



CAELucinaAR



LICENSING

The maximum number of clients that can connect to the host varies depending on the license associated with your account. You can purchase a new license or upgrade your current license by contacting CAE.

The refresh button, beside the version number, allows you to refresh your license after a new license has been purchased and associated with your account. Ensure the HoloLens is connected to the Internet before clicking. After you clicked, on the first time, the LucinaAR application is put in background, and the Microsoft Store application asks for your Microsoft HoloLens Account. When done, close the Microsoft Store application, and reopen the LucinaAR application. The new license is downloaded automatically from the Microsoft Store.

If after refreshing the license information displayed is not what you purchased, try rebooting the HoloLens. Ensure the HoloLens is connected to the Internet during the operation.

SAFETY AND WARNINGS

AC Adapter Safety

Failure to take the following precautions can result in serious injury or death from electric shock or fire or in damage to the device. To select an appropriate power source for your HoloLens:

- Use only the power supply unit and AC power cord that came with your HoloLens
- Do not use non-standard power sources, such as generators or inverters, even if the voltage and frequency appear acceptable. Only use AC power provided by a standard wall outlet.
- Do not overload your wall outlet, extension cord, power strip, or other electrical receptacle. Confirm that they are rated to handle the total current (in amps [A]) drawn by the HoloLens (indicated on the power supply unit) and any other devices that are on the same circuit.

On devices where the AC prongs may be folded for storage, before plugging the AC adapter into a power outlet, make sure its prongs are fully extended. On devices where the AC prongs are removable and where the power supply uses a universal adapter, before plugging the AC adapter into a power outlet, make sure the prong assembly is of the proper configuration for the power outlet and fully seated into the adapter.

Battery Safety

The HoloLens contains a built-in battery, improper use of which may result in explosion. Do not heat, open, puncture, mutilate, or dispose of the product in fire. Do not leave the HoloLens in direct sunlight for an extended period of time, which could cause melting or battery damage. The battery in the HoloLens is not user replaceable.

Potentially Explosive Atmospheres

Areas with potentially explosive atmospheres are often, but not always, posted and can include fueling areas, such as below decks on boats, fuel or chemical transfer or storage facilities, or areas where the air contains chemicals or particles, such as grain dust, or metal powders. When you are in such an area, turn off your HoloLens, and do not remove or install battery chargers, AC adapters, or any other accessory. In such areas, sparks can occur and cause an explosion or fire.

Heat Related Concerns

The HoloLens may become very warm during normal use. HoloLens complies with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC 60950-1).

To reduce heat related concerns, follow these guidelines:

- Allow for adequate air circulation under and around the device
- Use caution when operating your device with a pillow, blanket, hat or other soft material contacting the device, because the material can block the airflow which may result in the device overheating
- If your device gets uncomfortably warm, remove it and take a break

Photo Sensitive Seizures

A very small percentage of people may experience a seizure when exposed to certain visual images, including flashing lights or patterns that may appear in video games. Even people who have no history of seizures or epilepsy may have an undiagnosed condition that can cause these “photosensitive epileptic seizures” while watching video games.

These seizures may have a variety of symptoms, including light-headedness, altered vision, eye or face twitching, jerking or shaking of arms or legs, disorientation, confusion, or momentary loss of awareness. Seizures may also cause loss of consciousness or convulsions that can lead to injury from falling down or striking nearby objects.

Immediately stop using the HoloLens and consult a doctor if you experience any of these symptoms.

The risk of photosensitive epileptic seizures may be reduced by taking the following precautions: A very small percentage of people may experience a seizure when exposed to certain visual images, including flashing lights or patterns that may appear in video games. Even people who have no history of seizures or epilepsy may have an undiagnosed condition that can cause these “photosensitive epileptic seizures” while watching video games.

These seizures may have a variety of symptoms, including light-headedness, altered vision, eye or face twitching, jerking or shaking of arms or legs, disorientation, confusion, or momentary loss of awareness. Seizures may also cause loss of consciousness or convulsions that can lead to injury from falling down or striking nearby objects.

Immediately stop using the HoloLens and consult a doctor if you experience any of these symptoms.

The risk of photosensitive epileptic seizures may be reduced by taking the following precautions:

- Using HoloLens in a well-lit room
- Do not use HoloLens when you are drowsy or fatigued
- If you or any of your relatives have a history of seizures or epilepsy, consult a doctor before using HoloLens

Skin Irritation

The HoloLens is made of materials commonly used in wearable consumer electronic devices. However, certain people may develop skin irritation due to allergies or sensitivities.

To reduce the risk of skin irritation:

- Wipe your device dry with a cloth if it gets wet
- Avoid using lotions or other products under the portions of HoloLens that contact your head
- Do not wear over injured skin
- Adjust the headband only until snug – avoid tightening the headband uncomfortably
- If your skin becomes irritated, stop using HoloLens
- If symptoms are severe or persist, consult your physician

TABLE OF CONTENTS

Licensing	i
Safety and Warnings.....	iii
AC Adapter Safety	iii
Battery Safety	iii
Potentially Explosive Atmospheres	iii
Heat Related Concerns	iii
Photo Sensitive Seizures	iv
Skin Irritation	v
Table of Contents.....	v
Helpful Links.....	1
What's Included	1
Before Beginning Setup.....	2
Using Hand Gestures	2
The Gesture Frame	2
Bloom	2
Gaze	3
Air Tap	3
Tap and Hold	4
Zoom and Rotate Gestures	5
Environmental Anchoring	5
Know Your Surroundings	6
Use in Safe Surroundings	6
About Your Environment	6
Be Physically Capable	6
Stay Comfortable	7
Certain Situations Can Increase Your Risk of Discomfort	7
Consider Keeping Your First Sessions Brief	7
Take Periodic Breaks	7
If You Experience Discomfort	7
Setup	9
Validate Microsoft HoloLens Account	9
Charge the HoloLens	9
Battery LEDs	10
Connect and Start the HoloLens	10

Power on the HoloLens.....	11
Establish a Network Connection	12
Update the System.....	12
Update HoloLens Operating System	12
Download Updates from Microsoft Store.....	15
Update Lucina AR	17
Manage Network Connections.....	20
Configure the Start Menu	22
Setup Lucina with Müse	22
Using LucinaAR.....	23
Launch the LucinaAR App.....	23
LucinaAR App Icons	24
Tutorial Mode	25
Settings Menu	25
Practice Modes	26
Multi-User	29
Holographic Mode	30
Single User.....	30
Multi-User	31
End the Simulation	32
Power Off the Manikin.....	32
.....	33
Troubleshooting.....	35
Wireless Connection Issue	35
Simulator Not Found Error	37

HELPFUL LINKS

- **Fitting your HoloLens:** <https://support.microsoft.com/en-us/help/12632>
- **Turning your HoloLens on or off:** <https://support.microsoft.com/en-us/help/12642>
- **HoloLens lights:** <https://support.microsoft.com/en-us/help/28982>
- **HoloLens buttons:** <https://support.microsoft.com/en-us/answers/6ff53cab-1ec8-087e-3a7e-554d18ae639c/find-out-what-the-hololens-buttons-do>
- **Using gestures:** <https://support.microsoft.com/en-us/help/12644>
- **Start menu and finding your apps:** <https://support.microsoft.com/en-us/help/12638>
- **Spaces on HoloLens:** <https://support.microsoft.com/en-us/help/13760/hololens-spaces-on-hololens>
- **Environment considerations for HoloLens:** https://developer.microsoft.com/en-us/windows/mixed-reality/environment_considerations_for_hololens
- **Charging your HoloLens:** <https://support.microsoft.com/en-us/help/12627/hololens-charge-your-hololens>
- **Caring for and cleaning your HoloLens:** <https://support.microsoft.com/en-us/help/12649/hololens-whats-in-the-box>
- **Additional instructions and references:** <https://support.microsoft.com/en-us/products/hololens>
- **LucinaAR product introduction video:** <https://youtu.be/i7Asl1PBpyI>

What's Included

- HoloLens
 - Visor
 - Charger
 - Ethernet Cable
- 5 Ghz Wireless Router
- Documentation

BEFORE BEGINNING SETUP

Prior to beginning setup, it is important to understand some basic concepts and environmental considerations to ensure a safe and productive learning experience.

Using Hand Gestures

The Microsoft HoloLens has several hand gestures that users should become familiar with to properly operate the device.

