
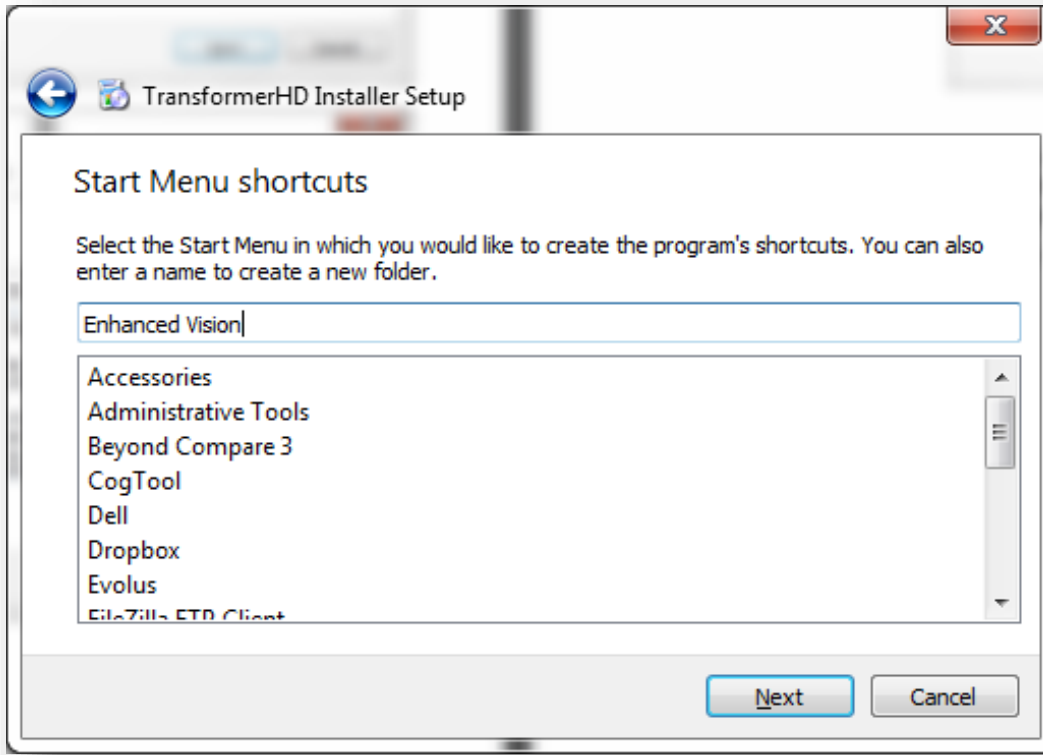
9. Click **OK** to confirm that you understand that you cannot connect the device to your computer yet.
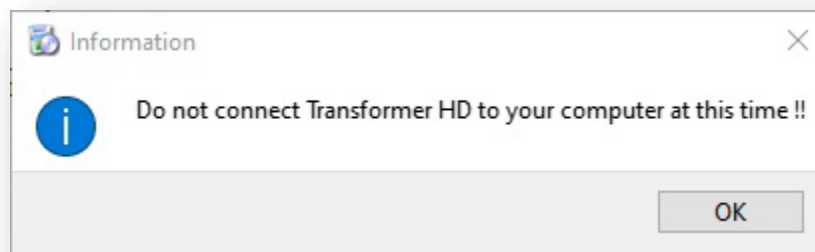
10. Click **Install**. Do not interrupt the installation process, which may take several minutes to complete.
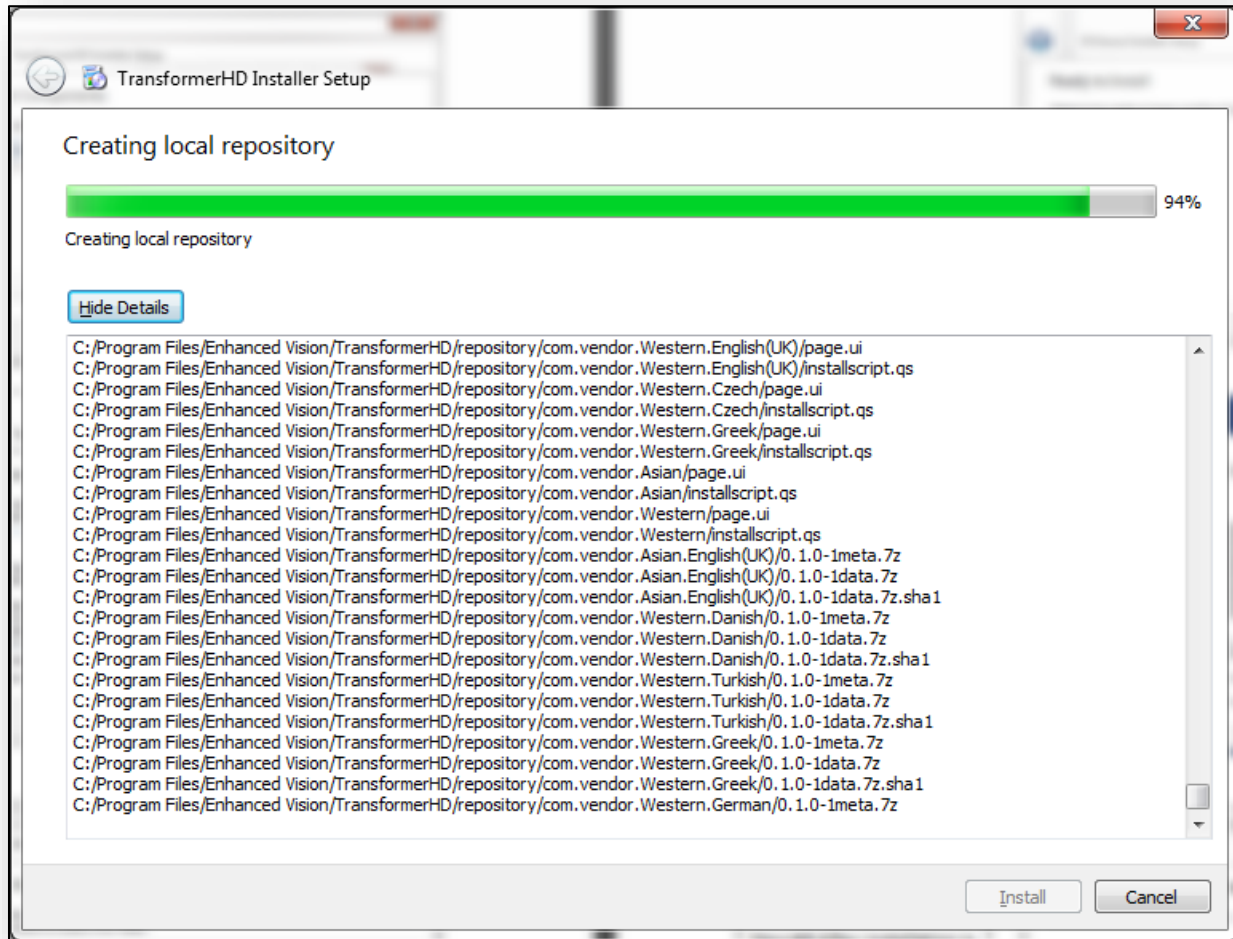
11. When you see the prompt, connect your Transformer device to the PC. Click **OK**.
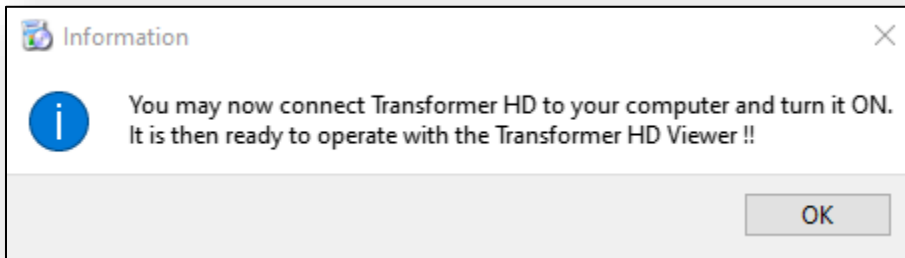
12.	In the **Completing the Transformer HD Wizard** window, click **Finish** to exit the wizard.

13.	Use the shortcut to launch the Transformer HD application.

Mac Installation

To install on an Apple Mac, follow these steps:

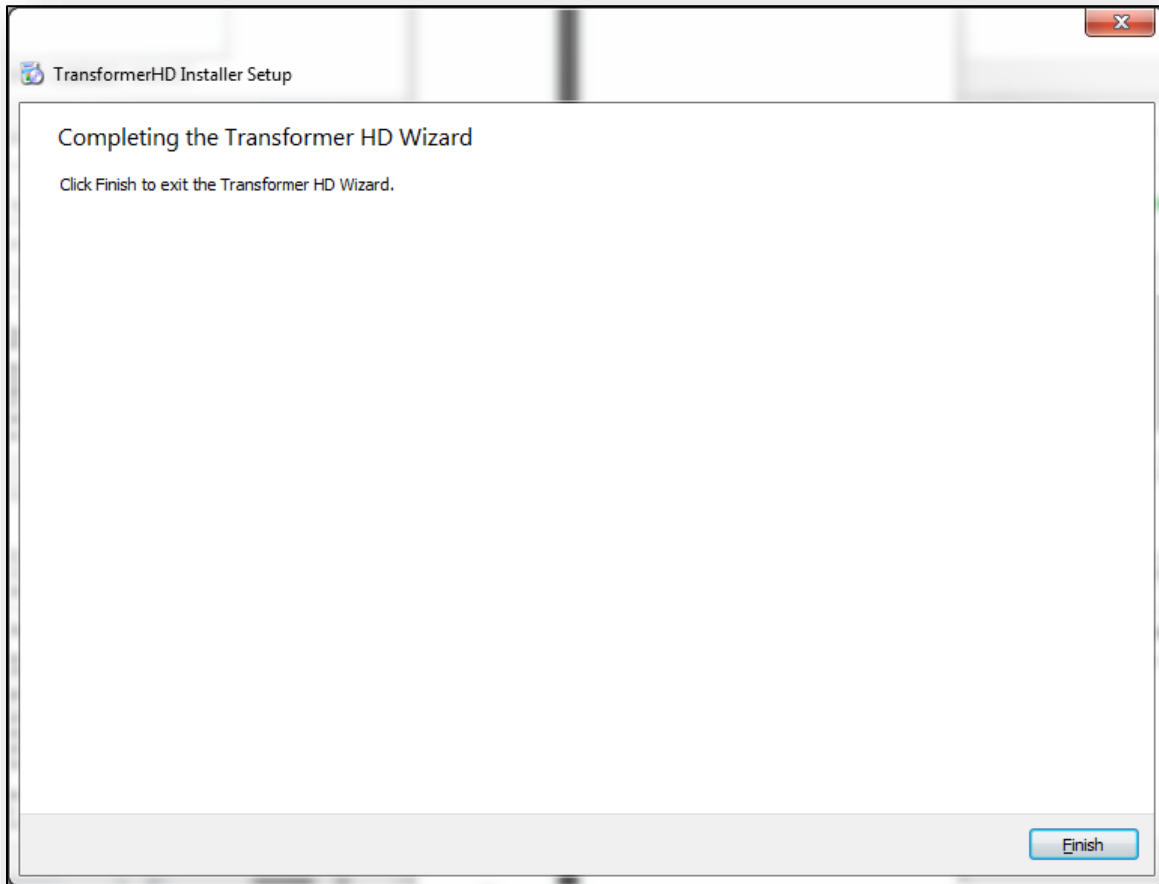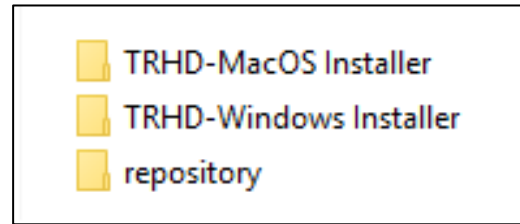1. Insert your USB flash drive and locate the **TRHD-MacOS Installer** folder.

   Note: *Do <u>not</u> open the **repository** folder. All files in that folder are installed automatically.*

2. In the **TRHD-MacOS Installer** folder, click and drag the .zip file to your desktop.

3. On your desktop, double-click the .zip file to extract the contents to your desktop.

   Note: *It is strongly recommended that you copy the file to your desktop rather than extract it on the USB drive because the installation would take much longer.*
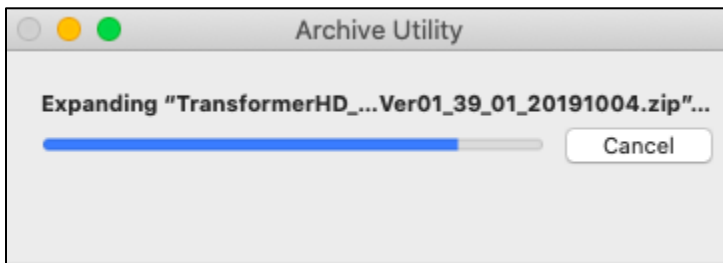
4. On your desktop, locate the **TransformerHD MacViewer** folder and navigate to the Installer subfolder.

5. Double-click the **Transformer HD** icon with a down arrow on it.

   Note: *Do not open the binaries folder. All files in that folder are installed automatically.*

6. A system window prompts you for your password. Type your password and press the **ENTER** key to continue the installation.

