# Cyber Eyez 2.5 on Vuzix Smart Glasses

## User Guide

## Version 2.5

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# Introduction

Welcome to the Cyber Eyez family! We are thrilled that you have chosen the best head mounted device and software in the world and want to make sure your experience is excellent. This guide will help provide information for Cyber Eyez compatible hardware along with general hints for the Cyber Eyez application. Please remember that Cyber Timez believes strongly that we should always be "In the Service of Others," so at anytime you feel frustrated or overwhelmed we strongly suggest contacting the Help Desk.

## We Want Your Feedback

Cyber Eyez is developed in cooperation with the low vision and blind community with constant feedback from our Cyber Eyez family. At any time, please feel free to reach out to us via email at support@cybertimez.com or by phone at (202) 827-6883 to offer insights, suggestions or requests for improvements or new features. Remember, if it would help you, it will help someone else too!

# Getting Help

Every Cyber Eyez license includes free support and free updates for life! Use it!

## Training Classes

Cyber Eyez online training is always free with your purchase. New to the system or need a refresher? Want to learn all about the latest and greatest features and how to use them? Join us! You can find our training class schedule on our Facebook Page under the Events section and on Eventbrite. Registration closes 1 hour prior to each class and is required to attend.

# Support Forums

The Support Forums on our website are a great resource for information about your device and Cyber Eyez. Be sure to check frequently as more content is being added by Cyber Timez and our community to help answer your questions. The support forums are also a great place to share your experiences and for finding the latest tips and tricks. The effort of both our community and our support staff will help you get the most out of your Cyber Eyez. If you have a tip or trick you'd like to share, by all means login and share away!

# Help Desk

## *Help Desk Operating Hours*

Our Help Desk is open Monday through Friday from 8 AM Eastern to 6 PM Eastern.

## *Email Support*

The Help Desk can be reached by email at support@cybertimez.com.

## *Phone Support*

The Help Desk can be reached by phone at (202) 827-6883 extension 2.

# Manuals from Vuzix

Cyber Eyez is an app. Just like apps on your phone, Cyber Eyez relies on the hardware provided by Vuzix to operate. That means basic functions like powering it on and off, using the buttons and many system settings aren't necessarily covered by this guide about Cyber Eyez. To make sure you get the most out of your device, please download and review the respective device manuals. We highly recommend that you familiarize yourself with the Vuzix M100 or M300 device before diving headlong into Cyber Eyez. Cyber Eyez relies on some features of the glasses that need to be set up,

such as WiFi, for Microsoft Online Reading Assistant, barcode scanning (to retrieve product results), color identification, online object recognition and mood ring mode to work.

## *M100 Quick Start & Product Guide*

You can download the latest [M100 Quick Start Guide](#) and [M100 Product Guide](#) respectively.

## *M300 User Manual*

The latest [M300 User Manual](#) can be obtained from Vuzix's website [here](#).

## *Button Names*

For Cyber Eyez trainings, we always refer to the buttons as number 1, 2 and 3 going from your eye toward your ear. The one closest to your ear is number 3. Vuzix has changed the names a couple of times of the buttons depending on the device, hence the reason we use 1, 2 and 3 :).

### *M100*

For the M100 button number 1 is called the "Forward Button," button #2 is called the "Center Button" and button #3 is called the "Rear Button."

### *M300*

For the M300 button number 1 is called the "Forward/Options Button," button #2 is called the "Back/Home Button" and button #3 is called the "Select/Return Button."

# Cyber Eyez Basics

Cyber Eyez has several modes to enable different types of functionality and new features and functions are being added all the time!

# Zooming In

When Cyber Eyez is running, short press button #1 to zoom in. On the M300, you can also use the swipe pad to zoom in (and out). By default you can press this button three times to magnify at 5X, 10X and 15X resolution in real time. When you have reached the maximum zoom level you will hear a prompt saying "Maximum Zoom." The magnitude of zoom (how many steps it takes to get to 15X) can be changed in the Cyber Eyez Settings screen.

# Zooming Out

When Cyber Eyez is running, short press button #2 to zoom out. By default you can press this button three times to decrease magnification from 15X, 10X and 5X resolution in real time. When you have reached the minimum zoom level you will hear a prompt saying "Minimum Zoom." The level of zoom can be changed in the Cyber Eyez Settings screen.

# Changing Modes

To select from the different modes in Cyber Eyez, long press on button #1 to bring up the menu. You can then short press button #1 to scroll down or button #2 to scroll up through the list of modes. When the mode you want to use is highlighted, short press button #3 to select it and dismiss the menu.