The Gesture Frame

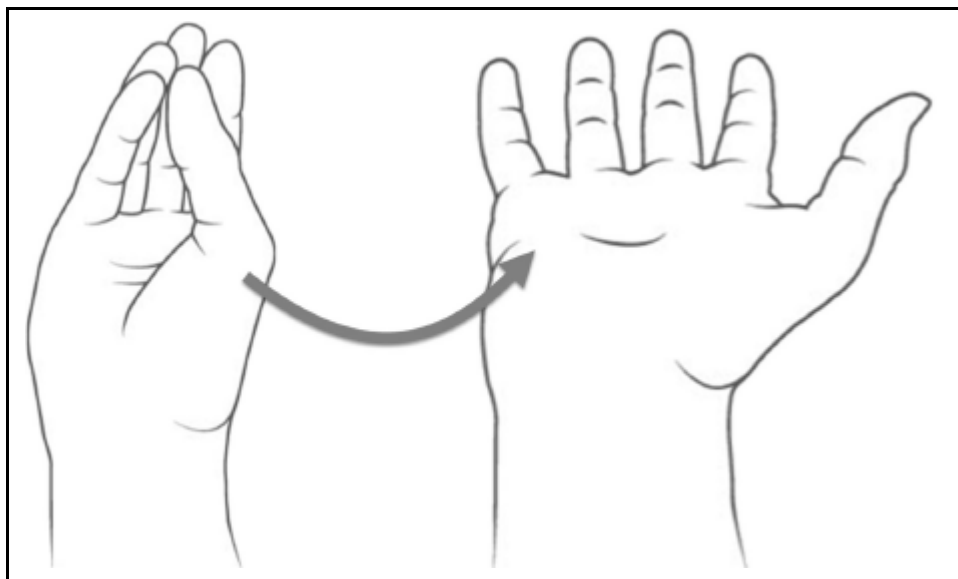
HoloLens has sensors that can see a few feet to either side of the user. When gestures are used, they must be kept inside that frame for HoloLens to detect them. As the user moves around, the frame moves with them. When the user's hand is inside the frame, the cursor will look like a ring. When HoloLens cannot see the user's hand the cursor changes to a dot.

Bloom

Blooming opens the Start menu. Most of the time, bloom is only needed once to get to Start, but sometimes the user will need to bloom twice. If a user is uncertain what to do, blooming is a good way to get reoriented. Bloom may also be used to hide the Start menu.

To bloom:

- Hold out your hand with your palm up and fingertips together
- Then open your hand

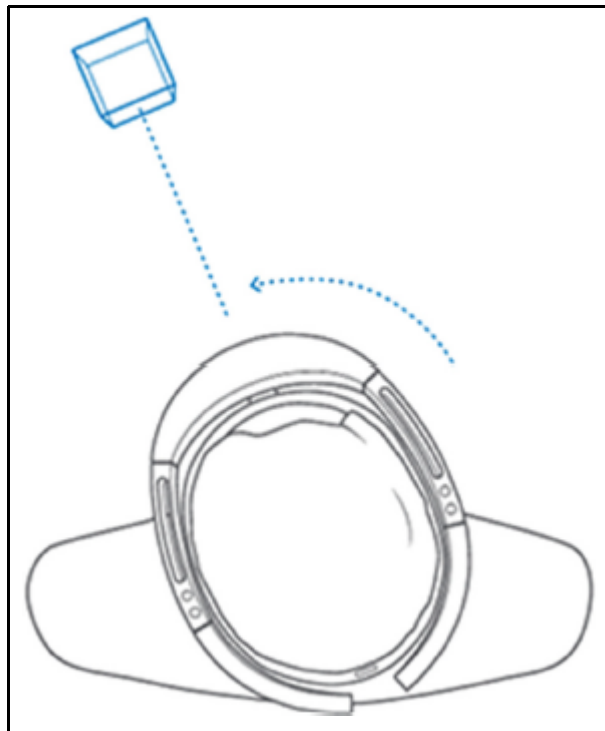


Bloom

Gaze

A gaze can be used to move the cursor and highlight apps and other holograms for selection. The cursor follows whole head movements as opposed to simple movement of the eyes.

Holograms are highlighted when they are available to be selected.



Gaze

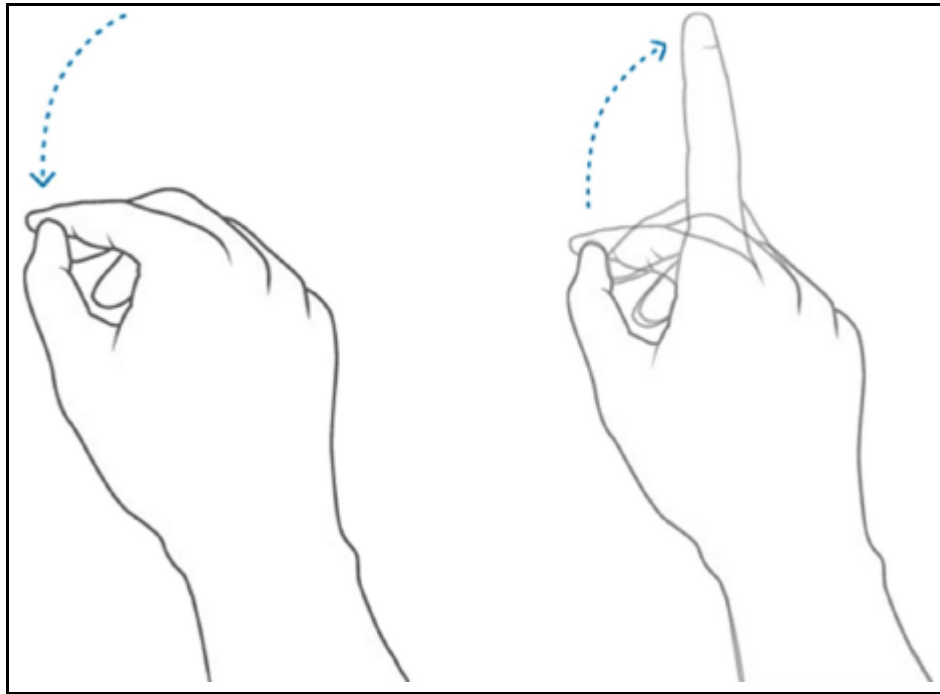
Air Tap

Use air tap, along with gaze, to select apps and other holograms.

To use Air Tap:

1. Gaze at a hologram.
2. Hold your hand straight out in front of you in a loose fist.
3. Point your index finger straight up toward the ceiling.
4. Point your thumb straight out, forming an "L" with your index finger.

5. Keep your elbow low and comfortable.



Air Tap

6. Tap your finger down, then quickly raise it back up again.

Tap and Hold

To tap and hold, start with an air tap, but keep your finger down instead of raising it back up.

Use tap and hold to:

- **Scroll:** On the app bar, select Scroll Tool. Tap and hold until the tool appears, then slowly move your hand up and down or side to side. To scroll faster, move your hand farther from the center of the tool.
- **Drag:** On the app bar, select Drag Tool. Tap and hold until the tool appears, then slowly move your hand up and down or side to side.
- Drag the calibration arrows in the calibration step of LucinaAR.
- **Pin, unpin, or uninstall an app:** Tap and hold an app tile on Start or in the All apps list, then select one of the menu choices.
- **Resize an app:** On the app bar, select Adjust. Tap and hold one of the blue squares in the corners of the app window, then move your hand to resize.
- **Move an app:** On the app bar, select Adjust. Continue gazing at the app window, then move your hand to position the app.

Zoom and Rotate Gestures

For all zoom and rotation gestures below, ensure that your index and thumb are visible by the HoloLens camera.

Note: The tap and hold gesture is described at the following link: <https://support.microsoft.com/en-ca/help/12644/hololens-use-gestures>

Zoom Gestures:

- **Zoom IN:** Tap and hold, then slowly move your hand towards you
- **Zoom OUT:** Tap and hold, then slowly move your hand away from you

Rotation Gestures:

- **Rotate CLOCKWISE:** Tap and hold, then slowly move your hand towards the left
- **Rotate COUNTERCLOCKWISE:** Tap and hold, then slowly move your hand towards the right

Environmental Anchoring

The stability of the anchoring is highly impacted by the knowledge the HoloLens has of its environment. It is important to scan your surroundings when using the HoloLens in a new room. This prevents the hologram from drifting causing the device to lose its tracking.

Prior to launching LucinaAR, walk around with the HoloLens on your head so it can map the surroundings. Microsoft suggests doing this for between 5 and 10 minutes, to look at the ceiling, the floor and other objects from all sides. This step is important so the holograms stay grounded in the world preventing the device from "getting lost". One trick is to finger tap in the air while looking

around. This directs the device to return visual feedback on its spatial mapping, drawing green triangles on the surfaces it knows about.

Note: The HoloLens continuously tracks its surroundings to maintain its position in the World. Here are examples of things that can confuse the device. None of them is critical by itself but combined they can create a bad experience where the device may lose its tracking ability.

- Windows, mirrors
- White empty walls (posters help)
- No furniture
- Looking at a display monitor (ex: having a large TV in the field of view when looking at the manikin)

Note: During the experience, you may see an image with the following text: "Trying to map your surroundings..." This is because the HoloLens is having difficulty tracking the environment. Ensure that you are taking the environmental considerations above into consideration and scan your environment with the HoloLens until the warning disappears from your field of view.