   Note: *Depending on the speed of your computer, it may take up to two minutes to display the next installation window. The file is 4GB and macOS enforces many security measures.*

7. In the **Setup Wizard** that is displayed, click **Continue**.
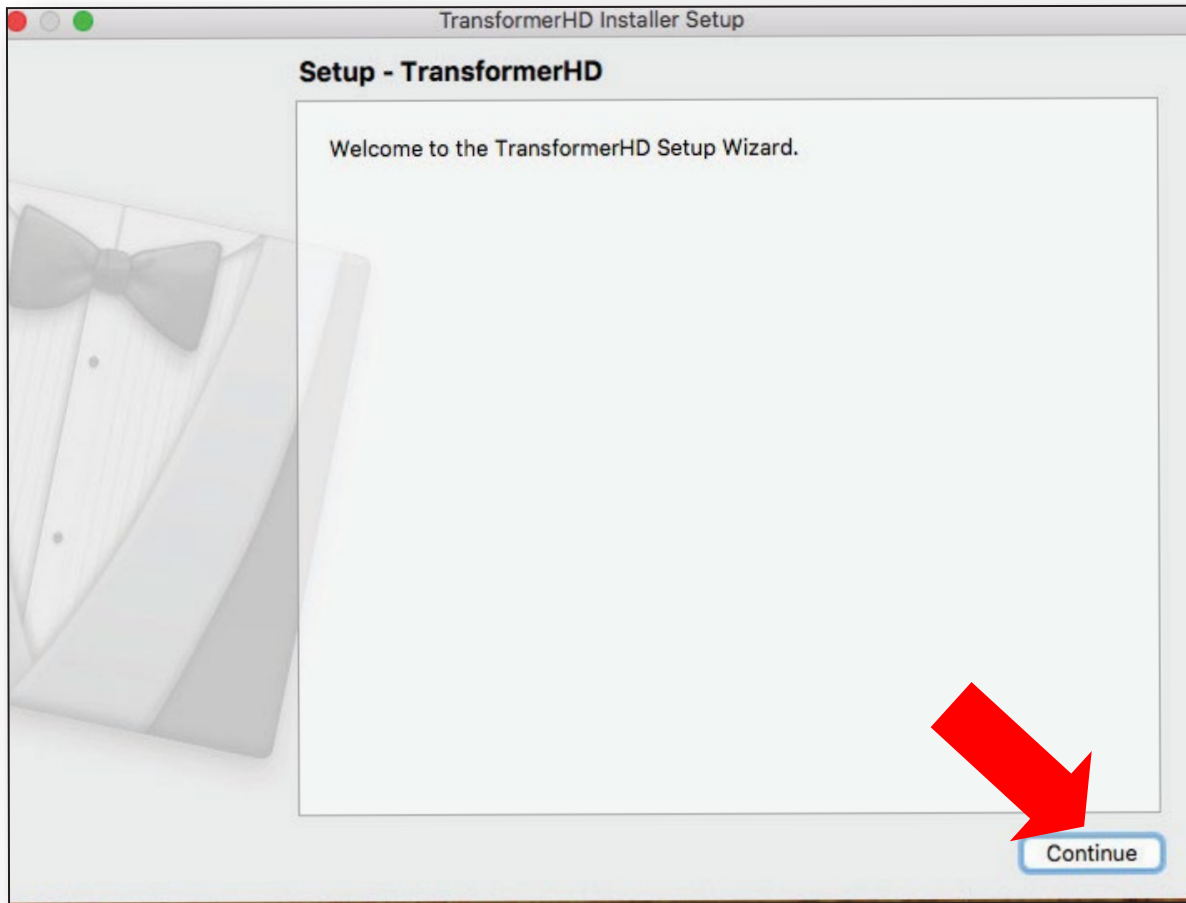
8. In the **Installation Folder** window, specify the directory where you want to install Transformer HD, then click **Continue**.
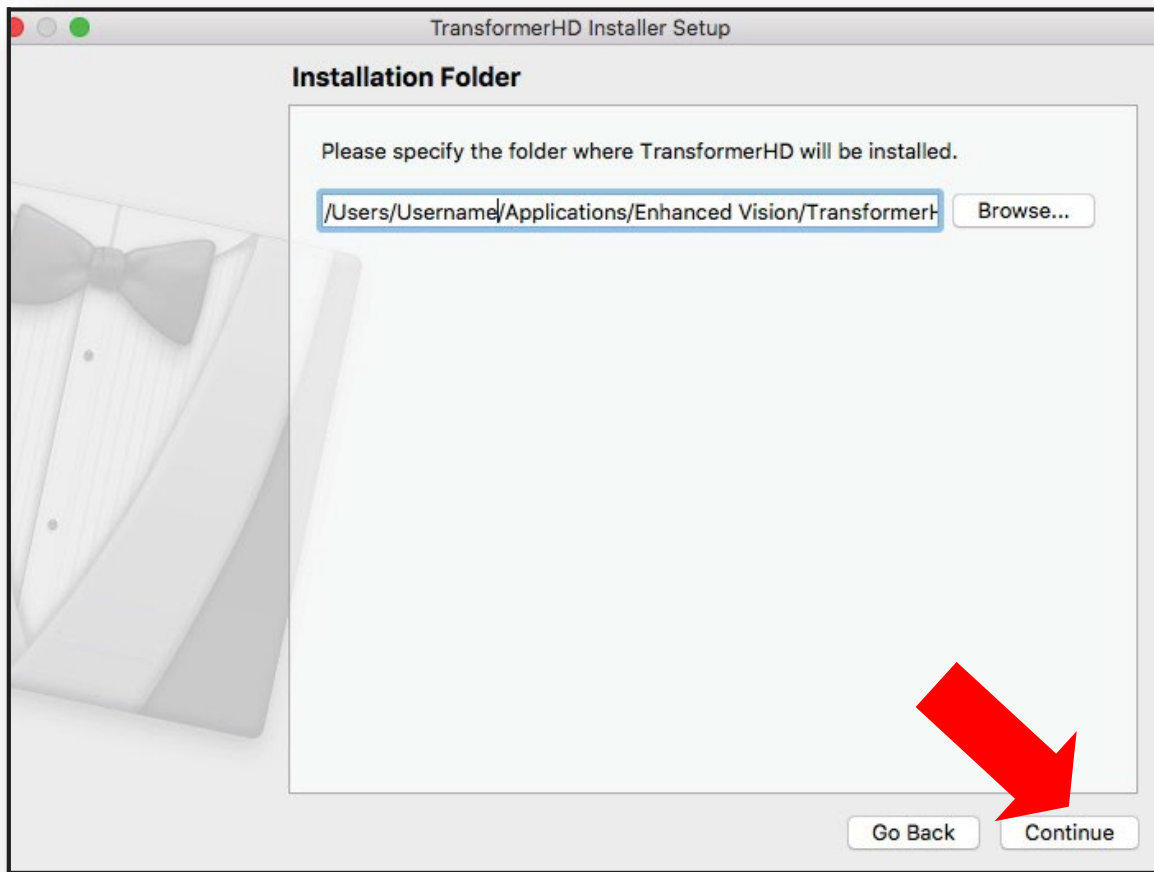
9. Select your desired language(s) for OCR and on-screen menus, and then click **Continue**. You can select more than one language within a group. To see the available languages, click on the arrows to the left of **Group 1** or **Group 2**.

   Note: You can only select languages from one group. For example, you cannot select French from Group 1 and Japanese from Group 2. However, you can select French and Spanish from Group 1, or you can select Japanese and Korean from Group 2.

10. Accept the license agreement and click **Continue**.
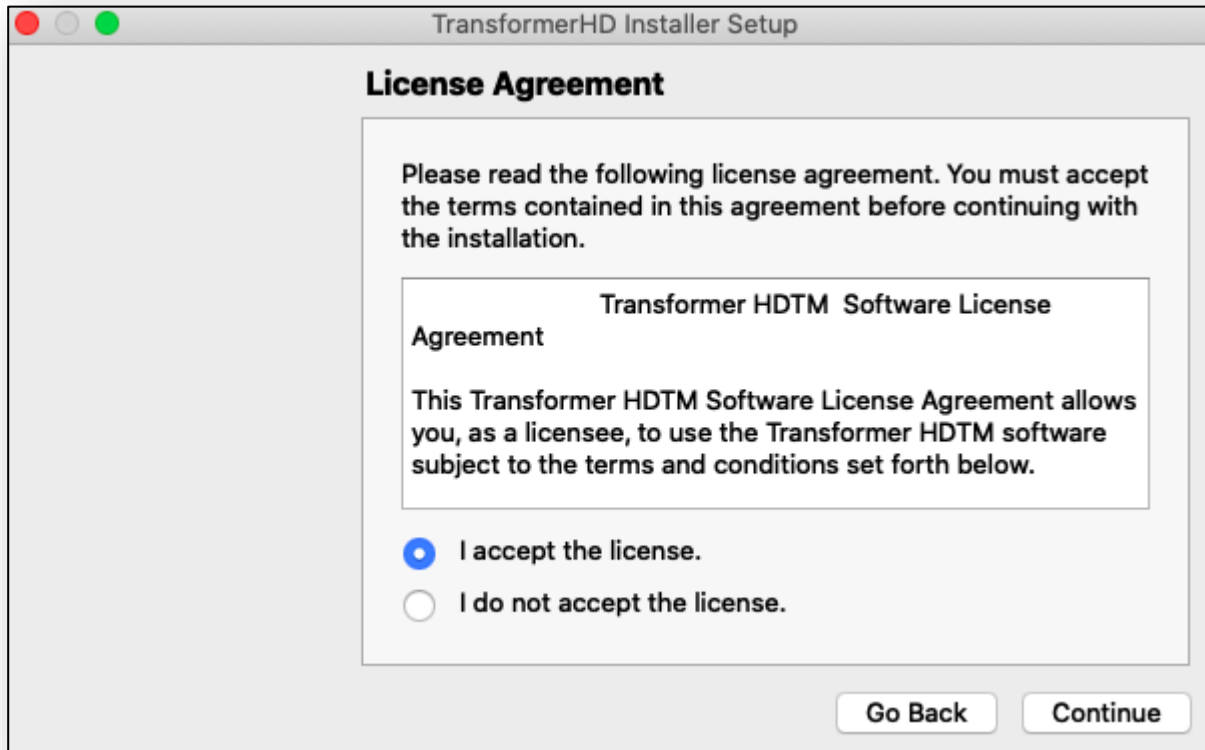
11. Make sure that the Transformer HD device is not connected to your computer, then click **OK**.

12. In the **Ready to Install** window, the disk space required for the installation is displayed. To begin installing the software, click **Install**.
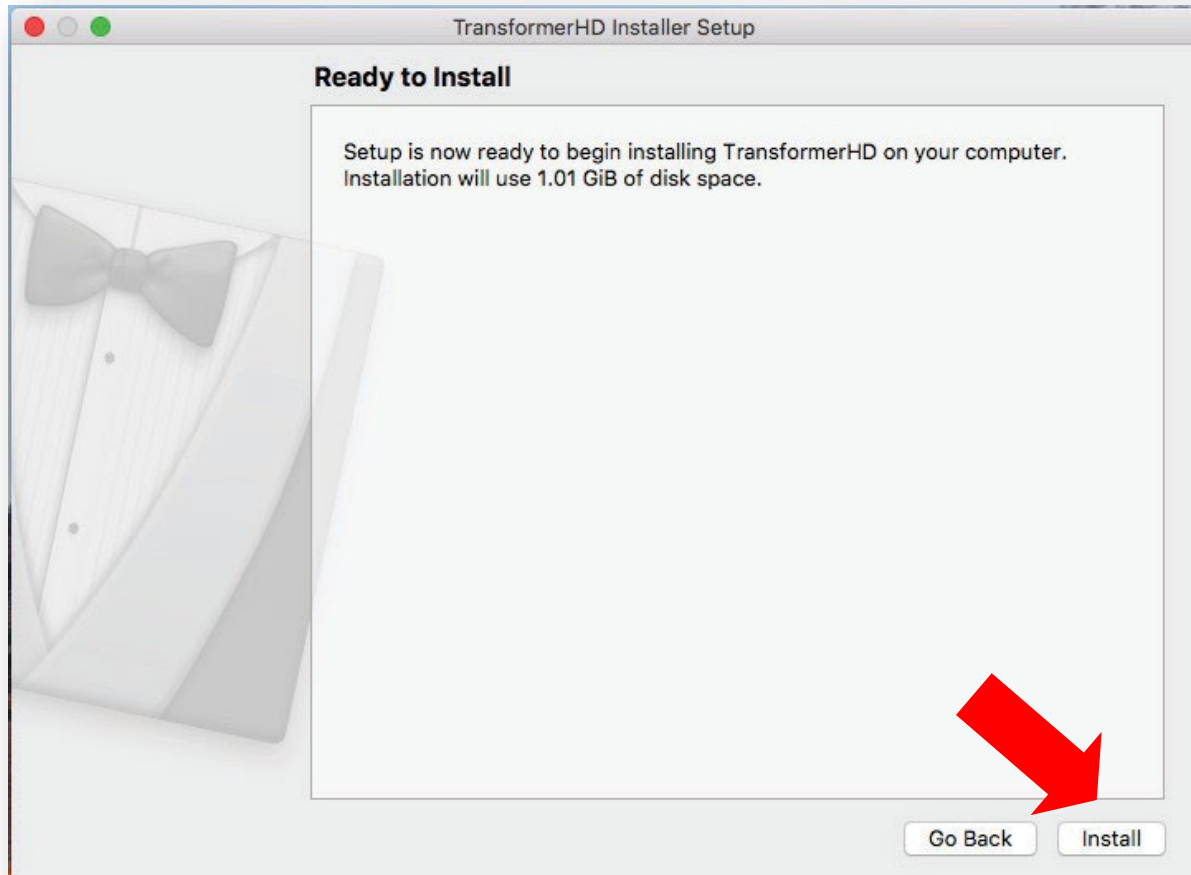
13. While Transformer HD is installing, a window shows you the progress being made.
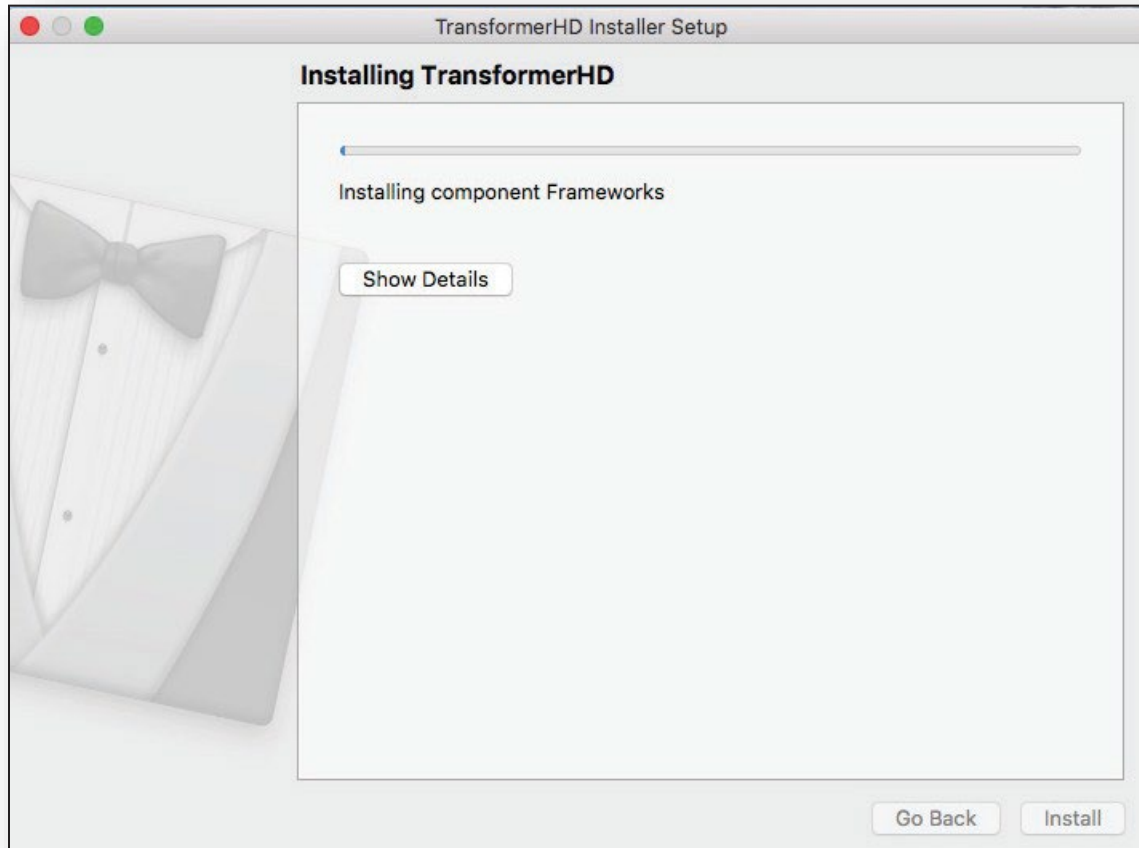
14. When you see the prompt, connect the Transformer to your Mac. Click **OK**.
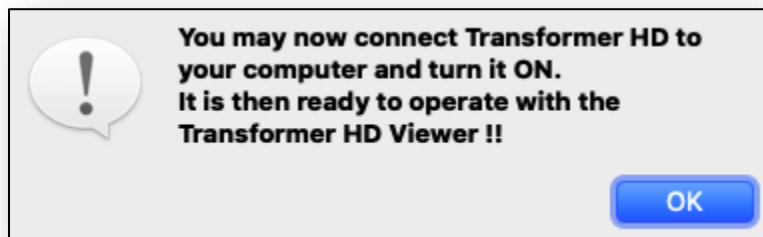
15. In the **Completing the TransformerHD Wizard** window, click **Done** to exit the wizard.
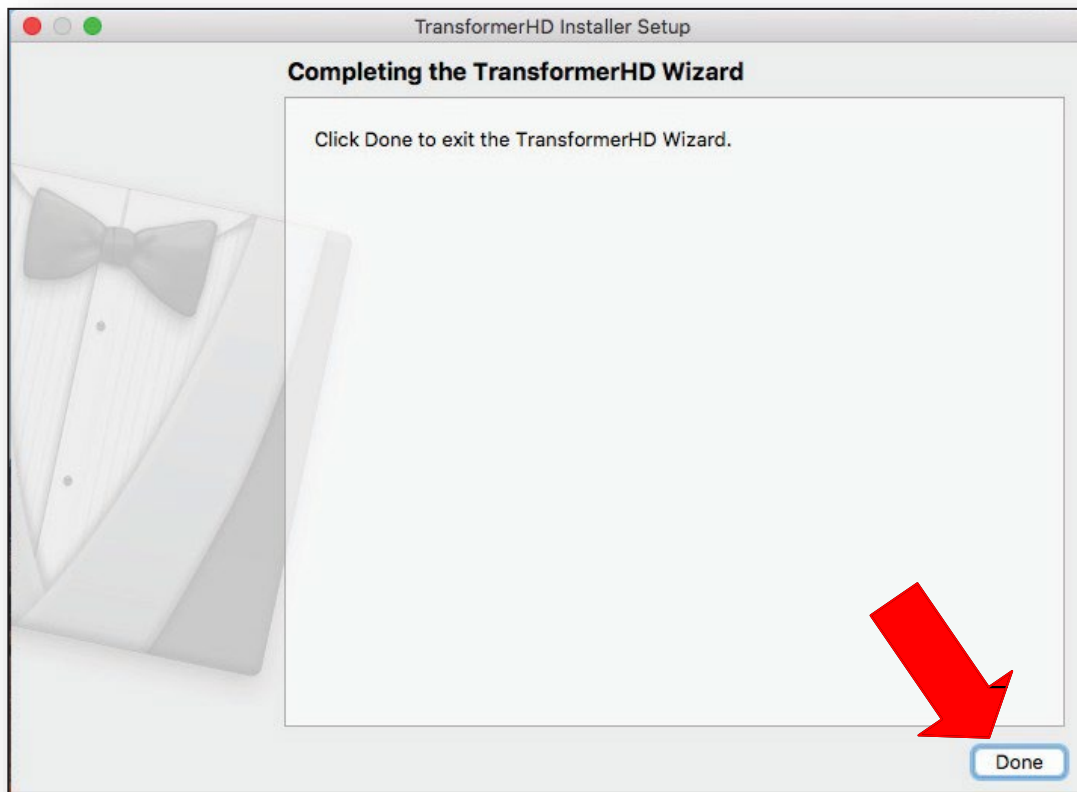
16. Open Finder by clicking the icon in the taskbar, then click **Applications**.
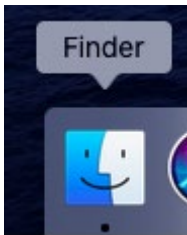
17. Click the **Transformer HD** icon to launch the application.
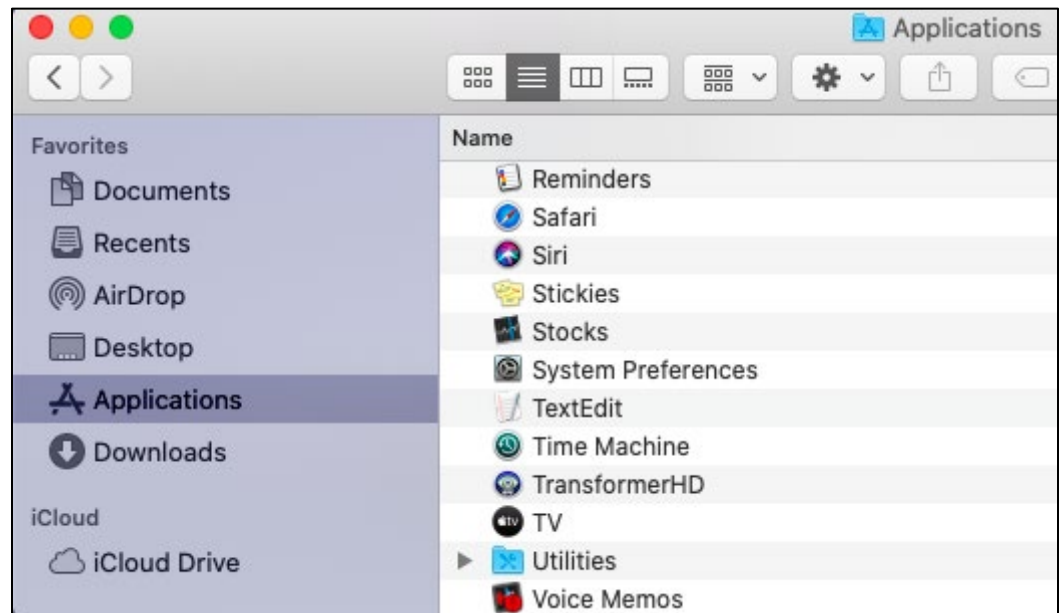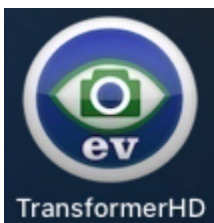
Setting Up Transformer HD