Some menu items in Cyber Eyez 2.5 have "sub-menu" choices such as Reading Assistant and Object Recognition. In these cases, once you short press button #3 a new list of options will be available to choose from. You can scroll through and select them using the same methods as before.

The modes available in Cyber Eyez 2.5 are:

- Reading Assistant
    - Cyber Eyez Offline
    - Microsoft Online
    - Back
- Ask Alexa

- Scan a barcode
- Color Assistant
- Object Recognition
    - Offline Recognition
    - Online Google Recognition
    - Back
- Mood Ring
- Toggle Flashlight
- Settings

## Snapping Pictures

Cyber Eyez on Vuzix smart glasses is controlled mainly through the 3 button interface running along the top (or bottom if on the left) edge of the device. Some new users will get strange results for object recognition and reading assistant even after many tries in different environments. When snapping a picture with a camera on your head, it's just like any other camera and motion matters. While there is image stabilization enabled, if the whole device is moving it won't help much. When you are using Cyber Eyez (especially in the beginning) be deliberate when taking your pictures. By deliberate, we mean be patient, line up the frame and squeeze button #3 slowly so as not to shake the device. It takes a little practice, but you will get the hang of it!

## Exit Cyber Eyez

To exit Cyber Eyez (or any application on the device) long press button #2. We call this the "master escape hatch." If at any time you are stuck or having trouble navigating long press button #2 to get back to Vuzix home and the application carousel.

## Reading Assistant

Cyber Eyez 2.5 has the most advanced OCR engines in the world! We support hundreds of fonts and over 160 languages! We also know that OCR with your head is the hardest thing Cyber Eyez family

members have to learn and the thing they usually want to do most (after magnification). That said, OCR is hard. Please take advantage of our free training classes as we have one dedicated to the Reading Assistant all by itself. We're here to help!

To read text, simply line up the text you would like to have read and short press button #3 to snap a picture.

# Cyber Eyez Offline Mode

With Cyber Eyez Offline, once you snap the picture you will hear prompts saying "Processing Image" and "Finding Text in Image for OCR." There may be some silence while the image is being processed. Once the text is found and identified, Cyber Eyez will start reading it back to you.

# Microsoft Online Mode

*Note -- This mode is only available on the M300 at this time.
*Note – This mode requires an Internet connection using either WiFi (home, public, hotspot, etc.) or Bluetooth Tethering/Internet Connection Sharing to your smartphone.

We are proud to support the same OCR technology used by Microsoft's Seeing AI app! When using Microsoft Online after you snap a picture you will hear "Uploading image, please wait." This process usually only takes seconds, but is dependant on your WiFi connection and speed. Our partnership with Microsoft to access the same OCR technology used by Seeing AI is truly life changing! Happy reading!

# Troubleshooting OCR

If you're having trouble with the OCR function we first and foremost apologize that you didn't have an excellent experience out of the box. Cyber Eyez is pre-configured to support most lighting and contrast scenarios, but it is impossible to predict every environment. To this end, here are several

steps you can try to get better OCR results. If you still get strange results, please see [Getting Help](#) or contact the [Help Desk](#) directly.

## *Necks and Elbows*

When we do training with people, we usually find that by about week two or so they are working on what we call "necks and elbows" week. What we mean by this is that most new users end up taking a lot of pictures that include portions of a ceiling, walls and other artifacts that are much higher or lower than in a normal image. This is because the camera is mounted on your head and a lot of times the screen has been adjusted up by a few degrees to bring the screen in focus. You may need to look a little further down or hold the document you are working to read a little higher. On this note, Cyber Eyez is made to try and identify every possible character so as not to leave anything out. Lines on the ceiling, tile floors, seams on walls, etc. will come across as 1's, L,'s I's, etc. We would rather read something that's not there than miss something that is!

## *Adjust the Zoom Level*

Sometimes text is just too small in the image to process well. Fortunately Cyber Eyez is the only OCR product in the world that can process a zoomed in image! That's right, you don't have read the entire electric bill, but can focus in on the corner with the amount due and just read that ☺. Zooming can also make a big difference in your OCR results by making the font much larger and easier for the OCR engine to process. You may not get as much text in one pass, but it will likely be more accurate.