Know Your Surroundings

Getting around HoloLens is a bit different from using Windows on other devices. Instead of moving the cursor with a mouse, you use your gaze instead of moving a mouse and hand gestures instead of clicking or tapping.

Use in Safe Surroundings

When using the HoloLens you will move your body and walk around the mannequin to change your field of view and viewing angle. Be sure to use the HoloLens in a place that is free of obstructions and tripping. Clear the area of any tripping hazards and provide enough clear space to move freely.

About Your Environment

- Use HoloLens in a room with adequate light and plenty of space. Avoid dark spaces and rooms with a lot of dark, shiny, or translucent surfaces.
- Avoid spaces with a lot of motion, as this may cause distraction and interfere with HoloLens calibration.

Be Physically Capable

Make sure your balance and physical abilities are sufficient for any movements while using HoloLens. Take breaks periodically and stop and rest if you get tired, sore, or experience any discomfort.

Stay Comfortable

Some people may experience discomfort such as nausea, motion sickness, dizziness, disorientation, headache, fatigue, eye strain, or dry eyes when using mixed or virtual reality, particularly as they adjust to using it. Typically, motion sickness and related symptoms occur when there is a mismatch between what you see and what your body perceives. If you are prone to motion sickness in other situations, are afraid of heights, get migraine headaches, have an inner ear disorder, or other health conditions, you may be at increased risk of discomfort.

Certain Situations Can Increase Your Risk of Discomfort

For example:

- Being a new user - symptoms tend to decrease as your vision system adapts
- Display not calibrated, or headset not oriented correctly on your head. Make sure HoloLens is properly calibrated and that it is properly aligned by using the Calibration application.
- Certain types of content, particularly games or movies that make you feel as if you are moving through space or looking down from high, or interactions that involve tracking moving objects
- Using HoloLens for extended periods without a break
- Using HoloLens in a completely dark environment that keeps you from seeing visual cues with your peripheral vision

Consider Keeping Your First Sessions Brief

Start slowly and look around to get a feel for how the virtual objects and the outside world interact. For most people discomfort should decrease as you get more practice over your first few sessions.

Take Periodic Breaks

Take breaks periodically and stop and rest if you experience any discomfort. The timing and length of breaks may depend on the individual user and what you are doing with HoloLens.

If You Experience Discomfort

If you experience discomfort, stop using HoloLens and rest until you feel better. Sitting still in a well-lit environment can help speed recovery from disorientation. If you feel disoriented, avoid activities that require balance, coordination, or other capabilities until you recover. Be sure the display is properly calibrated. Take note of the type of content you were viewing and other aspects of the situation in which the discomfort occurred so you can adjust or ease into the situation next time. People differ in the time they take to adapt. Consider taking more frequent or longer breaks.

If symptoms are severe or persist, consult your doctor. Viewing AR or Mixed Reality is not known to harm vision development or cause binocular vision disorders. If you are not able to view the AR effect clearly and comfortably, consider consulting an eye doctor, as you may have an undiagnosed binocular vision disorder.

SETUP

Prior to using the HoloLens and simulator exercises, it is necessary to setup and configure the network settings for the HoloLens to function properly.

Setup LucinaAR	
1	Validate Microsoft HoloLens Account
2	Charge the HoloLens
3	Connect and Start the HoloLens
4	Power On the HoloLens
5	Establish the Network Connection
6	Update the System
7	Download Updates from Microsoft Store
8	Manage Network Connections
9	Configure the Start Menu
10	Setup Lucina with Müse

Validate Microsoft HoloLens Account

At the time of its manufacture, the HoloLens is bound to a Microsoft account. The format of the email account address is: **mfs####@outlook.com**, where **####** is the serial number of the LucinaAR unit. The password for the account is: **CAEadmin** and SHOULD NOT be changed.

If the HoloLens require validation, this account information will be used.

Charge the HoloLens

Connect the power supply to the charging port using the included Micro USB cable. Then plug the power supply into a power outlet to charge the HoloLens. When the device is charging, the battery indicator lights up in a wave pattern.

NOTE: Put the HoloLens in sleep mode by briefly pressing the Power button.

The battery indicator shows the battery level in increments when the HoloLens is on. When only one of the five lights is on, the battery level is below 20 percent. If the battery level is critically low and you try to turn on the device, one light will blink briefly, then go out.

Battery LEDs

LED Action	Indication
Scrolling Center Outward	HoloLens is Starting
All On	HoloLens is on and charging (Battery life is shown in 20% increments)
Turning Off one at a time	HoloLens is Shutting Down
All turn Off at once	HoloLens has gone into Standby
All Lighted - One Blinking - All Lighted	Battery is Critically Low - HoloLens needs to Charge
All Scroll - One Blinks - All Scroll	Battery is Critically Low - HoloLens is Charging
Scrolling Center Outward	HoloLens is Starting

Connect and Start the HoloLens

Prior to beginning this process, start with the router and HoloLens powered off. To connect the HoloLens:

1. Plug in the power supply and turn on the wireless router.



5 Ghz Wireless Router

2. Connect the network cable between any of the blue ports on the router and the Ethernet LAN port on Lucina's right side.



Lucina Ethernet Ports

3. Press the power button located on the right side of the manikin's torso to turn on Lucina and wait for the manikin to say "hello."

Power on the HoloLens

The first time the HoloLens is powered on it needs to be awakened from sleep mode.

To wake the HoloLens from Sleep Mode:

1. Hold the Power button down for three seconds. Allow it to boot up.



Microsoft HoloLens

2. After the first time, turn on the HoloLens by pressing the Power button.

Note: LED lights near the power button indicate the current battery level. See "Battery LEDs" on page 10 for more information.

3. Bloom to view the Start menu.

Establish a Network Connection

The HoloLens is pre-configured to connect to the router. To ensure the router is connected:

1. Verify the wireless connectivity to the network by viewing the WiFi status indicator at the top of the Start menu.
2. Verify that it indicates **LUCINA####**, where **####** is the serial number of the simulator.

If the network does not match the desired simulator, see the *Troubleshooting* section of this guide.

Update the System

When a software update for LucinaAR is released during the warranty period, you will be notified via email, phone, or standard mail.

The HoloLens operating system and Microsoft Store need to be updated often to better support a new update. Install any available Windows updates before installing any available Microsoft Store updates.

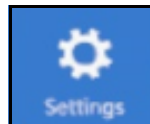
IMPORTANT: The LucinaAR application does not update automatically, and you must check for updates. Before checking for updates, ensure that your HoloLens operating system and Microsoft Store are up to date.

Update HoloLens Operating System

NOTE: The update process can take several hours to complete depending on the speed of your WiFi network connection. Prior to starting the update process, ensure that the HoloLens is charged.

To update the HoloLens operating system:

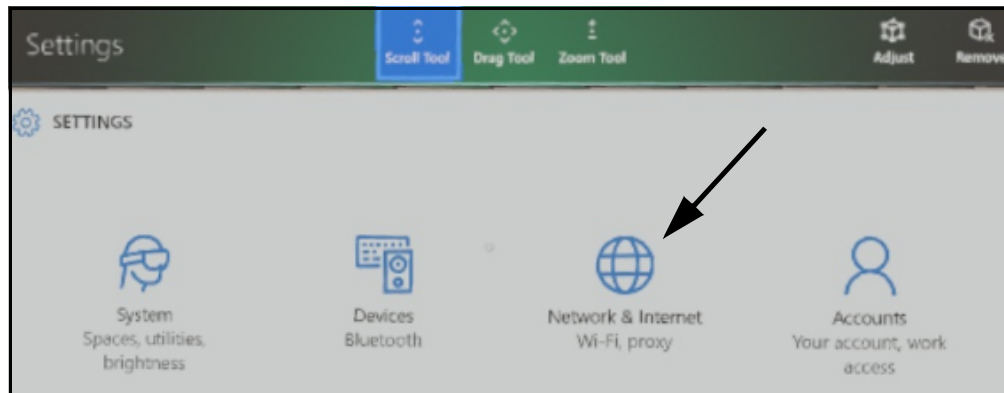
1. Bloom to show the Start menu.
2. Select the **Settings** icon with air tap along with gaze.