To set up Transformer HD, follow these steps:

1. Find a steady and level location, such as a table or desk, where you will be comfortable using the Transformer HD. Remove the device from the carrying case and place it on your surface. Hold the body of the Transformer HD firmly, and then carefully unfold the camera arm so that it is in an upright position. Next, spread the legs evenly to your desired width. The wider the legs, the more balanced when pivoting or rotating the Transformer HD camera head.

2. If this is the first time you are using Transformer HD or you need to charge the battery, connect the DC adapter power supply provided to an available wall outlet and then attach the connector to the Transformer HD.

3. You can connect Transformer HD via [HDMI](), [USB](), or [Wi-Fi](). Go to the directions in this section for the type of connection you are using.

   Note: Do not use more than one interface at once. Always restart Transformer HD when changing the interface.
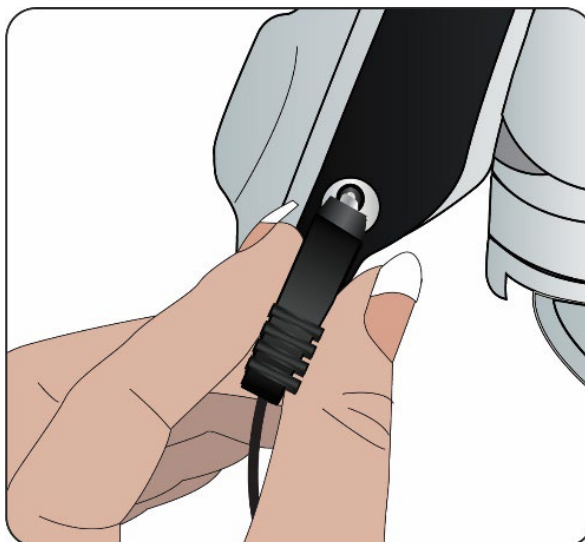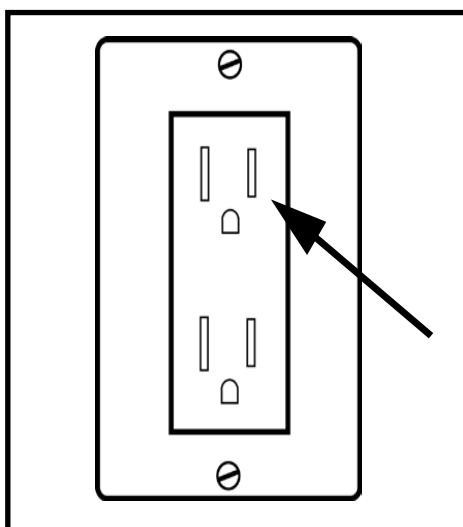
Connecting via HDMI

The simplest way to use your Transformer HD is to connect it to a television or monitor via an HDMI cable. For system requirements, see "Monitor or TV (for HDMI Mode)" on page 5.

Note: Only use HDMI with a television or standalone monitor.

Follow the steps below to get started:

1. Connect the HDMI cable to the television or monitor and to the Transformer HD device.

2. Ensure the television or monitor is powered up and on the correct HDMI video source.

3. Press the Power button on the Transformer HD to start the device. You should see a Transformer HD Splash screen while the system powers up. After 30-35 seconds, you will see the Transformer HD camera streaming.

4. Adjust the Transformer HD camera head to position it at your target or document. Only the buttons on the Transformer HD device, shown on pages iv-v, are available in this mode.

   Note: OCR & Text to Speech (TTS) is not available in HDMI mode. To perform OCR, the Transformer HD must be connected to a supported computer or tablet as shown on pages 4-5.

1. Connect HDMI A to port on Transformer HD.

2. Connect HDMI A to available monitor port.
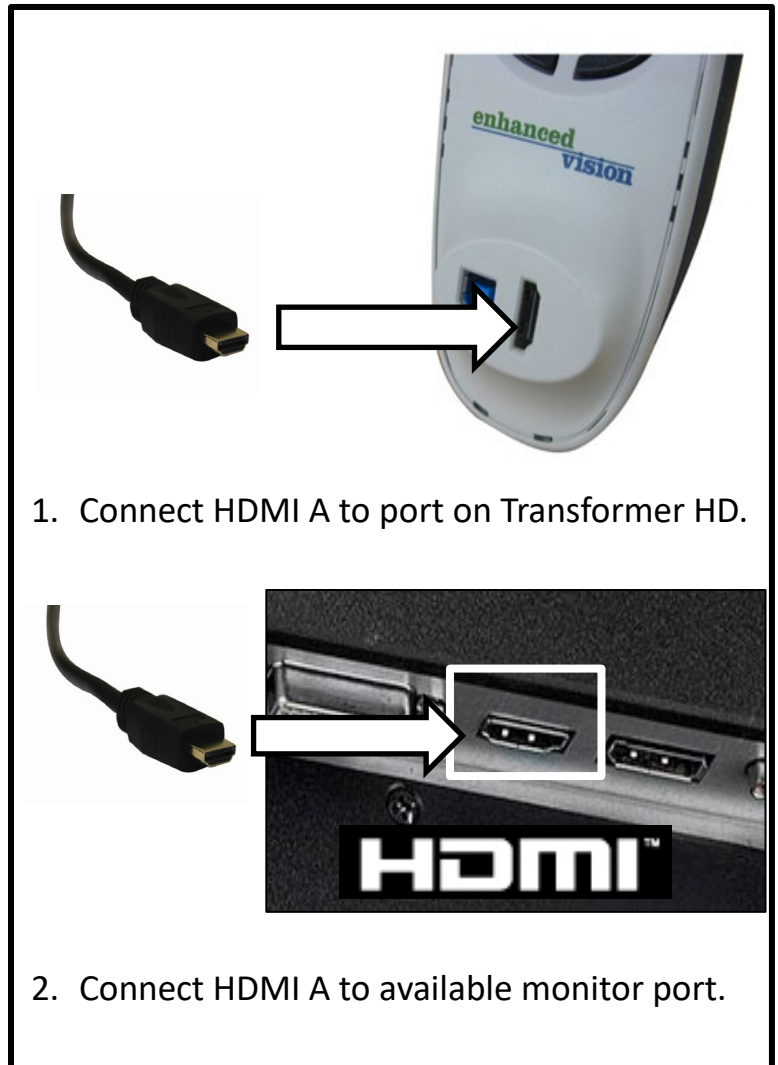
Connecting via USB

Note: USB is recommended over Wi-Fi because it offers the best combination of picture quality and features.

USB is used to connect the Transformer HD device to a computer. As a pre-requisite to using USB, you must install the Transformer HD application on your computer. The USB flash drive included in your Transformer HD package has all the software needed to get started. To stay up-to-date and ensure you have the latest software, visit our website at www.enhancedvision.com/support/software.html.

Note: USB 3.0 ports and cables can be identified by their blue color coding or by the USB SuperSpeed logo. If you have issues installing the driver, follow the steps in "I'm having installation issues in Windows" on page 63.

Steps for installing a USB 3.0 connection follow.

1. Ensure you have already installed the Transformer HD software application on a computer that meets the minimum requirements laid out on pages 4-5. (You can find more information on software installation on pages 6-20.)

2. Locate an available USB 3.0 (or SS) port on your computer and the port on your Transformer HD device.

3. Make sure your device is not connected to any other interface (HDMI/Wi-Fi), then connect the USB 3.0 cable that was provided with Transformer HD (see item 3 on page iii).

4. Ensure that either the Transformer HD battery is adequately charged, or the device is connected to the DC adapter power supply.

5. Press the Reset button on the underside of the device. If connected via DC adapter power supply, the green LED should be solid and the amber LED either blinking or solid based on the battery condition.

   Note: If you do not have the DC adapter power supply available but have a charged battery, press the Reset button on the device, then press and hold the Power button until both green and amber LEDs turn off. At this point, the device is fully off.

6. Press the Power button to start up the Transformer HD device. The reading light flashes once if you are connected to the DC adapter power supply but will not flash if you are powered by battery.

7. Launch the Transformer HD software application. After a few moments, a status message is displayed in the top right corner, indicating Transformer HD is connecting.

8. The Transformer HD takes about 30-35 seconds to start up. When you see the live camera view, your Transformer HD is ready to use.

1. Install Transformer HD application on the computer.

2. Connect USB 3.0 B male connector to Transformer HD.

3. Connect USB 3.0 A male connector to blue USB 3.0 or black SS port on PC.
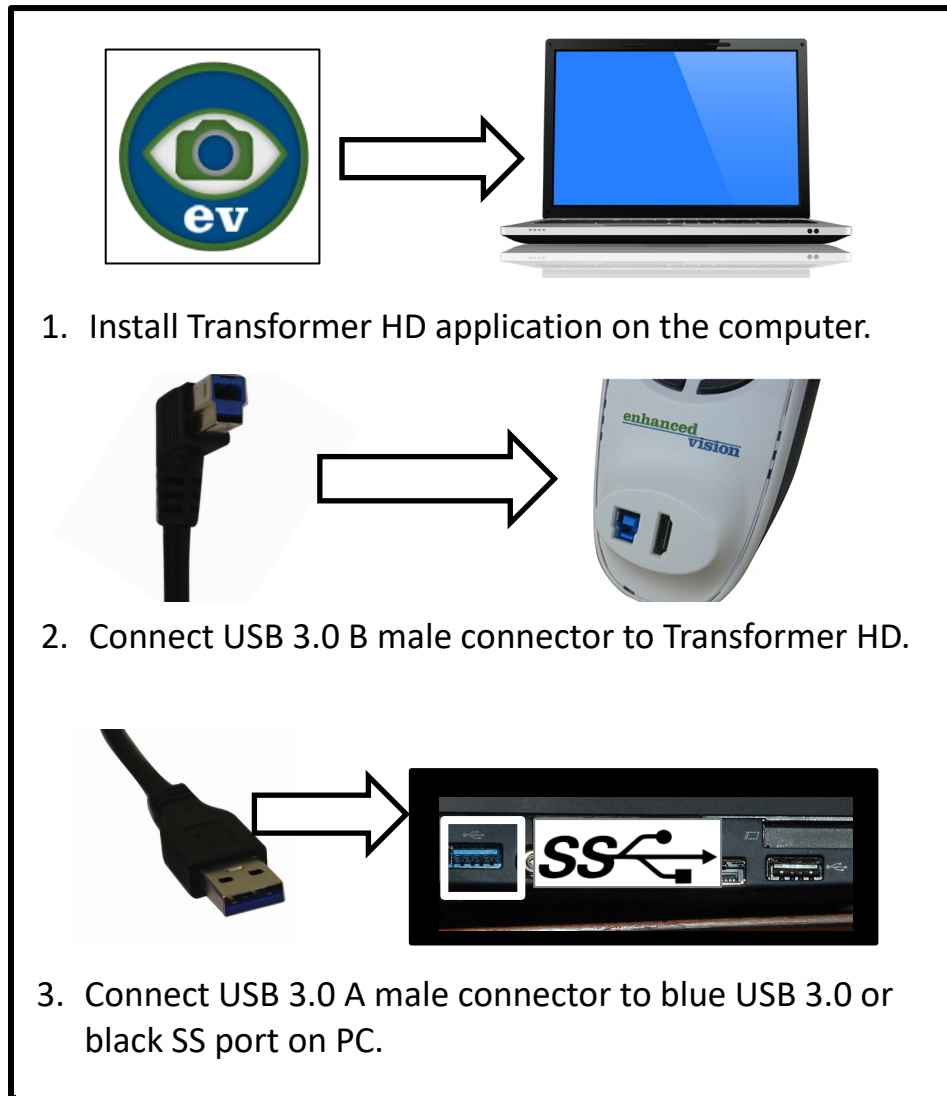
Connecting via Wi-Fi

Note: *Not available for Chromebook.*

With Wi-Fi, a wireless network connects the Transformer HD device with either a computer or a tablet. A computer Wi-Fi quick reference and tablet Wi-Fi quick reference are provided after these step-by-step instructions.