## *Pre-Process Image Checkbox*

* This setting applies to Cyber Eyez Offline Mode only

Cyber Eyez is doing a LOT of work in the background when you snap a picture to make the text as readable as possible for the OCR engine. Depending on lighting conditions, glare, contrast levels, etc. sometimes this is or isn't the best option. To enable and disable Pre-process Image with Cyber Eyez running long press button #1 to bring up the menu, short press button #1 several times to navigate down to Settings and press button #3 to open the settings screen. The very first option is a

checkbox to enable/disable the Pre-process Image setting. Short press button #3 to turn the check on or off and then long press on the same button #3 to go back one screen. This will exit settings and put you back in Cyber Eyez ready to go for another round with that document!

## Image Compress Setting

In the Settings screen you will also find an option to change the Image Compression setting. We compress the image to speed up the OCR engine results, but again sometimes this doesn't work out to be the best depending on environmental conditions. To change this, access the Settings screen and scroll to the Image Compression Setting. Short press on button #3 to bring up the available compression options. You may need to go up or down on this setting to find the "sweet spot" for your environment. Please note though, the less compressed the image is the longer it will take to process the OCR, but the accuracy will go up.

## Image Resolution Setting

Out of the box, we set up the camera to have the highest resolution available to make sure we get great color depth and line detection for the color identifier, object recognition and most OCR tasks. We have found, however, that sometimes a lower resolution can be better. We know, for example, that in an office type environment with overhead lighting that reading 8.5 by 11 inch pages the 1024 x 768 setting can work much better. You may need to play with this setting for a while to find your "sweet spot" as there are LOTS of resolution settings available.

## No Internet Connection Error

* This issue only applies to Microsoft Online Mode

There is very little processing going on using the device directly for the Microsoft Online Reading Assistant. The only real issue we have experience is trying to use Microsoft Online Mode with no Internet connection. If this happens, you will hear a prompt saying "Network Error" or something similarly vague and annoying when trying to upload the image. To correct this, please connect your device to either WiFi or a Bluetooth Tethered smartphone and try to upload the image again.

### *Send It To Us*

Last, but certainly not least, if you just can't seem to get a good result we are happy to look and see what is going on. You can plug the device into a pc via the USB cable and it will show up as another drive (a lot like thumb drives). If you navigate through Internal Storage to Pictures you will find the images the OCR engine is working from. Please feel free to send any of those images that you're struggling with to support@cybertimez.com and we'll take a look to see if we can offer some advice or make updates to Cyber Eyez.

# Ask Alexa

*Note -- This mode is only available on the M300 at this time.

*Note – This mode requires an Internet connection using either WiFi or Bluetooth Tethering/Internet Connection Sharing to your smartphone.

Cyber Eyez is thrilled to be the first commercially available smart glasses application supporting Amazon Alexa! If you like Alexa at home, just wait until you have her on the go! Using Alexa couldn't be easier.

## Talking to Alexa

1. Long press button #1 to bring up the menu
2. Short press button #1 until you get to Ask Alexa
3. Short press button #3. This will launch the Alexa app on your glasses. Once you hear, "Voice command," Alexa is ready to respond to the hundreds of thousands of skills available!
4. Because Amazon has "rules" about non-Amazon devices using voice commands to actually get Alexa's attention, to get Alexa to listen short press button #3. You will hear a chime that lets you know she's ready for your commands.
5. Say your keyword. You don't have to say the "Alexa" part. So to get the weather in New York I would say, "What's the weather in New York City?"

6. Press button #3 to tell Alexa you are done talking

7. Through the magic of the internet and the cloud seconds later, Alexa responds!

## First Time Setup

1. Follow the steps above in the Talking to Alexa section to get into the Alexa app and start a command.

2. The first time you attempt to use Ask Alexa mode, you will be prompted to Allow Amazon Alexa to record audio. Short press buttons #1 or #2 until you are on the Allow button and then short press button #3.

3. The first time you press button #3 to execute a command, a pop-up will appear asking which app you would like to use to complete this action with the options of Browser and Firefox. We HIGHLY recommend that you select Firefox and then Always.

   a. Short press button #1 until Firefox is highlighted

   b. Short press button #3 to get to the buttons

   c. Short press button #1 twice to get to the Always button

   d. Short press button #3

4. Firefox will launch an Amazon login page to provide your username and password. Please use Vysor to complete this page.

5. Enter Amazon username and password in the appropriate fields and click on Sign-in

6. Click the Authorize button

You will be returned back to the Alexa app screen. Get her attention by short pressing #3.

## Exiting Alexa

To exit, long press button #2. This will take you back to the Vuzix home screen.

## Scan a Barcode

*Note – This mode requires an Internet connection using either WiFi (home, public, hotspot, etc.) or Bluetooth Tethering/Internet Connection Sharing to your smartphone.