The Settings Icon

3. Move the Settings window with gaze, and air tap to anchor it in place and run.

4. Select the **Network & Internet** icon with air tap along with gaze.

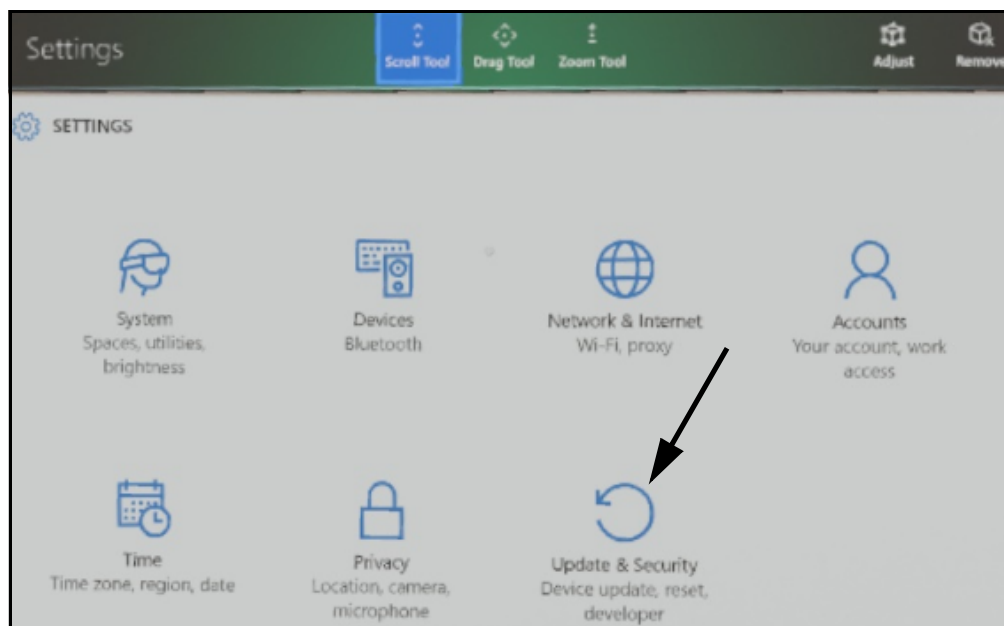


Settings Window Network & Internet Icon

5. Connect to a WiFi network with Internet capabilities. If required, enter the password for the network.

NOTE: Use care when selecting characters on the virtual keyboard.

6. Return to the main Settings menu by selecting the **Go back** icon in the top left corner of the Settings window with air tap along with gaze.
7. Select the **Update & Security** icon with air tap along with gaze.

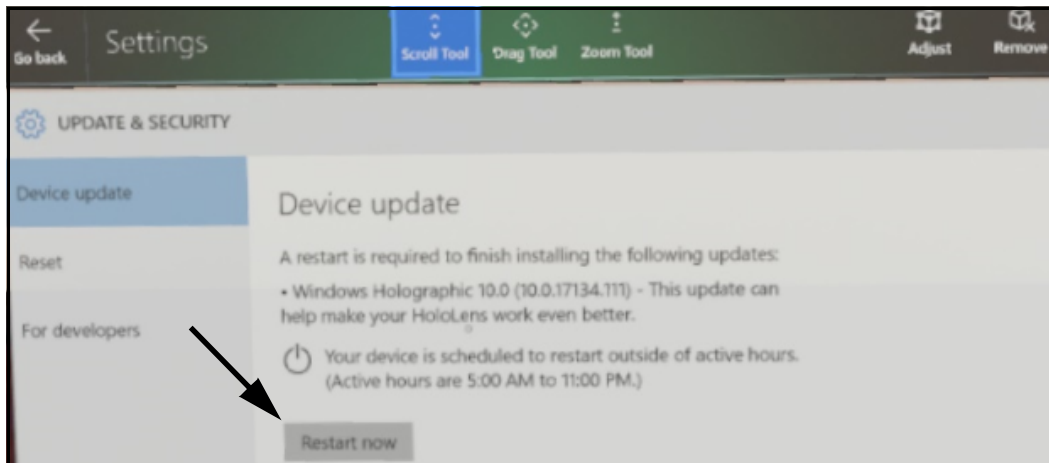


Settings Window Update & Security Icon

8. Select the **Check for updates** button with air tap along with gaze even if it says "You're up to date." If any HoloLens operating system updates are available, they begin to download and install.

NOTE: This step could take more than 20 minutes to complete.

9. Select the **Restart now** button with air tap along with gaze to complete the installation.



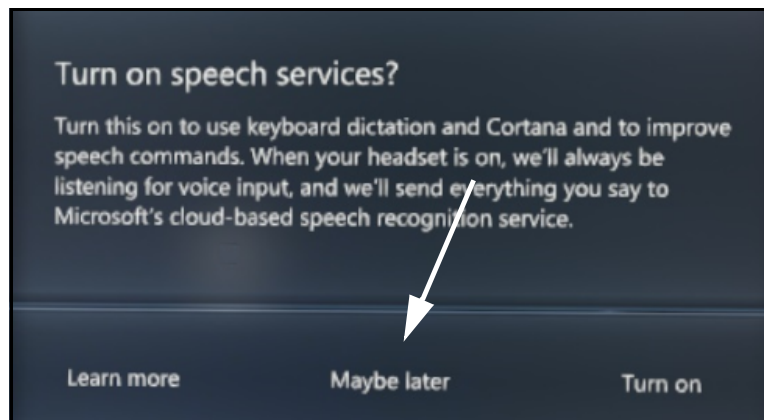
Settings Window Restart Now Button

NOTE: This step could take more than 20 minutes to complete. While the HoloLens is restarting, you may connect the HoloLens to power, and place the HoloLens upright in its case to keep it from sleeping.

10. After the HoloLens has restarted, sign into to your Microsoft account, for which the password is **CAEadmin**.

NOTE: Use care when selecting characters on the virtual keyboard.

11. When prompted, don't turn on speech services by selecting the **Maybe later** button with air tap along with gaze.



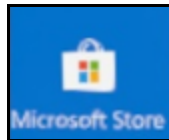
Speech Services Turn On Button

12. Repeat steps 1 to 11 until there are no more HoloLens operating system updates to download and install.

Download Updates from Microsoft Store

To download LucinaAR updates from the Microsoft Store:

1. Bloom to show the Start menu. If the Microsoft Store icon is not shown on the Start menu, do one of the following:
 - Select the **All Apps** icon using air tap along with gaze.
 - Use gaze and follow the voice command prompt by saying “All Apps” when it appears at the bottom of the All Apps icon.
2. Select the **Microsoft Store** icon with one of the following methods:
 - Use air tap along with gaze.
 - Use gaze and follow the voice command prompt by saying “Microsoft Store” when it appears at the bottom of the Microsoft Store icon.



Microsoft Store Icon

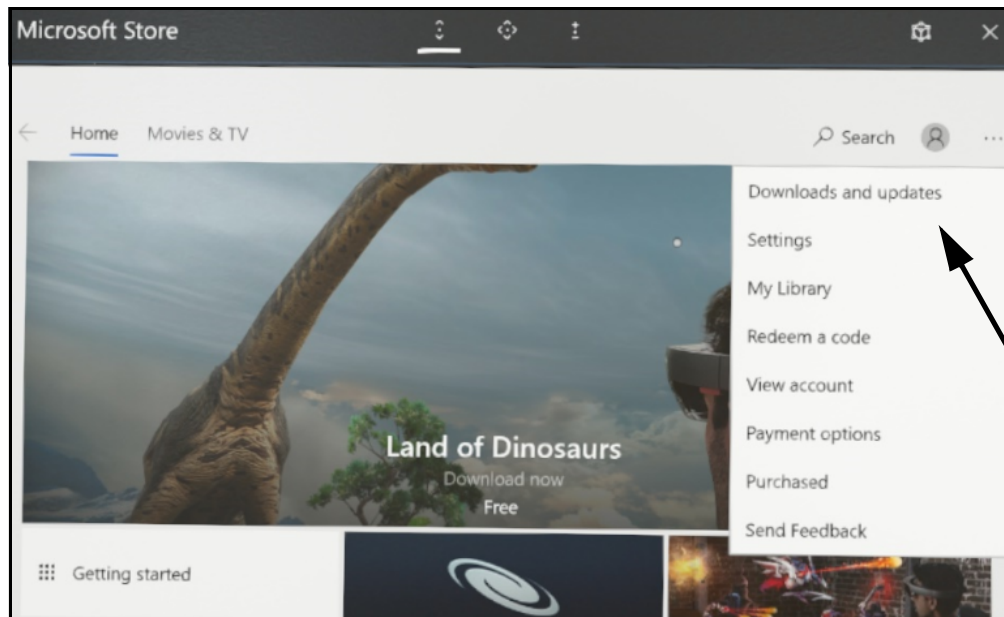
NOTE: While completing the steps below, you may be prompted to sign into your Microsoft account, for which the password is **CAEadmin**.

3. Select the **See More** icon near the upper right corner of the Microsoft Store window with one of the following methods:
 - Use air tap along with gaze.
 - Use gaze and follow the voice command prompt by saying “See more” when it appears at the bottom of the See More icon.