Note: *You connect to your Transformer HD through Wi-Fi as if you were connecting to the internet. You can only have one Wi-Fi connection at a time. If you are connected to Transformer HD wirelessly, you will not have internet connectivity (unless you have a second wireless adapter available).*

1. As a pre-requisite to using Wi-Fi to connect, you must install the Transformer HD application. See "Software Installation on Transformer HD" on page 6.

2. Ensure your Transformer HD device is not connected to any other computer or tablet via Wi-Fi or to any USB/HDMI interface. Also ensure that the Transformer HD application is not running.

3. Ensure that the Transformer HD battery is either adequately charged or the device is connected to the DC adapter power supply.

4. Turn off the Transformer HD device.

   • If connected via DC adapter power supply, press the white Reset button on the underside of the device. The green LED should be solid and the amber LED either blinking or solid based on battery condition.

   • If you do not have the DC adapter power supply connected but have a charged battery, press the Reset button on the device, then press and hold the Power button until both green and amber LEDs turn off.

5. Press the Power button on the device only once to start it up. The reading light will flash once if you are connected to the DC adapter power supply but does not flash if you are powered by battery.

6. Wait while Transformer HD starts up. The reading light will begin blinking slowly.

   Note: Transformer HD will blink for approximately one minute, representing the pairing phase where a device must connect to continue operation. Transformer HD will automatically return to standby as a power saving measure if the device does not make a connection during this window. If the reading light is on and not blinking, another nearby device may be connecting to your Transformer HD; if so, terminate that connection and retry.

7. While the reading light is blinking, enter your computer network settings or tablet Wi-Fi settings. Make sure your Wi-Fi adapter is turned on.

8. Scan for nearby Wi-Fi networks and connect to the device. By default, the device name is **TransformerHD_########**, where **#** is the serial number found above the Rotate button on your device. If you cannot identify the Transformer's network name, follow the "Wi-Fi Configuration" procedure on page 27, and then retry these Wi-Fi connection steps.

   Note: If a Windows Security Alert dialog is displayed, then check <u>*both*</u> *the* **Private networks** *and* **Public networks** *boxes and click* **Allow access***.*

9. The reading light will cease blinking but stay on when the connection is established.

10. Launch the Transformer HD application on your computer. After you see the "Connecting Transformer" message, wait for the image to appear.

    Note: *If you are not getting an image after a minute or if the "Connecting Transformer" message appears unresponsive, follow the "Wi-Fi Configuration" procedure on page 27, and then retry these Wi-Fi connection steps.*

11. When the live camera image appears, your Transformer HD is ready for use.

Computer Wi-Fi Connection

1. Install the Transformer HD application on the computer.

2. Enter network settings on your desktop/laptop, then scan available networks and choose to connect to the Wi-Fi matching your Transformer HD device name.

3. Transformer HD is available for Wi-Fi when it is powered on and the reading light is blinking.
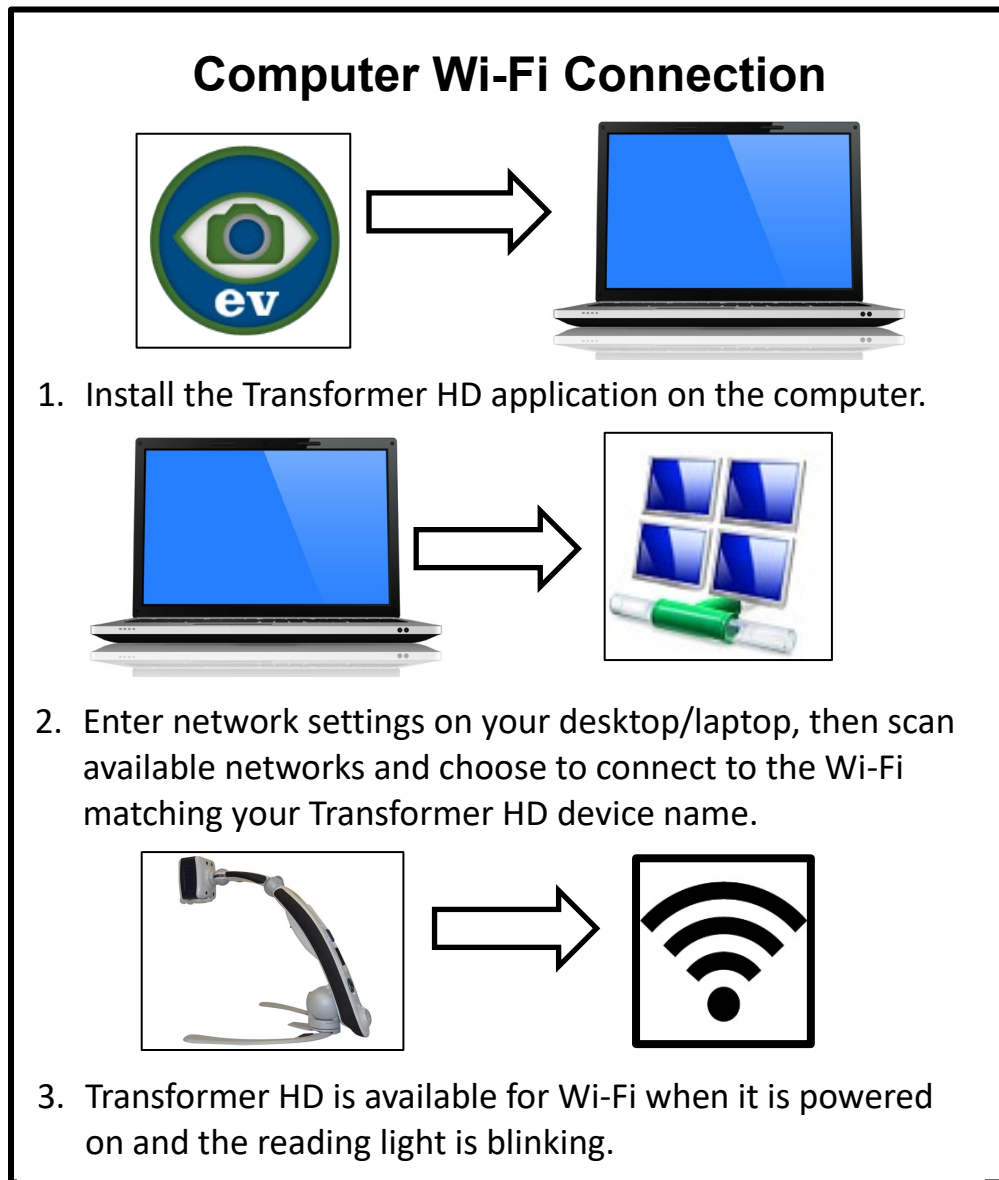
Note: *Asian languages are not supported on iOS tablets.*

Tablet Wi-Fi Connection

OR

1. Install Transformer HD application from Google or Apple Store.
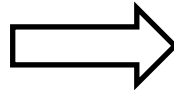
2. Connect your tablet via Wi-Fi to Transformer HD using **Settings**.
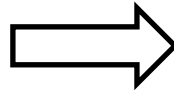
3. Transformer HD is available for Wi-Fi when it is powered on.

Wi-Fi Configuration

Note: USB 3.0 is recommended over Wi-Fi whenever possible. Wi-Fi is not available for Chromebook.

This section provides instructions for changing your device's Wi-Fi password and network name (SSID) for your Transformer HD. To make these changes, the Transformer HD application must be installed, and your device must be connected via USB 3.0 or SS.

1. Connect Transformer HD to the computer using the USB cable. See "Connecting via USB" on page 23.

2. Connect the DC adapter power supply to the Transformer HD device and press the Reset button. The green LED should be solid and the amber LED blinking or solid based on battery condition.

   Note: If you do not have the DC adapter power supply available but have a charged battery, press the Reset button on the device, then press and hold the Power button until both green and amber LEDs turn off. At this point, the device is fully powered off.

3. Press the Power button on the device to start it up. The reading light will flash once if you are connected to the DC adapter power supply but does not flash if you are powered by battery.

4. Run the Transformer HD application and wait for the "Connecting Transformer" message.

   Note: If the message does not display after a minute or it appears stuck, check your driver by following the steps in "I'm having installation issues in Windows" on page 63. Retry these Wi-Fi configuration steps once the issue is resolved.

5. Once the image is live, go the Wi-Fi configuration settings:

   a. Hover the mouse near the top left of the screen to display the **MENU** icon.

   b. Left click on **MENU.**

   c. In the **Settings** menu, select **Wi-Fi Configuration**.

6. Enter the desired Wi-Fi network name (SSID) and password if one is desired and click **OK**. Wait until you see the message "Restarting Device."

7. Transformer HD restarts automatically. Try again to connect via Wi-Fi with your new name and password. Follow the Wi-Fi connection steps that start on page 24.
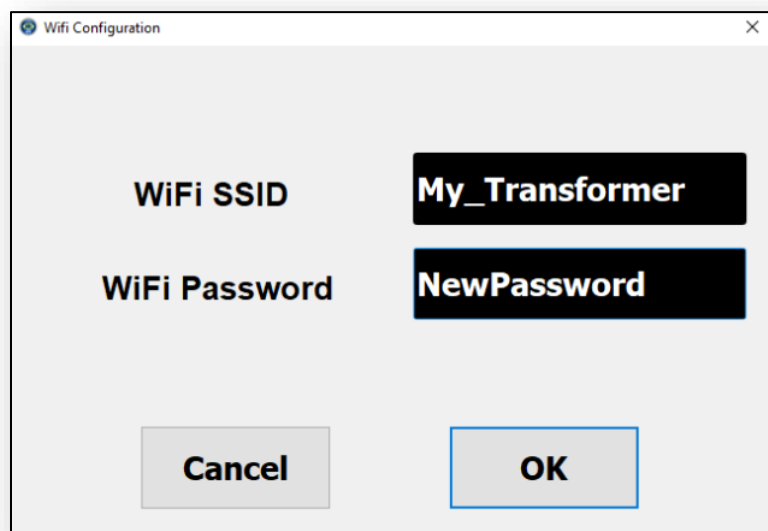
Powering the Device Up and Down

The amber and green status LEDs at the bottom of the device and the reading light respond differently depending on whether you are using the DC adapter power supply or battery power. See "Transformer Device Status LEDs and Reading Light" on page 30.

Startup

After you have installed the software and set up your connections, follow these directions to start using Transformer HD:

1. Press the Power button to start up the Transformer HD device. The reading light flashes once if you are connected to the DC adapter but will not flash if you are powered by battery.

2. Launch the Transformer HD software application (this step is not required with HDMI). After a few moments, a status message is displayed in the top right corner, indicating Transformer HD is connecting.

3. Transformer HD takes about 30-35 seconds to start up. When you see the live camera view, Transformer HD is ready to use.

Standby

When your Transformer HD is not in use you may want to place it into standby mode. Standby mode saves power and allows a quicker return to normal operation compared to a full shutdown. To place your device into standby, follow these instructions:

1. Locate the green Power button on the Transformer HD device.

2. Press this button once for less than five seconds.

3. To resume, press the Power button again.

Shutdown

When your Transformer HD is not in use, you may want to power it off. Placing your device into a full shutdown preserves your battery level but takes twice as long to start up compared with standby. To perform a full shutdown, follow these instructions:

1. Ensure that device is not connected to external power.

2. Press and hold the green Power button on the Transformer HD device for five seconds to begin the shutdown sequence.

3. Watch the amber and green LEDs, which will turn off when the process is complete.

Transformer Device Status LEDs and Reading Light

The Transformer HD has two status LEDs (amber and green) and a reading light on the device. These lights can be on, off, or blinking in one-second intervals. The tables in the next two sections define the meanings of the illuminations and combinations of lights.

Note: For more information on power states, see "Powering the Device Up and Down" on page 29.

Amber LED   Green LED

Power State Indicators and Battery Charging Status

The amber and green LEDs beneath the HDMI and USB 3.0 ports on the back of the Transformer HD indicate the status of the device, as shown in the following table:

Power Source	Device State	Green LED	Amber LED	Description
DC adapter	On	Solid	Solid	Unit on, battery full
			Blinking	Unit on, battery charging
	Off		Solid	Unit off, battery full (device plugged in but off)
			Blinking	Unit off, battery charging (device plugged in but off)
	Standby	Blinking	Solid	Unit in standby, battery full
			Blinking	Unit in standby, battery charging
Battery	On	Off	Solid	Unit on, battery good/full
			Blinking	Unit on, battery low
	Off	Off	Off	Unit off, battery not charging
	Standby	Blinking	Solid	Unit in standby, battery good/full

Wi-Fi Pairing Connection Status

The reading light indicates whether your device is ready to connect via Wi-Fi, as shown in the following table. This table applies to the Wi-Fi connection method only.

Device State	Reading Light	Description
On (startup)	Blinking	Device is not connected to a Wi-Fi network, but it is ready to connect.
	Solid	Device is connected to a Wi-Fi network and is ready to use.
Off	Off	Device has not been started up so it is not ready to connect. Press the Power button to turn on the device, and then launch the Transformer application.
Standby	Off	Device is not ready to connect because it is in standby mode. Press the Power button to turn on the device.

Transformer CCTV Camera Orientations

Transformer HD has four modes of orientation. Each mode retains your zoom level, color mode selections, markers, reading light status, and image rotation settings you have configured. It automatically detects when you have changed the camera position and remembers your previously used preferences. Simply turn the camera head towards the target you want to see, choosing one of these positions: desktop, distance, self-viewing, and arm upright viewing.