The See More Icon

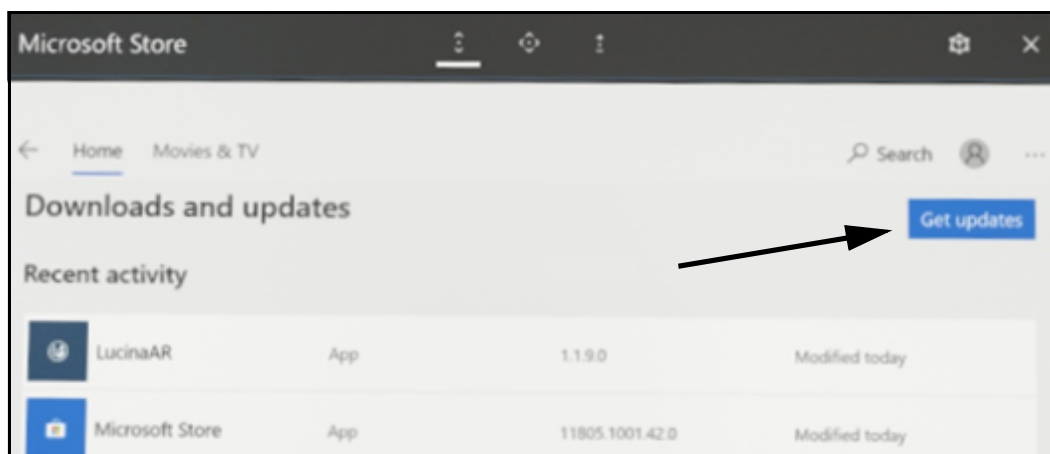
4. Select the **Downloads and updates** option with one of the following methods:
 - Use air tap along with gaze.
 - Use gaze and follow the voice command prompt by saying “Downloads and updates” when it appears at the bottom of the Downloads and updates option.



Downloads and Updates Option

5. Select the **Get Updates** button with one of the following options:
 - Use air tap along with gaze.
 - Use gaze and follow the voice command prompt by saying “Get updates” when it appears at the bottom of the Get Updates button.

NOTE: It may take a few minutes for the available updates to be displayed.



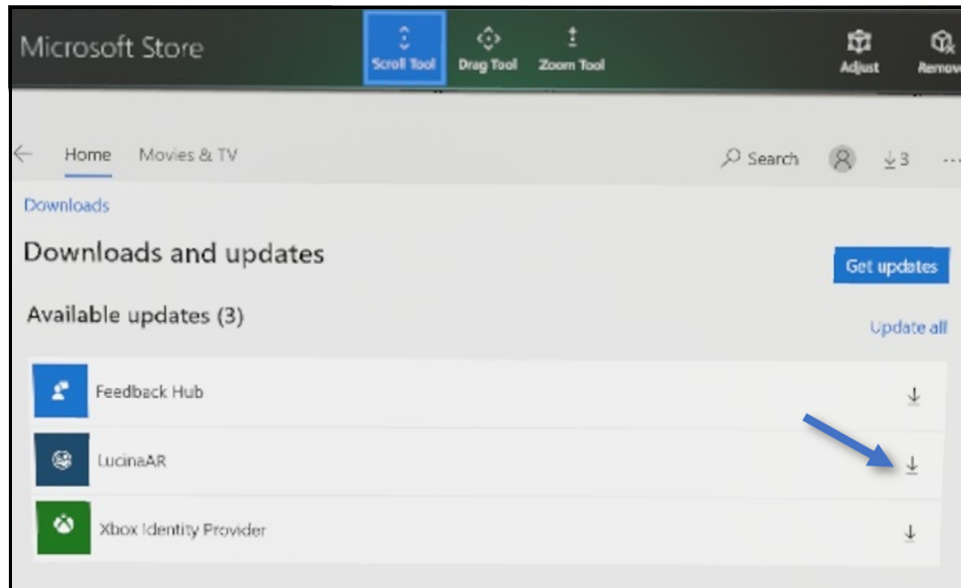
Get Updates Button

6. If a Microsoft Store update is available, download and install.

Update Lucina AR

To update the LucinaAR App:

1. Select the **Download** icon for the LucinaAR application with air tap along with gaze.

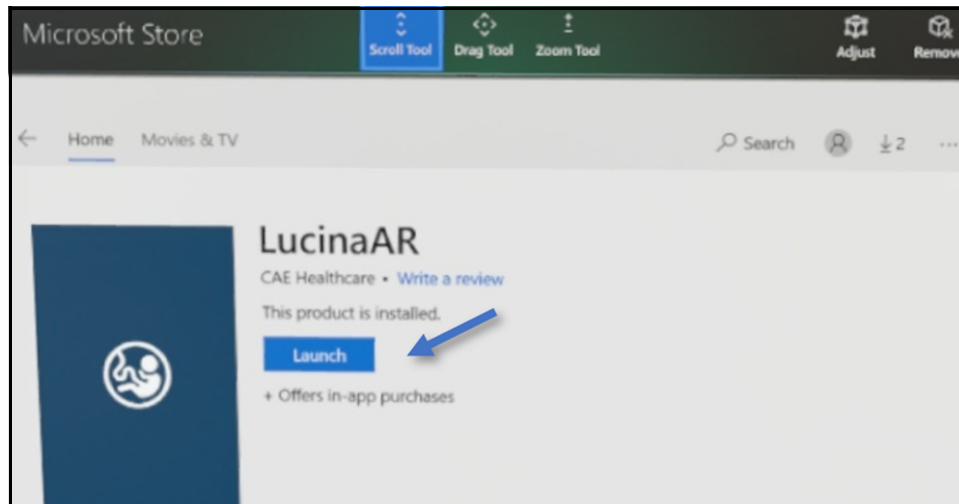


Download Icon

NOTE: The download may take a few minutes to complete. You can follow the progress of the download when the LucinaAR application appears in the download queue section.

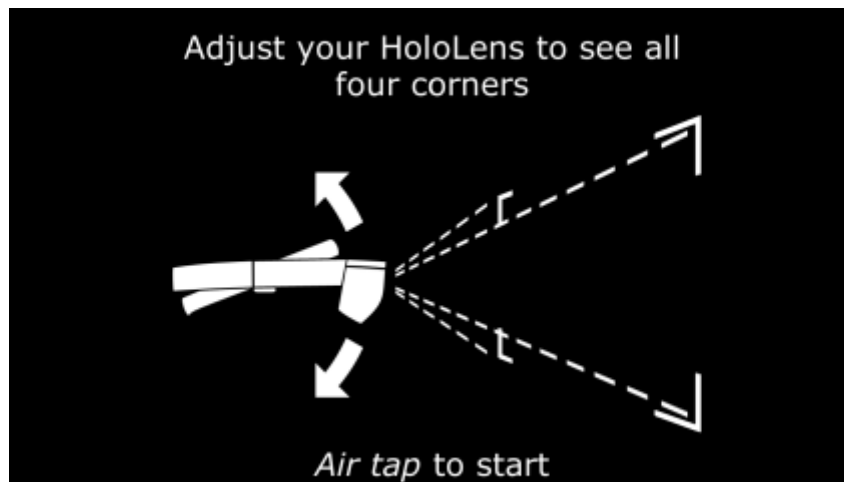
2. From the Microsoft Store, air tap along with gaze the **Recent activity** section and select the LucinaAR application.

3. Select the Launch button to launch the LucinaAR application with one of the following methods:
 - Use air tap along with gaze.
 - Use gaze and follow the voice command prompt by saying "Launch" when it appears at the bottom of the **Launch** button.



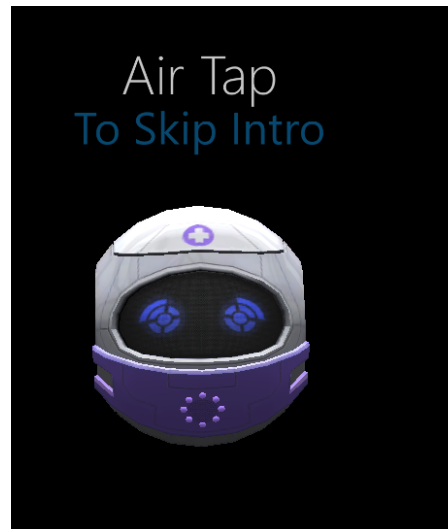
Launch Button

4. Adjust your HoloLens to see all four corners of the Fitbox and air tap to continue.



Fitbox

5. Air tap on Iris to skip her introduction.



Air Tap to Skip Iris's Introduction

6. Select the **Refresh** button in the Settings menu by using air tap along with gaze.



The Refresh Button in the Settings Menu

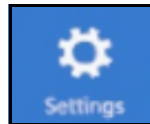
7. Verify that the **Version** number at the bottom of the **Settings** menu has been updated and that the license number is correct. If there are any discrepancies, contact CAE Customer Service. Otherwise, the update is complete.

NOTE: The license number represents the maximum number of clients that can connect to the host and will vary depending on the license associated with your account.

Manage Network Connections

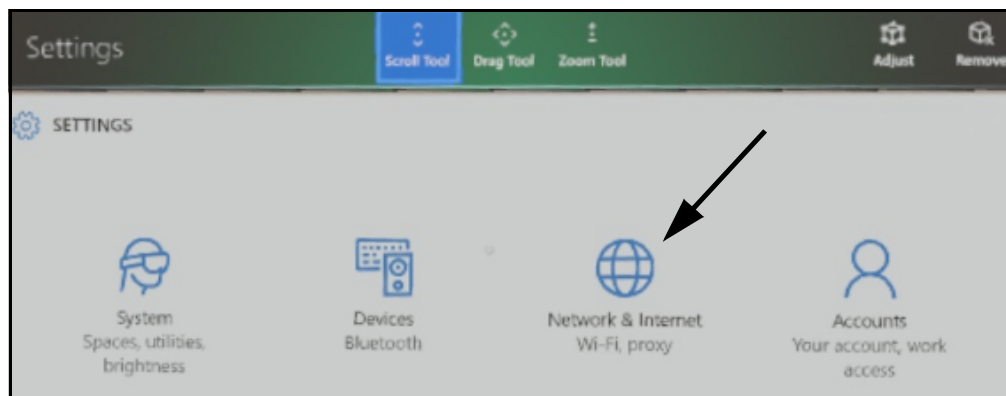
To remove available networks from the Known Networks list:

1. Bloom to show the Start menu.
2. Select the **Settings** icon with air tap along with gaze.



The Settings Icon

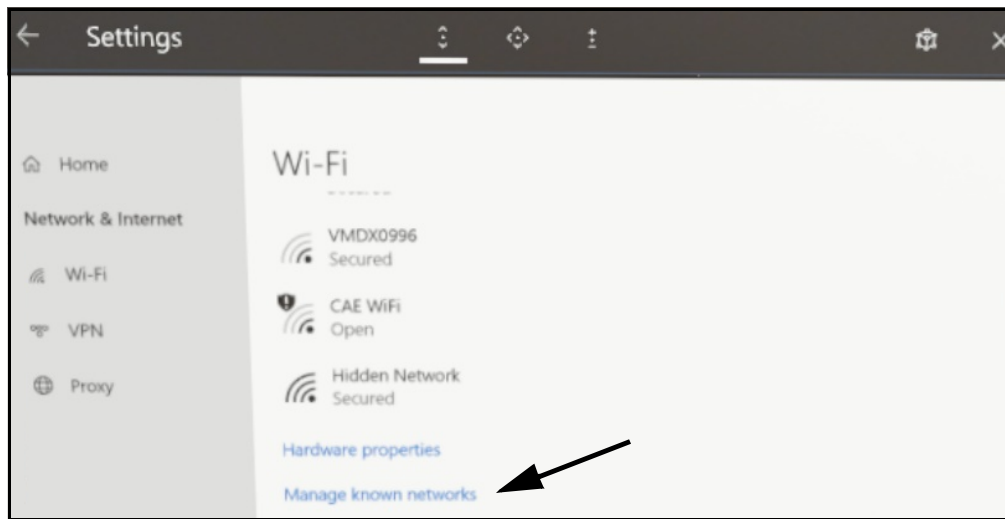
3. Move the Settings window with gaze, and air tap to anchor it in place and run.
4. Select the **Network & Internet** icon with air tap along with gaze.



Settings Window Network & Internet Icon

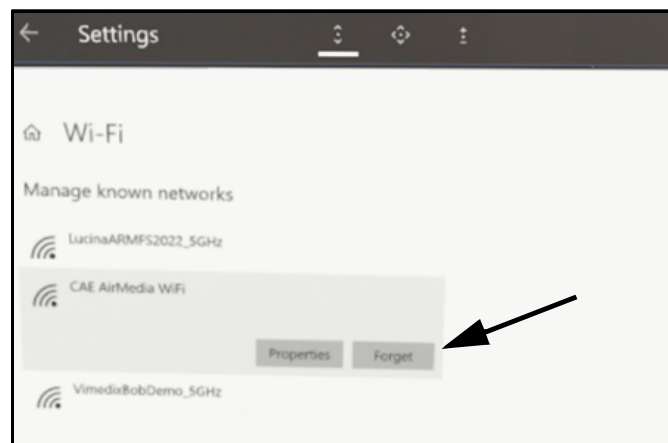
5. Select the **Manage known networks** option below the list of available WiFi networks with air tap along with gaze.

NOTE: Depending on the number of available WiFi networks, you may need to air scroll to the bottom of the list to see the Manage known networks option.



Network & Internet Manage Known Networks Option

6. Select any network other than your product's WiFi network with air tap along with gaze, and select the Forget button with air tap along with gaze when it appears.

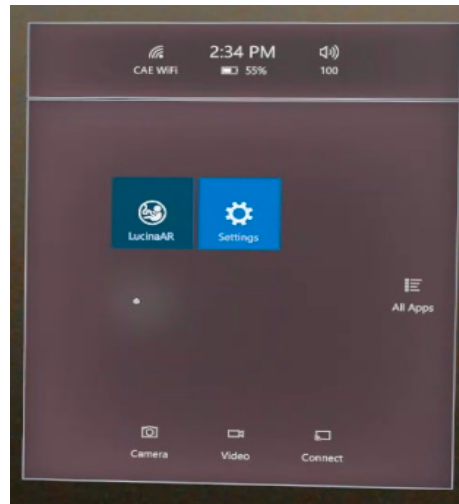


Manage Known Networks Forget Button

7. Repeat step 6 until only your product's WiFi network remains.
8. Close all open windows and verify functionality of your HoloLens.

Configure the Start Menu

HoloLens operating system updates may alter your Start menu configuration.



Start Menu

If this is the case, you can unpin or pin applications to your Start menu by selecting the application with air tap along with gaze until the Unpin or Pin options appear, respectively. Select the Unpin or Pin options with one of the following methods:

- Use air tap along with gaze.
- Use gaze and follow the voice command prompt by saying “Unpin” or “Pin” when they appear at the bottom of the Unpin or Pin options, respectively.

IMPORTANT: Be careful not to select the Uninstall option when unpinning an application.

Setup Lucina with Müse

To setup Lucina with Müse:

1. Connect the router to Lucina using the Ethernet port on Lucina’s side.
2. In Müse, start one of the augmented reality supported SCEs: **Shoulder Dystocia**, **A Normal Delivery** or **A Vaginal Breech Delivery**.
3. Place baby on Home position, as specified by the selected SCE in Müse.
4. Optional: Set **Rate of descent** to max (15).
5. Optional: Set **Contraction Frequency** to max (7).

Note: Keep the delivery at Pause. The HoloLens will automatically Play the simulation when needed.

USING LUCINAAR

The LucinaAR app enhances the simulation learning experience through the use of augmented reality and allows learners to gain a deeper understanding of the manikin's physiology during clinical scenarios.

Launch the LucinaAR App

1. Bloom to view the Start menu.
2. Verify that the HoloLens is connected to the **LUCINA####** wireless network.
3. **Optional:** Connect the clicker to the HoloLens if you prefer to click instead of air tap.
4. Start the application by tapping the LucinaAR icon.

LucinaAR App Icons

The following icons will provide feedback and allow you to perform functions:



Connected: Indicates that the HoloLens is connected to Lucina's Ethernet.



Not Connected: Indicates that the HoloLens is NOT connected to Lucina's Ethernet.



Multi-User: Indicates that you are operating in Multi-User Mode.



Instructor: Indicates that you are operating as the Instructor. Learners will see what you see but you will have full control of the experience.



Learner: Indicates that you are operating as the Learner. You will see what the Instructor sees. The Instructor will have full control of the experience.



Connection Counter: Indicates the number of Learners connected. The Connection Counter is ONLY visible to the Instructor.



Settings Icon: Opens the Settings menu.



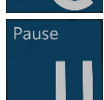
Home Icon: Exits the current Chapter and returns you to the Chapters menu.



Initial Icon: Returns you to the beginning of the simulated clinical experience.



Replay Icon: Replays the current Chapter Experience.



Pause Icon: Pauses the current Chapter Experience. Tapping it a second time resumes the current Chapter Experience.



Next Icon: Advances you to the Next chapter.



Information Icon: Provides an informational narrative of the current chapter.



Previous Icon: Returns you to the previous chapter.

Tutorial Mode

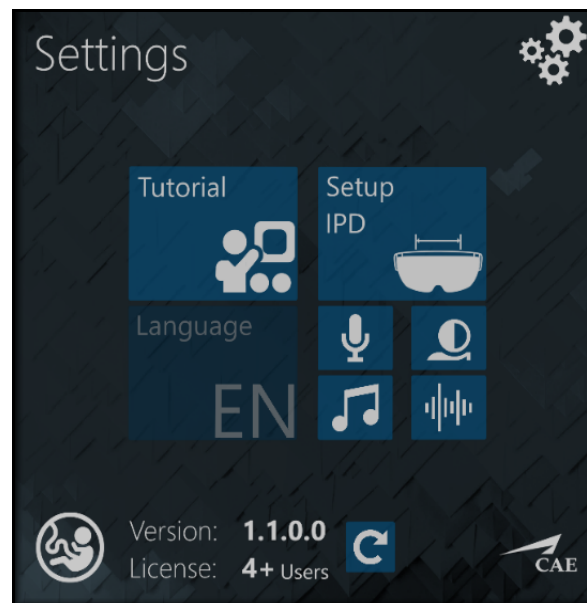
When you first start the application, you will be transferred to the Tutorial Mode. In this mode, you will learn everything you need to know about LucinaAR to properly use the application.