Desktop Viewing

The camera can be adjusted downward for reading, writing, and enjoying crafts or other hobbies. This makes it ideal for classroom use. When the camera is rotated downward, **Desktop** is displayed as the **Viewing Mode**. Transformer HD can be repositioned to the left or right and slightly up or down. Auto focus is available when you pull the arm up three clicks to the position shown below.
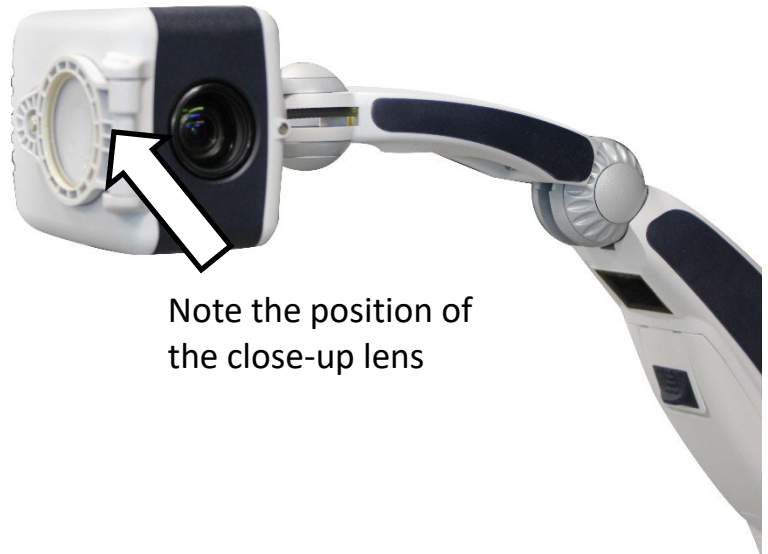
Note the position of the close-up lens
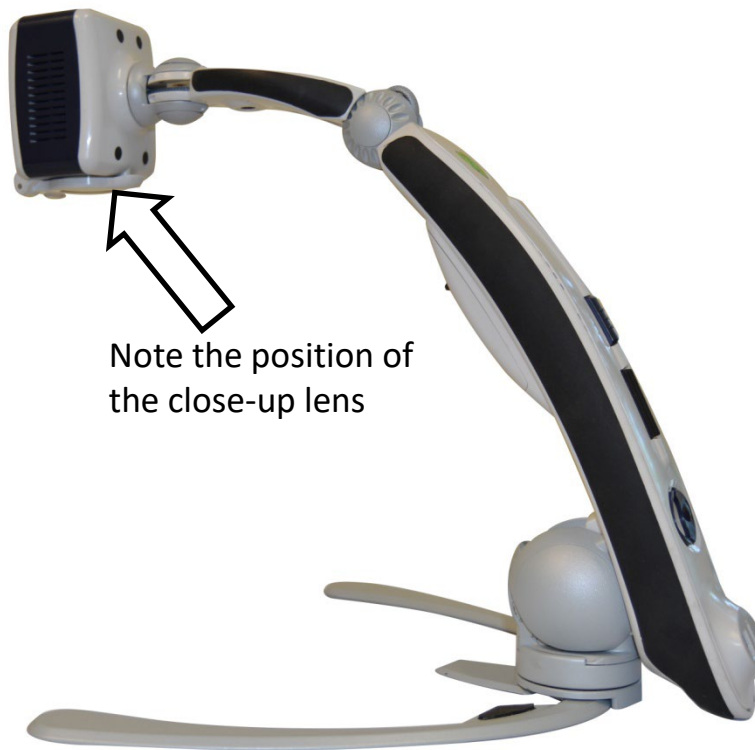
When objects (up to 2.25-inch thick) are placed directly beneath the camera, close the close-up lens for optimal focus at all zoom levels.

Distance Viewing

The camera can rotate forward to magnify people, objects and scenery at a distance. **Far** is displayed as the **Viewing Mode** when changing to this position. The recommended distance from camera to the distant object is 3 to 30 feet.

Note: Open the close-up lens for optimal focus at all zoom levels for distance viewing.

Note the position of the close-up lens

Self-Viewing

The Self-View mode is activated when the camera head is facing towards you and is designed to function as a digital mirror. **Self** is displayed as the **Viewing Mode** when changing to this position. You can use Transformer HD to help you put on makeup, shave, or perform other personal hygiene.

For optimal focus at all zoom levels, open the close-up lens and keep at least 3 feet between you and the camera. For optimal focus up to zoom level 6, maintain a minimum distance of 1 foot.

Arm Upright Viewing

The Arm Upright viewing mode is activated when the camera head is aligned vertically and is designed to increase the available height. **Arm Upright** is displayed as the **Viewing Mode** when changing to this position.

This mode offers more camera position flexibility and a higher stance for better clearance over objects in front of you. This can be especially useful in a classroom environment. The recommended distance from camera to the distant object is 3 to 30 feet.
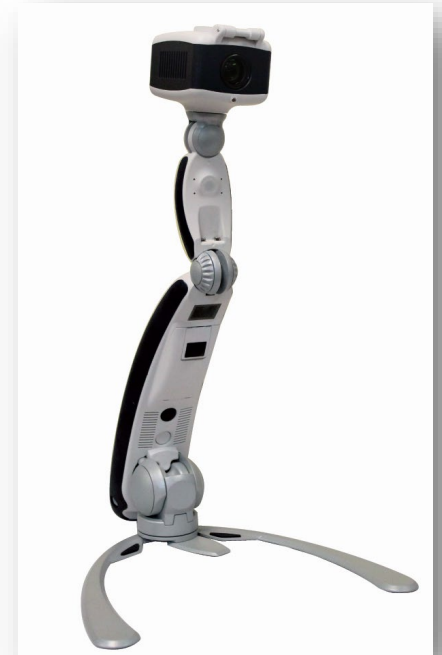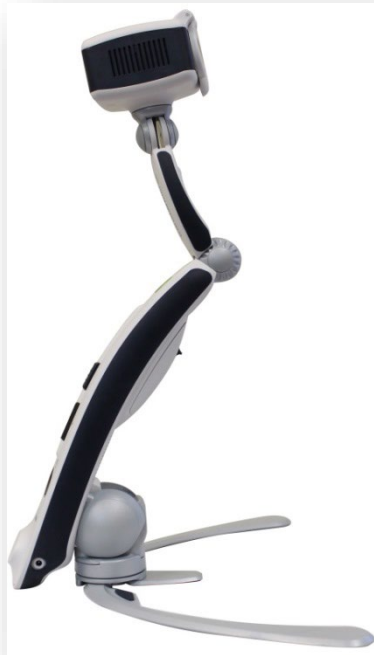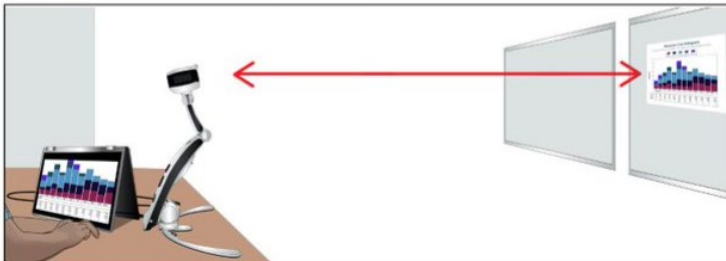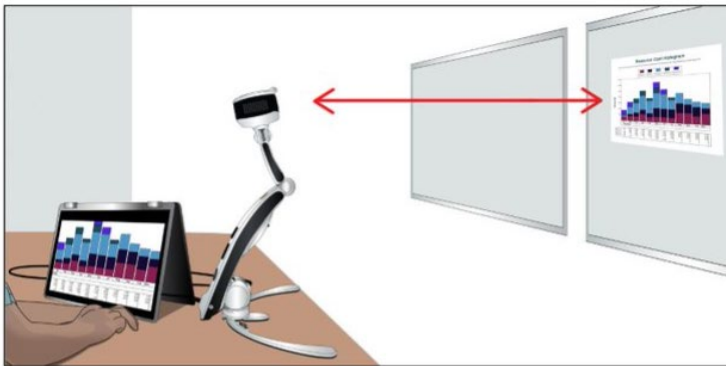
Adjusting Magnification

Transformer HD offers a large range of magnification capabilities. They can be adjusted via the Zoom Wheel on the device itself, or by using the computer keyboard, touchscreen, or menu options. A gradual optical zoom increases your control.
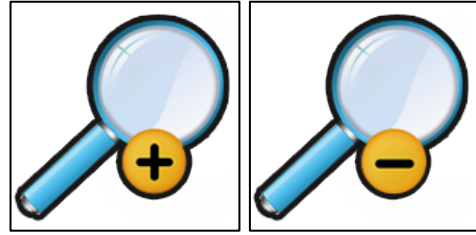
To adjust the magnification, turn the Zoom Wheel located on the back of the Transformer HD until you reach the desired magnification. Turning the wheel towards the plus sign (+) increases magnification, while turning the wheel towards the minus sign (-) decreases magnification.

The zoom level displays in the corner of your monitor when you increase or decrease magnification.
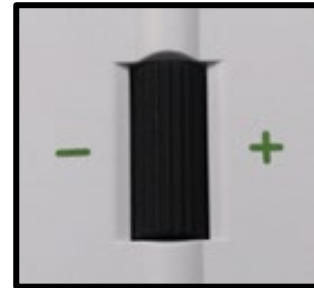
If you are using a keyboard, you can use the up and down arrow keys to increase or decrease magnification. If you are using a tablet, you can utilize the pinch gesture to decrease magnification or spread out your fingers to increase magnification.
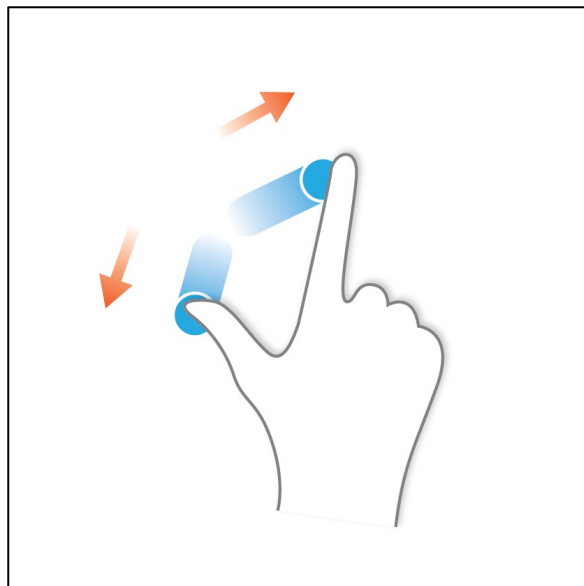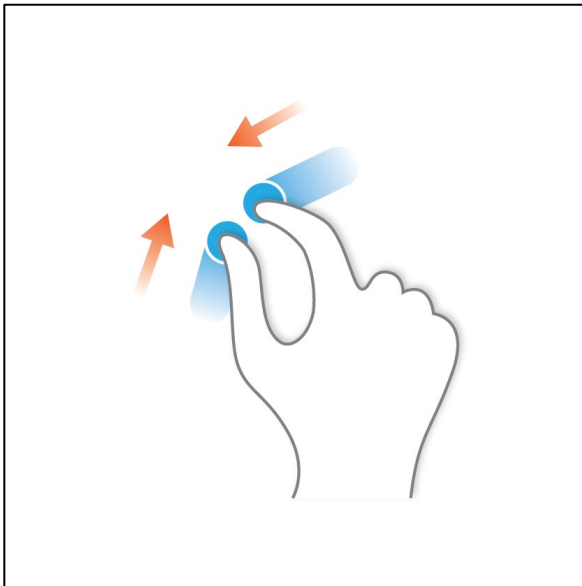
Keeping the Camera in Focus

The arm of the Transformer HD should be positioned either straight up or at a 90-degree angle, as shown in previous illustrations. The arm is not meant to be used at a 45-degree angle because images will be out of focus at high zoom levels.

Changing the Viewing Mode

Transformer HD was designed to provide optimal viewing for people with visual conditions by offering a range of choices in both text and background colors. To change the color, press the Color Mode button located on the back of the device. You can

also click the **Display** menu, then click   .

Pressing the Color Mode button rotates between the colors selected in the application. Six default color combinations are set, which you can view by clicking the **Display** menu, then clicking the color wheel.

To change your color mode choices, click the **Settings** menu and select the **Color Mode Selection** option. Use the scroll bar to the left of the list to review 32 choices, then select the box by each of your seven favorite color variations, such as color, black on white, or white on black.

You also can use the **Settings** menu to choose between white balance settings in your color viewing: auto, neutral, warm, and cool. Using these options, you can change the overall tone of the image based on the environment where you are using the Transformer HD device.
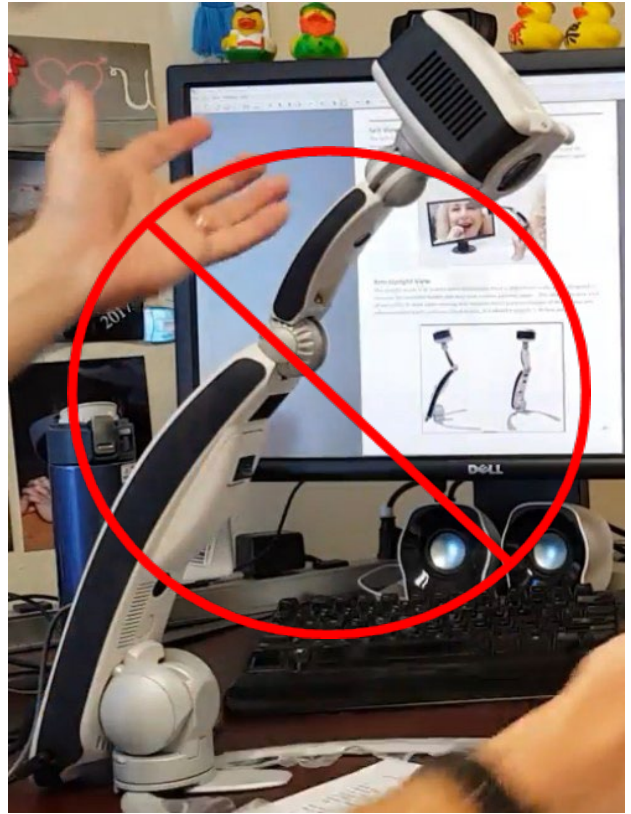
Using the Find Function

The Find feature helps you quickly identify where you are currently positioned when magnified on a page and easily locate a specific part of an object you want to view more closely. Follow these steps:

1. While magnified, press and hold the Find button on the Transformer HD device. Transformer automatically zooms out to the widest field of view, and crosshairs appear in the center of the monitor screen.

2. Move your work or reading material until you have centered the desired item within the crosshairs.

3. Release the Find button, and your previous zoom level is restored.

4. Toggle the Find function on and off by using the keyboard shortcut **F**.

Quick Reference

The information in this section gives you basic info for using the Transformer HD application, as well as running third-party applications alongside Transformer HD.

Bringing Transformer HD Window into Focus

When an application is in focus, it is receiving user input (keystrokes and hotkey combinations). If you click on a web browser or word processor in the middle of using the Transformer HD, the hotkeys and shortcuts won't be responsive until focus is returned to the Transformer application. To return the focus to the Transformer application, press **CTRL+ALT+G** on a PC or ⌘**+ALT+G** on a Mac.

*Note: This hotkey combination is unavailable for Chromebook. However, you can return to the Transformer application by clicking the Transformer HD icon in the task bar at the bottom of the screen. You can also press **ALT+TAB** and release the keys once you have the Transformer HD application in focus.*

Displaying the Transformer Menu

After setting up and turning on Transformer HD, hover your mouse over the top left corner of the application window to display a pop-up. Click this **MENU** pop-up link to display the menus, which are described in the "Menus and Shortcuts" section on page 42.