If you skipped the tutorial by mistake on your first start of the application, or if you'd like a reminder, you can always access the Tutorial Mode by clicking the **Tutorial** button on the Settings Menu at the beginning of the application.

Settings Menu

The settings menu contains buttons that allow you to:

- Play the tutorial
- Change the language of the application (currently unavailable)
- Setup the Inter Pupil Distance (IPD) of the HoloLens
- Mute your narration in Single User mode, or mute the narration of Learners and the Instructor sharing an experience
- Change the skin color of the holographic manikin
- Mute the music
- Mute all the sound effects



Settings Menu

NOTE: Instructors and single users can use all options. Learners cannot change the skin color of the manikin or change the mute settings.

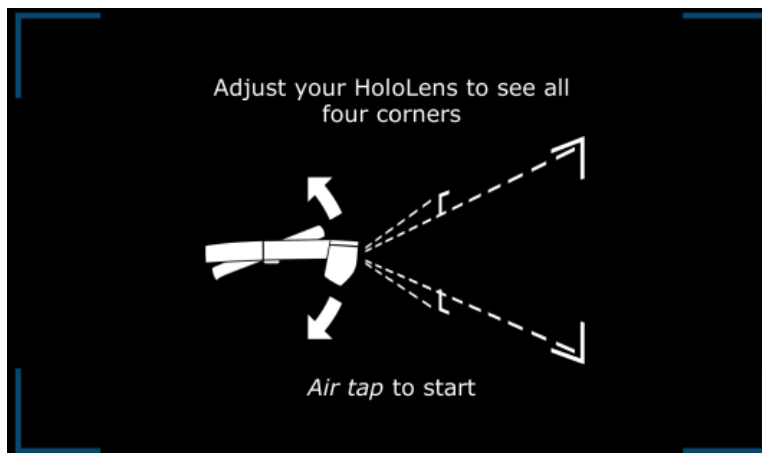
Practice Modes

Single User

The single user mode uses pre-recorded data to drive the physiological values during the experience. If you select this mode, a holographic manikin will automatically be used.

To use the application in single usermode:

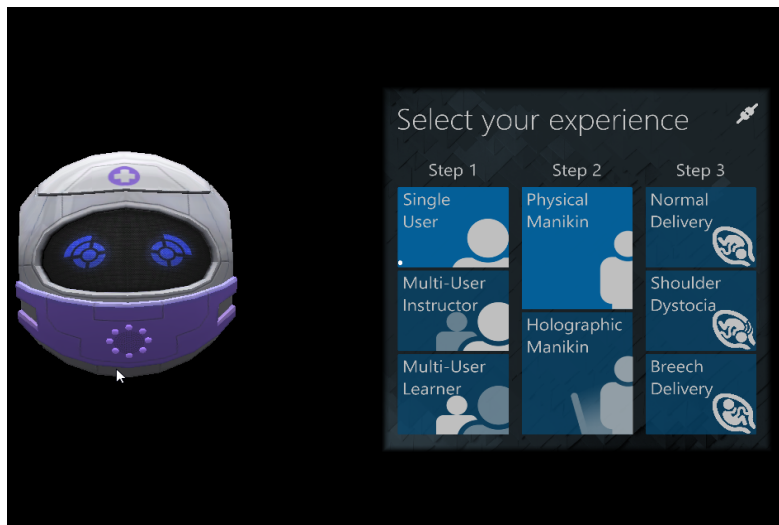
1. Visualize in your field of view the four corners of the Fitbox and tap to continue.



Fitbox

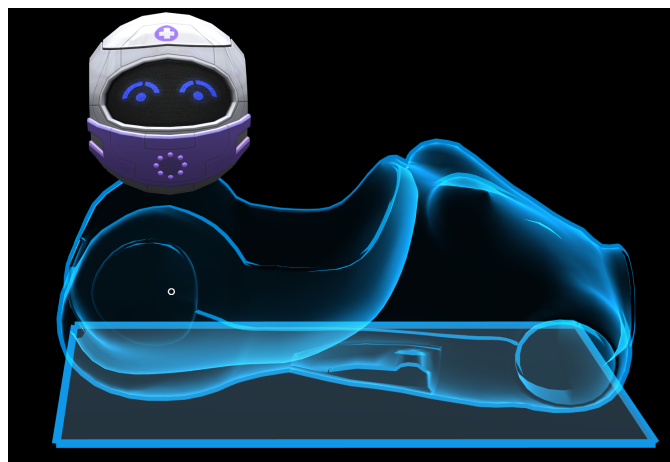
2. On the **Select your experience** menu:
 - a. Tap **Single User**.
 - b. Tap **Physical Manikin**.

- c. To start the calibration, select the same SCE that was selected in Müse.



Select Your Experience Menu

3. On **Gaze Calibration**:
 - a. Place yourself on the left side of the manikin to match the hologram with the good orientation atop the manikin.
 - b. Tap to place the hologram at the selected position.



Gaze Calibration

- c. Tap the **Done** button to go to **Fine Tuning**.
4. On **Fine Tuning Calibration**:
 - a. Tap on the arrows to match the different directions of the arrows using small steps.
 - b. To make bigger displacements, drag (tap and hold) the selected arrow.

- c. Try to place the hologram as close as possible to the figure below, focus specially on the red circle on the lower border of the vaginal area.



Fine Tuning Calibration - Single User

- d. When you are placed on the side of Lucina as shown below, keep the hologram at one inch of distance as in the above figure.

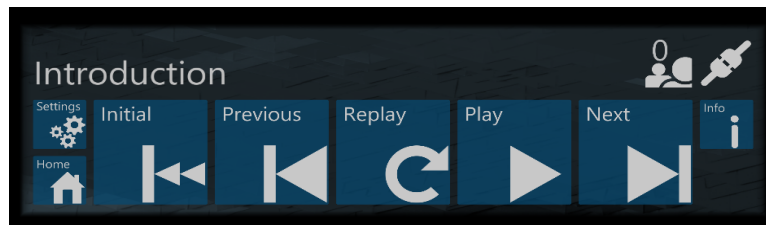


Hologram within One Inch of Manikin

- e. Tap **Done** to start the simulation.

The list of available chapters will depend on the selected SCE.

In Experience Chapter controls are as follows:



In Experience Chapter Controls

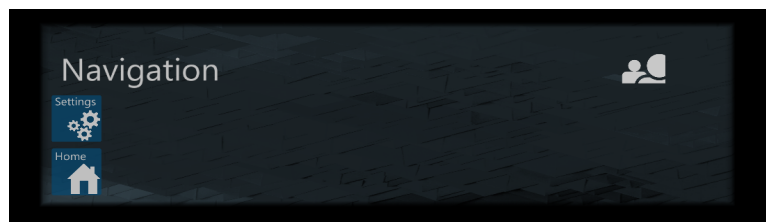
Multi-User

Instructor

1. Visualize the 4 corners of the Fitbox and tap to continue
2. On the **Select your experience** menu:
 - a. Tap **Multi-User Instructor**.
 - b. Tap **Physical Manikin**.
 - c. To start the calibration, select the same SCE that was selected in Müse.
3. Perform the calibration as it's done in single user mode.
4. When the simulation starts, wait for the other user clients before changing chapters. The clients will follow chapter changes selected by the host. Controls will be as explained in single mode.

Learner

1. Visualize the four corners of the Fitbox and tap to **Continue**.
2. On the **Select your experience** menu:
 - a. Tap **Physical Manikin**.
 - b. To start the calibration, tap **Start**.
3. Perform the calibration as it is done in single mode. Once the simulation starts, you will see the menu shown below:



Client Simulation Menu

4. Follow the changes of the **Host Client**.

NOTE: Tapping the **Home** button exits the experience.

Holographic Mode

In this mode, you will have essentially the same simulation as practice mode, but the physical manikin will be replaced by a holograph.

Single User

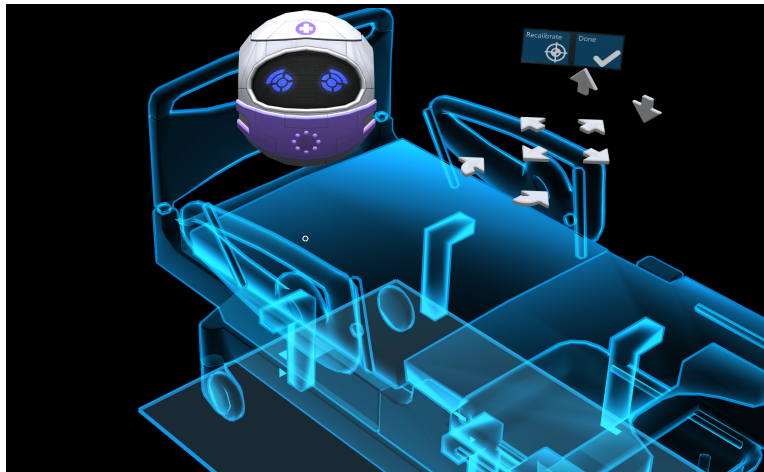
1. Visualize the four corners of the Fitbox and tap to continue.
2. On the **Select your experience** menu:
 - a. Tap **Single User**.
 - b. Tap **Holographic Manikin**.
 - c. To start the calibration, tap **Start**.
3. Gaze to any plane surface until you see the circle shown below.



Calibration Image

4. Tap to select that position.

5. On **Fine Tuning** calibration, tap the arrows to move the bed to your preferred position.



Fine Tune Calibration - Holographic Mode

6. To start the simulation, tap **Done**.
7. In preparation mode, you will have the same controls as practice mode.

Multi-User

Instructor

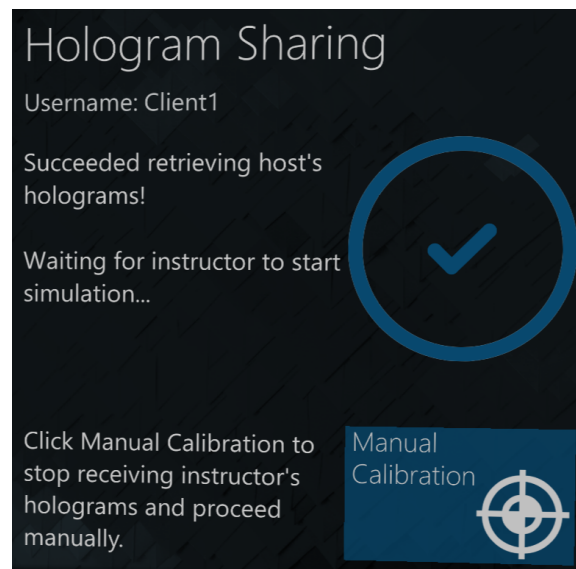
1. Visualize the four corners of the Fitbox and tap to continue.
2. On the **Select your experience** menu:
 - a. Tap **Multi-User Host**.
 - b. Tap **Holographic Manikin**.
 - c. To start the calibration, tap **Start**.
3. **Calibrate** your holograms as done in Single mode.
4. Wait for the clients to connect before changing the chapter.

Learner

1. Visualize the four corners of the Fitbox and tap to continue.
2. On the **Select your experience** menu:
 - a. Tap **Multi-User Client**.
 - b. Tap **Holographic Manikin**.
 - c. To start the calibration, tap **Start**.

You automatically receive the position of the instructor's holograms.

If you are satisfied with the position of the instructor's holograms, simply wait for the instructor to start the chapter.



Hologram Sharing Screen

If you feel the need to recalibrate the holograms to the desired position, you can stop receiving the instructor's holograms and proceed with manual calibration, as done in Single mode.

- d. Once you are done calibrating, air tap **Done** to join the simulation.

End the Simulation

To end a LucinaAR simulation with the HoloLens:

1. Use the bloom gesture to return to the LucinaAR Start menu.
2. Tap the **Remove** icon in the upper right corner of the LucinaAR Startup window to exit LucinaAR and close the window.
3. Glance around the environment and verify that all virtual windows have been closed.

Power Off

You must power off the HoloLens and simulator.

To power off the HoloLens:

1. Press and hold down the power button on the head band until the HoloLens says, "Goodbye."
2. Plug the power supply into the HoloLens and allow the unit to recharge.

To power off the simulator:

1. Stop the SCE and exit Maestro.
2. Turn off the tablet.
3. Press the power button on the right side of the manikin's torso to power down.

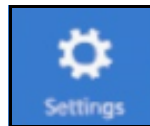
TROUBLESHOOTING

If you encounter problems while operating your LucinaAR, check the common solutions below prior to contacting CAE Customer Service.

Wireless Connection Issue

To connect to the desired simulator network:

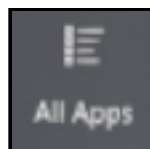
1. Bloom to show the **Start** menu.
2. Select the **Settings** icon using one of the following methods:
 - Use air tap along with gaze.
 - Use gaze and follow the voice command prompt by saying “Settings” when it appears at the bottom of the **Settings** icon.



The Settings Icon

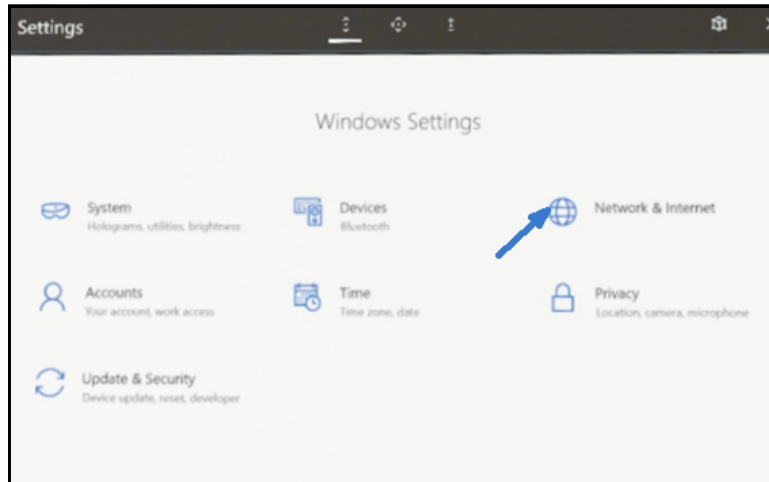
Note: If the **Settings** icon is not shown on the Start menu, select the **All Apps** icon with one of the following methods:

- Use air tap along with gaze.
- Use gaze and follow the voice command prompt by saying “All Apps” when it appears at the bottom of the **All Apps** icon.



The All Apps Icon

3. Select the **Network & Internet** icon by using air tap along with gaze.

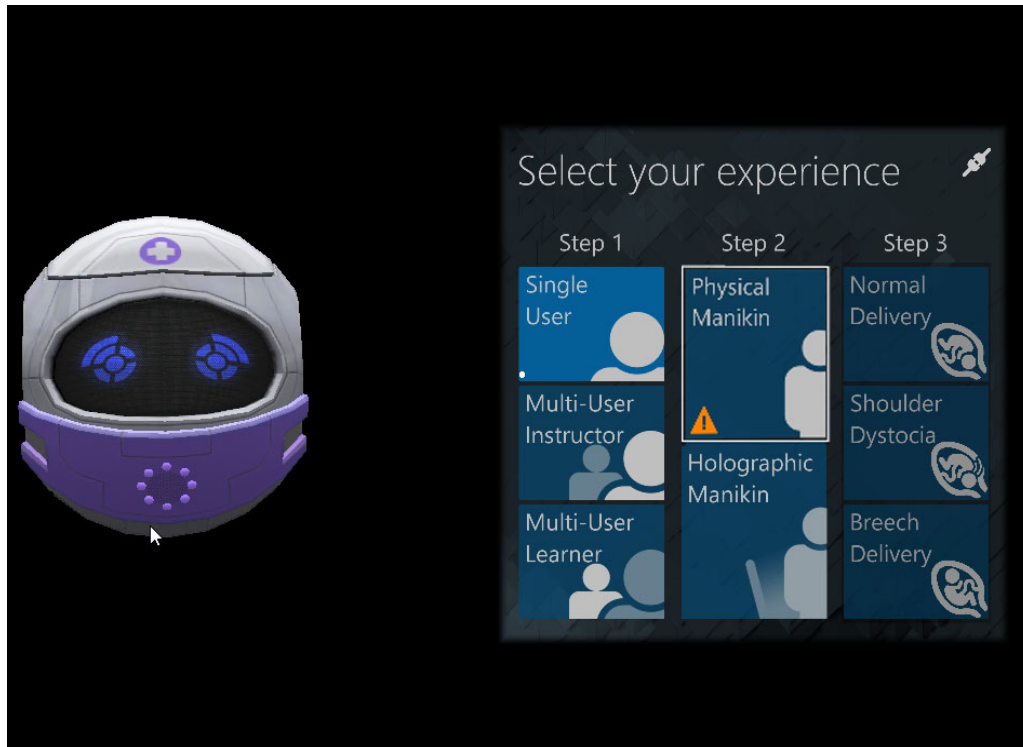


Settings Window Network and Internet Icon

4. Select the **Settings** icon in the Start menu.
5. Air tap the Settings window to anchor it in place.
6. Select the **Network & Internet** icon.
7. Connect to the appropriate LUCINA WIFI network and enter password **caeadmin**.

Simulator Not Found Error

While selecting your experience, if the application detects any problem, you might encounter a warning icon like the following:



Select Your Experience Screen with Warning Message

Click on the button with the warning icon to open the Troubleshooting panel

You will find information about your current issue and appropriate steps to help you solve the problem.



Troubleshooting Panel