The Transformer HD application has keyboard shortcuts so you can quickly access features without navigating through the menus. When two keys are shown together, press them at the same time. When you read **CTRL+S**, for example, press and hold the **CTRL** key, then press the **S** key.

A quick reference of shortcuts is available by clicking the **Help** menu or pressing **F1.** For Chromebook, press 🔍**+1**.

Changing the Transformer HD Window Position

You can press **F8** when using Windows or Mac or 🔍**+8** on a Chromebook to place the window in eight different places on the screen—upper or lower right corner, upper or lower left corner, right or left half of the screen, or top or bottom half of the screen.

*Note: Pressing **F8** when using a third-party application such as ZoomText or SuperNova changes the camera/desktop display and orientation but cannot display in only one corner. The **CTRL+ARROW key** shortcuts are also not supported when using third-party applications.*

General Shortcuts

Menu Option	Windows	Mac	Chrome OS
Help	F1	F1	🔍+1
Bring Transformer HD Window into Focus	CTRL+ALT+G	⌘+⌥+G	N/A
Battery Level	CTRL+B	⌘+B	CTRL+B
Product Information	F2	F2	🔍+2
Restore Factory Settings	CTRL+R	⌘+R	CTRL+R
Quit	ALT+F4	⌘+Q	ALT+🔍+4

Touchscreens

You can use trackpad commands with a touchscreen on either a computer or tablet. In addition, scroll commands are available via the mouse wheel, while drag-to-move commands are available using the mouse or touchscreen. See the following table for a description of trackpad capabilities.

Trackpad Capabilities	Description
Pinch to Zoom	Close two fingers together on the trackpad or touchscreen to zoom the camera out, and spread them to zoom the camera in. **Note:** *Not available in Chromebook.*
Adjust Marker Spacing	Touch and drag between the two markers to change the position of both markers.
Move Markers	Touch and drag each marker to change the position of that marker.

Using Third-Party Software with Transformer

Note: *Transformer HD only supports third-party applications on a Windows PC using a USB 3.0* connection.

The Transformer HD viewer operates side-by-side with Freedom Scientific's JAWS, ZoomText, and Fusion, as well as Dolphin's SuperNova and other third-party applications.

Note: JAWS has no voice accessibility support and mouse-only input.

You can use the third-party magnification software's keyboard shortcuts to magnify the window for a closer look. However, you must use the Transformer HD viewer. You cannot use

the ZoomText or SuperNova viewer with Transformer HD. Transformer HD does not function as a webcam.

Note: To ensure full functionality, enable the **Keyboard Shortcuts** *option on the* **Settings** *menu.*

Getting Started

To get started, follow these steps on a PC:

1. Launch SuperNova, ZoomText, or another third-party application.

2. Launch the Transformer HD application.

3. Press **CTRL+ALT+G** to bring Transformer HD into focus.

4. Use Transformer shortcuts to perform actions. See the next section, "Using Shortcuts and Hotkey Combinations," and "Menus and Shortcuts" on page 42.

5. See "OCR and Third-Party TTS" on page 56 to learn more about using your third-party application with Transformer HD to perform OCR.

Using Shortcuts and Hotkey Combinations

When using a third-party application, the Transformer HD user interface is not visible from the desktop. You must perform functions using shortcuts and hotkey combinations.

Shortcut	Description
CTRL+E	Starts OCR. The current TTS reading position is not highlighted in ZoomText or SuperNova, but it is highlighted in the Transformer HD viewer.
CTRL+C	Switches between cameras.
F7	Toggles between the Transformer HD camera image as a full screen, the desktop as a full screen, and a split screen.
F8	Toggles between the right or left half of the screen, the top or bottom half of the screen, the desktop as a full screen, and the Transformer HD camera image as a full screen.
SHIFT+ARROW key	Not supported
CTRL+ARROW key	Not supported

Menus and Shortcuts

After setting up and turning on Transformer HD, hover your mouse over the top left corner of the application window to display a **Menu** pop-up. Click on **Menu** to display the toolbar. The menus on the toolbar are described in the following table.

Note: Shortcuts exist only for available functionality. If you are using Chromebook, then you will not have optical character recognition, text to speech, or wireless capabilities. Therefore, those shortcuts are not applicable to you. No shortcuts are available on tablets. Bluetooth keyboards used on tablets do not work with any shortcuts.

Menu	Description
File	Saves images and opens images to perform OCR on with the Transformer HD application. On Chromebook, this menu only opens the image since OCR is unavailable.
Camera	Switches between OCR and CCTV camera, freezes an image, performs OCR, records a video, adjusts the zoom level, engages the find function, turns the auto focus on and off, and rotates the image (only for 90-degree and 180-degree camera angles).
Display	Turns the reading light on and off, adjusts the image brightness, adjusts the color mode contrast, changes to the next color mode, and lets you select a preferred color mode.
Markers	Turns the line and window markers on and off. Also adjusts the line marker thickness.
Window	Minimizes the Transformer HD application, enables or disables the Auto-Full Screen mode, and lets you choose the viewing window position.
Settings	Allows you to select the preferred color modes, change the resolution, adjust the color white balance, change the 50/60Hz anti-flicker setting, change between the left-handed and right-handed modes, turn the keyboard shortcuts on and off, select the audio input, change the language, view the product information, configure the Wi-Fi name and password, and reset to factory settings.
Help	Displays all keyboard shortcuts.

Help Menu

The **Help** menu provides the Transformer HD keyboard shortcuts for your operating system. To display the **Help** menu, press **F1** for Windows/Mac or 🔍+**1** for Chromebook.

File Menu

The File menu allows you to capture and save the current camera image, as well as organize and access your saved files. These features can be accessed in both CCTV and OCR modes.

Menu Option	Description	Windows	Mac	Chrome OS
Save Image	Saves a snapshot of the live camera feed. If you are in the OCR-TTS window, saves both a high-resolution image and a text file of the recognized text.	CTRL+S	⌘+S	CTRL+S
Open Image or Video	Opens the directory where your images and videos are saved. Select your desired image, then click **Open** to display it in the OCR-TTS window. If you are using the OCR camera, the image will be scanned for reading. ***Note:*** *With iPadOS, use the Photos application to open both images and videos.*	CTRL+O	⌘+O	CTRL+O

Camera Menu

The Camera menu contains all the features associated with your Transformer HD camera.

Note: Chromebook only supports CCTV, not OCR, so if you are using Chromebook with Transformer HD, the CCTV and OCR options are not displayed. The CCTV camera is always on by default.
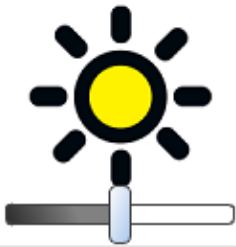
Menu Option	Description	Windows	Mac	Chrome OS
CCTV Camera	Swaps to the CCTV mode camera (if you were in OCR mode), which is embedded in the swiveling camera head, allowing you full range of view. ***Note:*** *Not available with Chromebook.*	CTRL+C	⌘+C	N/A
OCR Camera	Swaps to the OCR mode camera (if you were in CCTV mode), which is always facing down in the reading position. This camera is specifically for performing OCR. ***Note:*** *Not available with Chromebook.*	CTRL+C	⌘+C	N/A
Freeze	Temporarily takes a still image to allow you to view it at length. For example, you could freeze a picture of a blackboard and use it to finish taking notes.	Space bar	Space bar	Space bar
Image Capture	Performs an OCR scan and begins playback after processing is completed, skipping the preview window. This feature is only available on OCR-enabled devices while in the OCR camera mode. In the OCR-TTS window, click this icon to return to the OCR camera live preview and perform another OCR. ***Note:*** *Not available with Chromebook.*	CTRL+E	⌘+E	N/A
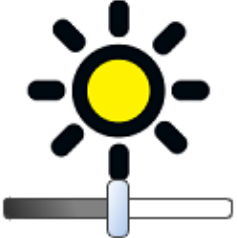
Menu Option	Description	Windows	Mac	Chrome OS
Start/Stop Recording	Records a video with your Transformer HD. Click the icon a second time to stop recording and save your video. On PC and Mac, your video automatically begins playback for review. On tablets, you can use the default file browser to play the saved video. With iPadOS, the Photos application can open videos.	CTRL+P	⌘+P	CTRL+P
Zoom In	Increases your magnification level step by step.	↑	↑	↑
Zoom Out	Decreases your magnification level step by step.	↓	↓	↓
Find Location	Helps you locate where you are reading by zooming out to the minimum zoom level. Clicking this icon a second time returns you to the previous zoom level. Crosshairs indicate the center of focus to help you position reading material.	F	F	F

Menu Option	Description	Windows	Mac	Chrome OS
Auto Focus	Toggles between the camera auto focus and the focus locked feature. The current mode is shown on the top right of the screen. Auto focus automatically adjusts for the best focus. Focus lock maintains a steady focus when you want to keep the focus on one item, such as a paper, while something else enters the field of view, such as a hand to sign the paper.	CTRL+A	⌘+A	CTRL+A
Rotate Image	Digitally rotates the camera image so you do not have to physically adjust the camera to get your desired view. Reading material can be kept in the correct orientation regardless of where it and the device are placed.	R	R	R

Display Menu

The Display menu contains your Transformer HD camera features. Details of its menu options follow, as well as the necessary shortcuts to activate its features.

Menu Option	Description	Windows	Mac	Chrome OS
Increase Image Brightness	Increases the total brightness for the Transformer HD application. You can adjust this slider with your mouse or touchpad. When you hover over the option, a message is displayed and a TTS announcement is available.	B	B	B
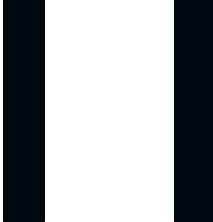
Menu Option	Description	Windows	Mac	Chrome OS
Decrease Image Brightness	Decreases the total brightness for the Transformer HD application. You can adjust this slider with your mouse or touchpad. When you hover over the option, a message is displayed and a TTS announcement is available.	N	N	N
Increase Color Modes Contrast	Brightens the contrast of text in high contrast modes. If you are having difficulty viewing in a color mode, try adjusting this slider. When you hover over the option, a message is displayed and a TTS announcement is available.	Z	Z	Z
Decrease Color Modes Contrast	Darkens the contrast of text in high contrast modes. If you are having difficulty viewing in a color mode, try adjusting this slider. When you hover over the option, a message is displayed and a TTS announcement is available.	X	X	X
Light On/Off	Turns the reading light on the Transformer HD device on and off.	L	L	L

Menu Option	Description	Windows	Mac	Chrome OS
Next Preferred Color Mode	Cycles through your preferred color modes.	C	C	C
List of Preferred Color Modes	Allows you to select your preferred color modes from a list.	N/A	N/A	N/A

Markers Menu

These features are designed to make your target easier to read by either framing it with lines or by covering up peripheral viewing space. You can adjust the position of both line and window markers by clicking them with your mouse or touchpad and dragging them to the desired location on your screen.

Menu Option	Description	Windows	Mac	Chrome OS
Marker Position	Moves the line markers or window markers up (+) or down (-).	CTRL+/-	⌘+/-	CTRL +/-
Marker Spacing	Increases (+) or decreases (-) the window size or the space between the line markers.	+/-	+/-	+/-
Cycle through Markers	Toggles between types of markers.	CTRL+G	⌘+G	CTRL+G

Menu Option	Description	Windows	Mac	Chrome OS
Horizontal Line Marker	Toggles horizontal line markers on and off.	H	H	H
Horizontal Window Marker	Toggles horizontal window markers on and off, masking the portion of the window outside of the markers.	H	H	H
Vertical Line Marker	Toggles vertical line markers on and off.	V	V	V
Vertical Window Marker	Toggles vertical window markers on and off, masking the portion of the window outside of the markers.	V	V	V

Menu Option	Description	Windows	Mac	Chrome OS
Marker Thickness	Adjusts the thickness of both vertical and horizontal line markers.	M	M	M
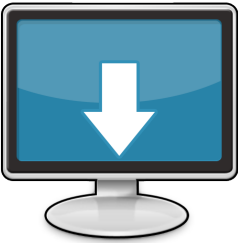
Window Menu

The Window menu controls the positioning and size of the Transformer HD window. This can be adjusted to quickly move the window to your desired location, as well as to control the Auto-Full Screen feature.

Note: See "SuperNova and ZoomText Users" on page 40 for information on using Windows menu shortcuts with third-party applications.

Menu Option	Description	Windows	Mac	Chrome OS
Minimize Windows Size	Minimizes the main window and takes the Transformer HD application out of focus. (This does not affect the OCR-TTS window.)	CTRL+M	⌘+M	CTRL+M
Enable Full Screen	Uses the entire viewing area to display the Transformer HD application, and hides menus and toolbars. In Windows, repeatedly pressing **F7** toggles between the viewer, your desktop, and the most recently accessed application. In Chromebook, pressing the shortcut again changes the focus to your desktop; clicking the EV icon in the toolbar returns to the viewer. Press **ESC** to exit full screen.	F7	F7	🔍+7

Menu Option	Description	Windows	Mac	Chrome OS
Change Window Position	Repeatedly pressing this shortcut moves the window to different places on the screen—upper or lower right corner, upper or lower left corner, right or left half of the screen, or top or bottom half of the screen, and full screen. To place the window in one quadrant of the screen (left, right, top, or bottom), you can press **CTRL+ARROW key** for Windows or Chromebook, or ⌘**+ARROW key** for Mac.	F8	F8	🔍+8
Upper Right Corner	Places window in upper right corner of screen.	N/A	N/A	N/A
Lower Right Corner	Places window in lower right corner of screen.	N/A	N/A	N/A
Upper Left Corner	Places window in upper left corner of screen.	N/A	N/A	N/A

Menu Option	Description	Windows	Mac	Chrome OS
Lower Left Corner	Places window in lower right corner of screen.	CTRL+↓	⌘+↓	CTRL+↓
Right Half	Places window in right half of screen.	CTRL+→	⌘+→	CTRL+→
Left Half	Places window in left half of screen.	CTRL+←	⌘+←	CTRL+←
Top Half	Places window in top half of screen.	CTRL+↑	⌘+↑	CTRL+↑
Bottom Half	Places window in bottom half of screen.	CTRL+↓	⌘+↓	CTRL+↓

Menu Option	Description	Windows	Mac	Chrome OS
Change Horizontal Window Size	Increases or decreases horizontal window size.	SHIFT+ →/←	SHIFT+ →/←	SHIFT+ →/←
Change Vertical Window Size	Increases or decreases vertical window size.	SHIFT+ ↑/↓	SHIFT+ ↑/↓	SHIFT+ ↑/↓
Close OCR Window	Closes an open OCR-TTS window.	CTRL+W	⌘+W	N/A

Settings Menu

This menu allows you to select the preferred color modes, change the resolution, adjust the color white balance, change the 50/60Hz anti-flicker setting, change between the left-handed and right-handed modes, turn the keyboard shortcuts on and off, select the audio input, change the language, view the product information, configure the Wi-Fi name and password, and reset the factory settings.

Note: Wi-Fi is not available with Chromebook.

No shortcuts are available for the options on the **Settings** menu. If a checkbox is black, then that option is selected.

On Windows and Chrome OS, you can record audio along with video by clicking **Audio Input** and selecting **Default – Internal Mic**. The audio/video file is stored in the default application folder with a file format of either .avi or .webm, depending on your operating system. Use the **Camera** menu to record a video clip.

Note: Audio input, such as using your microphone to add voice over to a video, is not available with Mac or tablets.

Color Mode Selection	The **Color Mode Selection** tab is where you can change your color presets (up to seven at a time).
CCTV Camera: 1080p30 ■	Camera resolution can be adjusted between 1080p at 30 frames per second or 720p at 60 frames per second. Wi-Fi is limited to 720p at 30 frames per second. Any change in resolution causes the device to automatically reset.
CCTV Camera: 720p60 ☐	
Color: Auto ☐	These options adjust your video white balance. **Auto** automatically adjusts based on the environment, **Neutral** sets it to a natural color, **Warm** has a red hue, **Cool** has a blue hue.
Color: Neutral ■	
Color: Warm ☐	
Color: Cool ☐	
Frequency Configuration 50 Hz ☐	**Frequency Configuration 50 Hz** enables light flicker compensation for 50Hz AC.
Left Handed Mode ☐	**Left Handed Mode** swaps the orientation for self and distance viewing.
Keyboard Shortcuts ■	The **Keyboard Shortcuts** option lets you use the keyboard to enter commands.
Audio Input	**Audio Input** allows you to select the audio device (Windows only).
Language	**Language** allows you to change your primary display, OCR, and TTS language.
Product Information	**Product Information** displays your device serial number, software, and firmware.
Wi-Fi Configuration	**Wi-Fi Configuration** allows you to change your Transformer's Wi-Fi network name and password.
Restore Factory Settings	**Restore Factory Settings** is used to return your device to a factory-fresh condition and clears user presets.

HDMI Menu

Available in HDMI mode only, you access this menu by pressing and holding the Freeze button for 10 seconds. Tips for using this menu follow:

- To change the highlighted selection, use the Zoom Wheel.

- To select an item, use the Color Mode button.

- To change the light flicker compensation, click **Frequency Configuration 50 Hz**.

- To exit the menu, press the Freeze button.

- If you ever forget your Wi-Fi password and are no longer able to connect, you can use the Factory Reset function in **Product Information** to reset the device to its defaults and reconnect to your Wi-Fi device.

- Auto Focus automatically adjusts for the best focus. To toggle Auto Focus with Focus Lock, press and hold the Rotate button. Focus lock maintains a steady focus when you want to keep the focus on one item, such as a paper, while something else enters the field of view, such as a hand to sign the paper.

   Note: OCR and Text-to-Speech features are not available in HDMI mode. To access these functions, you must connect to a supported Mac computer, Windows PC, or iOS tablet and install the related software.

Some settings are saved on the Transformer device rather than in the viewer application. See "How Transformer HD Settings Are Saved" page 59 for more information.

Color Mode Selection	
Line Marker	☐
Window Marker	☐
Marker Position	☐
Marker Spacing	☐
Horizontal Marker	◼
Vertical Marker	☐
Color: Auto	☐
Color: Neutral	◼
Color: Warm	☐
Color: Cool	☐
Frequency Configuration 50 Hz	☐
Left Handed Mode	☐
Language	
Product Information	
Auto Focus	◼

Transformer HD OCR/Text-To-Speech Mode

Note: OCR is not available for Chromebook or HDMI.

Using OCR

Some devices come equipped with an optional OCR module enabled. OCR stands for Optical Character Recognition. If your Transformer HD device is OCR enabled, then your Transformer can take a photograph of a book, business card, letter, etc. and translate that image into easily readable text that can be directly read aloud to you.

To use this feature, engage the Full Screen OCR Camera, which can be toggled via the orange camera icon.

1. Switch Transformer HD to the OCR mode if you are in CCTV mode by clicking the orange camera icon in the **Camera** menu or by pressing **CTRL+C**.

2. Position your target material directly under the camera so that the text is visible to the camera.

3. Click the **Capture** button or press **CTRL+E**.

4. After a brief processing period, the OCR-TTS screen displays and begins reading.

   *Note: With iOS tablets, the **File**, **Open**, and **Save** icons are not included in the OCR-TTS screen.*

5. You can click on any segment of text with your mouse cursor on computers/laptops or tap using your fingers with touchscreens to determine where reading begins. Click once to start reading, and click again to stop reading.
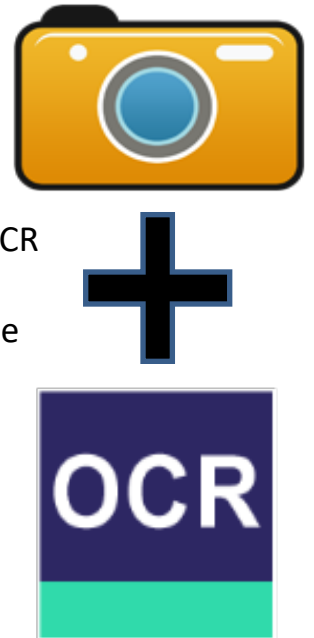
OCR and Third-Party TTS

Transformer HD TTS and OCR features are designed to integrate with SuperNova and ZoomText. For example, you can click and drag the mouse to highlight and copy text (**CTRL+C**) in the OCR-TTS window and paste it (**CTRL+V**) into SuperNova or ZoomText. However, redundant features such as Text-To-Speech announcements and word highlighting can lead to undesirable results; therefore, it is recommended that you disable third-party accessibility features while using Transformer HD OCR.

OCR Features

These buttons and features, which only exist on OCR-enabled devices, are displayed across the OCR-TTS window. No keyboard shortcuts are available for these features.

	Feature: Voice Gender When text-to-speech is stopped, you can click this icon to change the OCR playback text-to-speech voice between male and female variants (where available).
	Feature: Decrease TTS Speed While a scanned document is being read to you using text-to-speech, you can click this icon to slow down playback.
	Feature: Increase TTS Speed While a scanned document is being read to you using text-to-speech, you can click this icon to speed up playback.
	Feature: Speech Playback This feature starts and stops OCR playback after an OCR scan has been performed. OCR playback starts from the beginning of the passage that was scanned. To start playback in the middle of the passage, click where you want playback to begin.
	Feature: OCR Scan When you click this icon, the current OCR-TTS window is closed, and you can run OCR on a new document. You may want to save your current OCR scan before proceeding with a new one.

Tips & Tricks

System Restart

If your system exhibits any odd behavior, press the Reset button to reset the device and close and restart the Transformer HD application. If you are still experiencing problems, remove the DC adapter power supply from the device and remove the battery.

User Menus

Transformer HD is a feature rich system that comes with many configurable options. You can customize your user interface, system sounds, or system display items to suit your preference. Once you are familiar with the system, try changing or configuring these options to customize the perfect user experience.

The user interface is slightly different depending on whether you are using the device on a computer, Chromebook, standalone monitor, or tablet.

You can always reset your preferences and settings to factory defaults by utilizing the keyboard shortcut **CTRL+R** or through the **Settings** menu. This will return all your settings to their original values.

Wi-Fi Connectivity

Note: *Wi-Fi is not available with Chromebook.*

If you have difficulties with Wi-Fi, follow the step-by-step instructions in the "Wi-Fi Configuration" section on page 27. This section includes instructions for recovering your password.

Improving OCR Accuracy

To improve the accuracy of your Transformer HD, ensure that whenever you begin a document capture the lighting in the room is evenly distributed over your target document. (Avoid visible hotspots.)

Flatten out books (especially ones with large spines) or other materials with an observable curvature. For small OCR targets, such as a business card or letter, place a clean white sheet of paper behind the target to eliminate interference.

Position your material within the field of view in its entirety. You can rotate your target material in any orientation to ensure that it fits completely within these boundaries. Also, turning on or off the reading light by clicking the **Light On/Off** icon in the **Display** menu (or by pressing the **L** key) can sometimes improve accuracy.

Multiple Orientations

Transformer HD supports all available viewing angles (portrait and landscape). If your target document is too large or unusually shaped, you can reposition it at another angle for a perfect fit within the guide frame. Try turning the toolbar off or setting the device to Auto-Full Screen to get the best possible field of view on your target material.

Close-Up Lens

For reading, especially at higher zoom levels, the Close-Up Lens is a must. If you are using Distance or Self View modes, make sure the lens is **not** over the camera to give the best visual clarity.

Window Display

You can quickly dock your Transformer HD application to any side of your screen utilizing the **CTRL** button plus any arrow key, such as **CTRL+↑** for Windows/Chromebook or ⌘**+↑** for Mac. To fill your entire viewing area with the Transformer HD camera feed, you can enable Auto-Full Screen mode by pressing **F7** for Windows/Mac or ⌕**+7** for Chromebook. Use the same shortcut to disable Auto-Full Screen mode.

Third-Party Applications

Before using a third-party application such as ZoomText or SuperNova, you must enable shortcuts in the Transformer HD application by selecting the **Keyboard Shortcuts** option in the **Settings** menu. To access Transformer features and functions from the third-party application, you must use shortcuts. See page 42 for more information.

How Transformer HD Settings Are Saved

After you have set up Transformer HD and its viewer, you may have occasion to connect the device to a different desktop/laptop computer, iOS tablet, or Chromebook. For example, you may be in a classroom where you have Transformer HD set up on your own desktop computer but want to loan it to a student with a laptop. In this case, you need to reference the following table to know which settings are saved to the viewer on the computer versus those saved on the Transformer HD device. You will need to reapply the settings that are saved to the computer.

A check in the **Saved to Computer** column of this table indicates that the setting is saved to the desktop/laptop computer, iOS tablet, or Chromebook. Otherwise, it is saved on the Transformer HD device.

Setting	Saved to Computer	Saved on Device
Color Mode Selection		✓
Markers		✓
Color: Auto/Neutral/Warm/Cool		✓
Frequency Configuration 50 Hz		✓
Left Handed Mode		✓
Image Rotation		✓
Zoom Level		✓
Reading Light		✓
CCTV Camera Resolution		✓
Active Camera		✓
Wi-Fi SSID		✓
Wi-Fi Password		✓
Color Modes Contrast		✓
Language	✓	
Image Brightness	✓	
Window Position	✓	
Auto Focus	✓	
Full Screen	✓	
Keyboard Shortcuts	✓	
TTS Speed	✓	
Markers Thickness	✓	
Audio Input	✓	

Note: *Each viewing mode (desktop, distance, self-viewing, and arm upright) on the device retains your zoom level, color mode selections, markers, reading light status, and image rotation settings you have configured.*

iOS Tablet Settings

Tablets do not have the same capabilities as computers, so not all settings described in this document are available on tablets. Specifically, the following Transformer HD settings are unavailable on tablets:

- CCTV Camera Resolution
- Wi-Fi SSID
- Wi-Fi Password
- Window Position
- Full Screen
- Keyboard Shortcuts
- Audio Input

Troubleshooting

Transformer HD will not power on.

Double-check each item in the following list to be sure your device is set up properly:

- Make sure the power supply from Transformer HD is securely connected to a working wall outlet.

- Confirm the condition of the Transformer HD battery.

- Make sure the power supply and cord are securely connected.

- Ensure that you are using the USB 3.0 cable that came with your Transformer HD and that it is securely connected to both your Transformer HD and desktop or laptop.

- Press the Reset button on the Transformer HD (located on the underside of the device) to reset your Transformer HD and power the device back on.

- If Transformer HD is plugged into a power strip or surge protector, ensure that it is switched on. Also check the circuit breaker for the wall outlet.

Note: *It is recommended that you complete a full reset cycle when swapping between different connection types on your Transformer HD (such as Wi-Fi to USB 3.0 and vice versa).*

Image is out of focus and/or my OCR result is poor.

Clean the polarizing filter on the underside of the OCR camera with the nonabrasive lens cleaning cloth provided with your Transformer HD (avoid using cleaning solutions).

Make sure the target material is steady and flat. It might take a few moments for the camera to achieve focus after motion has stopped.

Alternate having the Transformer HD reading light on and off. Make sure there is even ambient lighting, which will assist in creating a better image.

Transformer HD is slow in processing text-to-speech.

Cycle the power on and off by pressing the Power button. If the device is not responding to these button presses, then press and hold the Power button for more than five seconds to force a shutdown. Do not physically remove the device from power during this time.

Note: *Based on the complexity and the clarity of the target material, it may take up to three minutes before recognized text is available. If no text is found, an alert message will display after about three minutes.*

My device is unresponsive.

If your device is unresponsive, follow these steps:

1. Ensure that the Transformer HD device is only connecting to one support peripheral—a PC, Mac, HDMI monitor, or tablet.

2. Press the white Reset button on the underside of the device.

3. If your device is plugged into a wall outlet, then press the green Power button to power on the device. If you are battery powered, the Transformer HD device starts up automatically.

Transformer HD not responding when connected via Wi-Fi.

If the device appears to be connected but you see nothing but the white splash screen, follow these steps to correct your wireless settings:

1. To open the search bar, press the **WINDOWS** key.

2. In the search bar, type "Allow an app through Windows Firewall".

3. Press the **ENTER** key.

4. Click the **Change Settings** button, which is on the top right above the box.

5. Scroll down to highlight the **TransformerHD** entry.

6. Check the boxes in both the **Public** column and the **Private** column.

Note: *For more information, see "[Wi-Fi Configuration](#)" on page 27.*

I lost some of my settings when I moved the device to a different computer.

Not all settings are saved when you move the Transformer HD to a different computer. You must reapply the settings that are saved to the viewer (desktop/laptop, tablet, or Chromebook). See "[How Transformer HD Settings Are Saved](#)" on page 59.

I'm having installation issues in Windows.

If you are having issues installing Transformer HD in Windows, follow these steps:

Note: *If any devices have an error code, contact Enhanced Vision [Technical Support](#).*

1. Connect TRHD to the computer with the provided USB cable and cable interface.

2. Connect the DC adapter to TRHD and press the Reset button on the device. The green LED should be solid and the amber LED blinking and/or solid based on battery condition. At this time, the USB drivers are ready to be checked. (Do not press the Power button.)

3. Under Windows 10, open the Device Manager by typing **Device Manager** in the Cortana toolbar or use the Control Panel.

4. Under **Cameras**, ensure that you see **Enhanced Vision**. If there are errors indicated on this device, it may result in issues when using Transformer.
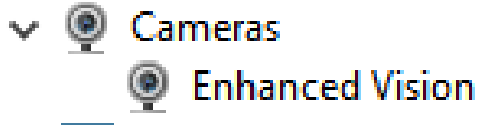
5. Under **Universal Serial Bus controllers**, ensure that you see **Enhanced Vision Device** and that no errors are indicated. If no errors occur, then the drivers are properly installed and working correctly.

6. If you are still having issues with your connection, try to connect via Wi-Fi. Follow the "Wi-Fi Configuration" steps on page 27.

7. If you complete these troubleshooting steps and do not see an image or exclamation mark on any of these drivers, contact Technical Support for assistance.

I need to update my software and firmware.

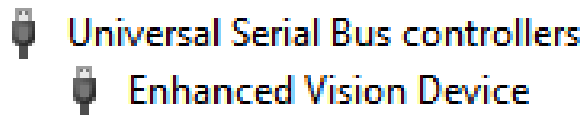To keep your Transformer HD up to date, visit our support page at https://www.enhancedvision.com/support/software/transformer-hd/update.html. Please download the technical bulletin and follow the instructions provided.

To download the most up-to-date user manual, visit our product page at https://www.enhancedvision.com/low-vision-product-line/transformer-hd-portable-electronic-magnifier.html

If you have any questions or require technical assistance with your product, please call (800) 440-9476 extension 2 (U.S.) or +001 714-465-3400 extension 2 (international) Monday through Friday, from 8 AM to 5 PM (8:00-17:00) Pacific Standard Time (UTC-8).

FCC Compliance Notice

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. 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 some instances. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are 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 to a wall outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modifications to this system can void your authority to operate this equipment.

Transformer HD has an option to connect to a TV; it must be used with shielded interface cables in order to meet FCC emissions limits for Class B digital devices. Use **only** the cables supplied with Transformer HD.

Safety and Care

To ensure your safety and obtain the most benefit from Transformer HD, review these safety precautions carefully.

Transformer enlarges and enhances text and objects in order to improve the quality of life for people who are visually impaired. The extent to which this product can improve the ability to see images depends on a person's individual condition and level of visual impairment.

Transformer HD is not designed to restore vision, correct eye conditions, or halt degenerative vision loss. An eye care professional can determine the usefulness and suitability of Transformer HD for a patient's individual condition.

Precautions for Use

- Follow all warnings, cautions, and instructions marked on the product.

- Use Transformer HD on a stable, level surface such as a solid desk or table, according to its intended design specifications.

- Avoid placing Transformer HD on an unstable table, cart, or stand. It may fall, causing serious damage to the device or bodily injury.

- Use Transformer HD indoors only—it should NOT be exposed to extreme or rapid changes in temperature or humidity. Do not place Transformer HD near a radiator, heater, or areas exposed to long hours of direct sunlight. These conditions may cause damage to the device's electronics or optics.

- At least once per week, clean Transformer HD with a soft dry cloth or an electrostatic dusting cloth. DO NOT use liquid cleaners on its plastic surfaces. No additional methods of sterilization or cleaning are recommended or required.

- Do not use Transformer HD near flammable materials or liquids.

Additional Mechanical Safety Precautions

Your Transformer HD features an adjustable camera arm. It has a variety of <u>usable orientations</u>. Do not attempt to forcibly reposition or adjust the camera arm outside of the ranges shown on page 21 and pages 32-35. It may cause damage to the device.

Note: *This product contains moving parts. Use caution when moving the adjustable arm or when transporting the Transformer to avoid possible injury to hands and fingers.*

Caring for Transformer HD

To care for your Transformer HD, follow these recommendations:

- When Transformer HD is not in use and not connected to external power, always turn the power off by pressing the green Power button on the front of the device for five seconds.

- You can place the device in "standby" (power saving mode) either by pressing the green Power button for fewer than five seconds or by disconnecting the HDMI or USB 3.0 cable from the Transformer HD device.

- Ensure that your Transformer HD is completely off before cleaning it.

- Clean Transformer HD with a soft dry cloth or an electrostatic dusting cloth. DO NOT use liquid cleaners on its plastic surfaces.

- To prolong the life of Transformer HD, remove the battery from the device if it will not be in use for one week or more.

- The protective glass covering the camera can be cleaned as needed with the lens cloth provided within the packaging of Transformer HD. DO NOT use liquid cleaners on the plastic surfaces. No additional methods of sterilization or cleaning are recommended or required.

Susceptibility to Interference

There may be temporary degradation of the image when Transformer HD is subjected to a strong radio frequency field, electrostatic discharge, or transient electrical noise. An electrostatic discharge (caused by static electricity) may cause the screen to go blank. If this happens, follow these steps:

1. Disconnect the DC adapter power supply from the electrical wall outlet.

2. Wait 30 seconds.

3. Connect the DC adapter power supply again.

Power Connections

To avoid personal injury or damage to the Transformer, do not make any other type of power connection to the input port other than the method indicated in the following photos.
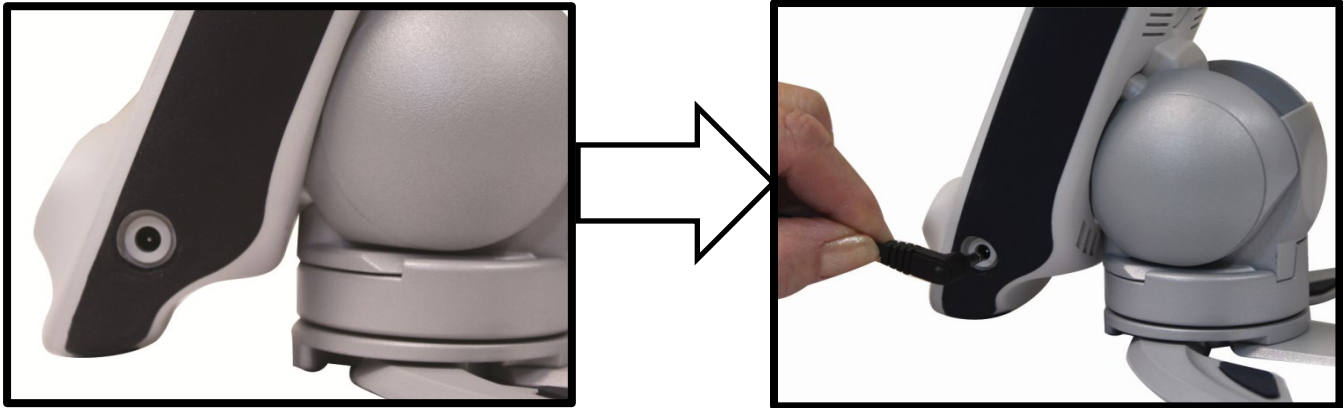
Additional Electrical Safety Precautions

Read these safety precautions before using Transformer HD:

- Using any power supply other than the one provided by Enhanced Vision for Transformer HD will **void the warranty**.

- If using DC power, the Transformer HD device should be near a wall outlet that is easily accessible.

- Do not use Transformer HD in, near, or around water. Transformer HD is not designed to offer protection against contact with liquids of any kind.

- Use only the power supply provided with your Transformer HD. Using unauthorized power supplies may cause serious damage to Transformer HD's electronic components.

- Always place the power cord away from traffic areas to avoid damage to the power supply.

- Prevent the risk of electrical shock by NOT attempting to disassemble the device. Refer all service to an authorized repair facility.

- Ensure that you make all proper cable connections illustrated in this document.

Transporting Transformer HD

Transformer comes with a convenient carrying case for transport. To prevent the device from being accidentally dropped and damaged, always return the Transformer to the carrying case when not in use. Disconnect and secure all power and video cables before moving the device.

*Note: Carry the device long distances by firmly grasping the Transformer HD main body when it is in the folded position. **Do not carry Transformer HD by the camera head since this may result in damage to your device.***

Instructions for Optional Suction Base

A suction cup base stand is an optional accessory that allows the user more desk space than the standard Transformer HD legs.

To install the suction base, follow these instructions:

1. Place the Transformer HD device on a level surface with the legs fully extended to prevent tipping.

2. Grasp the main body of the device with one hand and place your other hand on the base legs as shown in the following illustration.

3. Firmly pull the main body away from the legs.

4. Turn the base so that its shape fits with the bottom of the device.

5. Slide the device into the suction cup base until the built-in magnets make contact.

6. Attach the suction cup base to a smooth surface that is clean and free from debris.
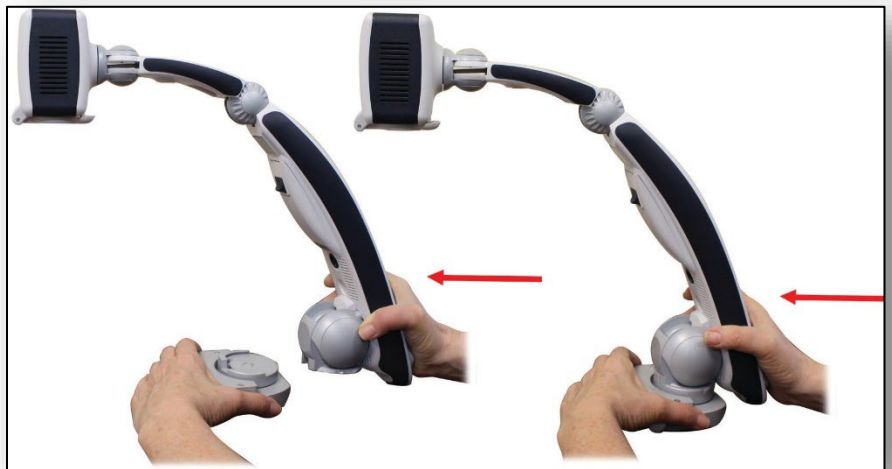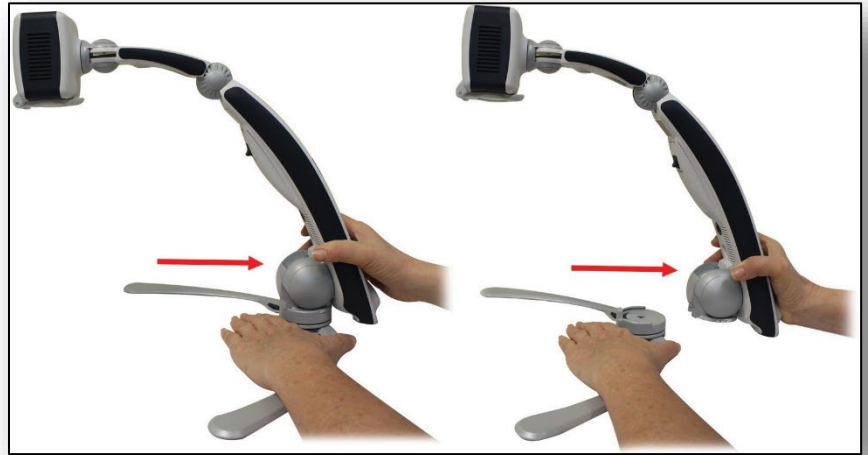
Warning: *Ensure that the suction cup and the surface you are mounting it on are both clean and free of debris. The suction cup is designed to work with all smooth surfaces. Do not attempt to use it with tables that have heavy woodgrain or fabric surfaces. If left on a surface for any length of time, periodically check the suction cup base to ensure that it is still secure. Failure to do so may result in the Transformer HD falling over unexpectedly from insufficient suction force. The fall could potentially result in damage to the device. We highly recommend detaching the Transformer with the suction base from the surface when the product is not in use.*

Transformer HD Specifications

Product Measurements

Reading Configuration

> **Length:** 15.4 inches (39.1 cm)
> **Width:** 16.0 inches (40.6 cm)
> **Height:** 13.5 inches (34.3 cm)

Closed Configuration

> **Length:** 13.5 inches (34.3 cm)
> **Width:** 4.8 inches (12.2 cm)
> **Height:** 4.9 inches (12.4 cm)

Camera
> CCTV camera & OCR camera (on enabled devices)

Product Weight
> 3.45 lbs (1.56 kgs)

Magnification Range
> 20-inch LCD 2.0x (min) to 51.2x (max)
> 22-inch LCD 2.0x (min) to 55.9x (max)
> 24-inch LCD 2.0 (min) to 30.6x (max)

> *Note: Minimum magnification levels changed in early 2023 so earlier models have a lower minimum range of 1.6 (20-inch or 22-inch) or 1.7 (24-inch).*

Power Supply
> Power supply is 100-240V~, 50-60Hz, 9VDC, 2.6A

Battery Life
> More than three hours of continuous operation

Equipment Classification (IEC 601-1)

> **Type of protection:** Class 1
> **Degree of protection:** Type B
> **Mode of operation:** Continuous
> **Operating temperature range:** 0-40°C / 32-104°F
> **Storage/transport temperature range:** 0-60°C / 32-140°F

Warranty: 2 Years

Note: Product specifications subject to change without notice.

Warranty Statement & Contact Information

Enhanced Vision Transformer HD Warranty Policy

Enhanced Vision products are designed to give you the highest quality image, convenient features, ease of use, and reliable service. **Transformer HD has been inspected and tested prior to shipping.** Enhanced Vision warrants Transformer HD against defects in material and workmanship under normal use for **two years** from the date of original purchase. Enhanced Vision, at its option, will either repair the product or replace it during the warranty period at no charge. There are no other expressed or implied warranties accompanying this product.

This warranty does not cover: a) Defects or damage from misuse, use in other than normal and customary manner, accident or neglect; b) Defects or damage from improper operation, maintenance, installation, adjustment, alterations or modification; c) Defects or damage from spills of food or liquid; d) All plastic surfaces and all other externally exposed parts that are scratched or damaged due to normal use; e) Damage due to operation of Transformer HD with equipment not supplied by Enhanced Vision.

- You must provide proof of purchase, bearing the date of purchase, in order to receive warranty service.

- Anyone using this product does so knowingly assuming certain risks, due to the need to utilize vision enhancement devices.

- A two-year extended warranty option is available within 12 months from the date of purchase. Please contact Enhanced Vision for detailed information.

Service Process

If technical support or repair service is needed, please contact your local Enhanced Vision representative or the Enhanced Vision warranty service center.

If warranty service is required, please contact Enhanced Vision at 800-440-9476 extension 2 (international +001 714-465-3400 extension 2) Monday through Friday, from 8 AM to 5 PM, Pacific Standard Time (UTC-8) to request a return authorization number.

Warranty repairs will not be accepted without a valid return authorization number. You may wish to keep the original product packaging in case warranty service is required. The manufacturer cannot provide packaging for warranty repairs.

OTHER ENHANCED VISION PRODUCTS

DaVinci Pro

DaVinci Pro is a high-performance desktop video magnifier (CCTV), featuring a Sony full HD 3-in-1 camera & full-page text-to-speech (OCR). With full HD, you will experience high definition color and contrast giving you a beautiful, crystal clear picture and vibrant colors. Experience the joy of reading with our new full-page text-to-speech feature. DaVinci Pro will read any printed text aloud with the push of a button.

Magnification: 24" LCD: 2x (min) – to 80x (max)

Acrobat HD ultra

Acrobat HD ultra is a complete system featuring a 3-in-1 Sony full HD camera with a 22", 24", or 27" high resolution HD LCD producing maximum picture detail for clear, vivid color display. The adjustable arm, tilting screen, and rotating capability allows the camera to be positioned at any angle for optimal viewing. A handle is built in for easy transport.
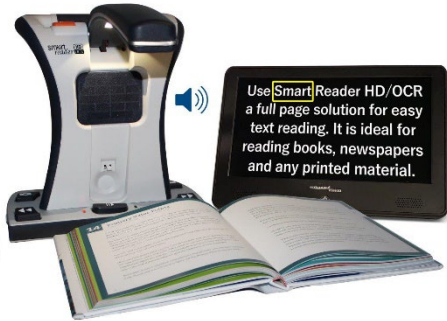
Magnification: 1.8x – 70.9x

Acrobat HD mini ultra

Acrobat HD mini ultra is a portable battery-operated full HD CCTV. Full HD gives you a beautiful crystal-clear picture and vibrant display. A generous 13.3" display offers a large field of view, allowing you to see more on the screen.

Magnification: 1.3x – 65x

OTHER ENHANCED VISION PRODUCTS

Smart Reader HD

The Smart Reader HD is a lightweight, portable reader/scanner with large built-in user-friendly tactile control buttons. Featuring a built-in HD camera and OCR (optical character recognition), Smart Reader HD enables individuals with low vision to retain the pleasure of reading by listening along or by attaching a monitor to view and adjust magnified text in full color and contrast. $C \in$

Merlin HD ultra

Merlin ultra's full HD camera technology produces an even truer, more natural image. Easily read books and magazines, read and write letters, manage your financial records, view color photos, do crossword puzzles, and even pursue a favorite hobby.

Magnification:
20" LCD: 1.9x (min) – 51.2x (max)
22" LCD: 2.1x (min) – 55.9x (max)
24" LCD: 2.3x (min) – 61.2x (max) $C \in$

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