Cyber Eyez has one of the most powerful barcode scanners and extensive product databases (over 7 million products) in the world! Our barcode scanner is computer vision based and uses machine learning to find the barcode automatically. For example, you can take a can of soup and spin it (slowly) in front of the glasses. Once the barcode comes into frame, Cyber Eyez automatically captures it and submits it to Google...that's right, Google! If they sell it on Google Shopping, we know their product...including Trader Joe's! To scan a barcode:

1. Long press button #1 to bring up the menu

2. Short press button #1 until you get to Scan a barcode

3. Short press button #3.

    Once in barcode mode, Cyber Eyez is always "looking" for barcodes. You don't need to snap a picture or do anything else until the camera can find the barcode.

4. Hold the product about 6 to 8 inches from your glasses and rotate it around.

5. When the barcode comes into frame and Cyber Eyez can read it, you will hear "Barcode found, accessing information"

6. Your screen will change to a Google search result screen with the barcode value in the search box

7. Cyber Eyez will read you the barcode number it found and the title of the first search result. Most of the time this is the manufacturer's page for the product with lots of details about their product.

# Troubleshooting Scan a Barcode

## *Hold It Closer*

Barcode scanning is different than OCR. In OCR, we want as much of the text, paper, etc. in the frame. With barcode scanning, we want the opposite, or as close as we can get to it. If you're not getting any results, try holding the product a little closer to the glasses. Not too close as we don't want to blur out the focus, but about 6 to 8 inches seems to be a "happy place."

### Slow Down

We know it's exciting, we get jumpy too :). Be patient and deliberate with your barcode scans. If you're not getting any results, just slow down so the barcode isn't moving quite so fast in the frame.

### Rotation, Rotation, Rotation

Cyber Eyez does a lot of things, but it doesn't know if a product is upside down or not. We understand that you may not know either! For that reason, rotate, rotate, rotate when scanning barcodes. Flip the object over on its ends, rotate it every which way…if there's a barcode there, we'll find it!

If you still get strange results, please see Getting Help or contact the Help Desk directly.

# Color Assistant

*Note – This mode requires an Internet connection using either WiFi (home, public, hotspot, etc.) or Bluetooth Tethering/Internet Connection Sharing to your smartphone.

Cyber Eyez identifies over 1,600 unique colors! Don't worry, we're not going to read them all to you ☺.

To recognize colors, put Cyber Eyez in Color Assistant Mode, point the camera in the direction of the object(s) you would like processed and short press button #3. You will hear a voice prompt saying "Uploading Image…Please Wait." Depending on your Internet Connection speed this may take as little as a few seconds or much longer. Once the result comes back, the system will begin reading the results to you including the unique color name and the color family based on how much of the image each color takes up. For example, if taking a picture of a bright blue shirt you may hear a result similar to "60% Cool Blue Color Family Blue, 25% Sapphire Color Family Blue, 15% Ice Color Family Gray".

## Troubleshooting Detect Color Mode

There is very little processing going on using the device directly for color detection. The only real issue we have experience is trying to use Color Assistant Mode with no Internet connection. If this happens, you will hear a prompt saying "Network Error" when trying to upload the image. To correct this, please connect your device to either WiFi or a Bluetooth Tethered smartphone and try to upload the image again.

# Mood Ring

*Note – This mode requires an Internet connection using either WiFi (home, public, hotspot, etc.) or Bluetooth Tethering/Internet Connection Sharing to your smartphone.

Cyber Eyez supports mood sensing on faces! We can tell you if the faces in the room are Joyful, Angry, Sorrowful or Surprised. We always say we are either saving or destroying marriages all over the planet with this one! But all kidding aside, as hokey as it sounds, this mode is used by visually impaired lawyers in court to determine how their presentations are being received by the judge, witness, jury, etc. Cool, huh?

To identify moods, put Cyber Eyez in Mood Ring Mode, point the camera in the direction of the person(s) you would like processed and short press button #3. You will hear a voice prompt saying "Uploading Image…Please Wait." Depending on your Internet Connection speed this may take as little as a few seconds or much longer. Once the result comes back, the system will begin reading the results to you with confidence scores for the faces and results for the different moods. For example, if taking a picture of a happy friend you may hear a result similar to "1 Face Detected with 99% confidence, Joyful Very Likely, Angry Very Unlikely, Sorrowful Very Unlikely, Surprised Very Unlikely". If there are more faces in the image it will read the results and confidence score for each face from left to right.

## Troubleshooting Mood Ring Mode

There is very little processing going on using the device directly for mood recognition. The only real issue we have experience is trying to use Mood Ring Mode with no Internet connection. If this happens, you will hear a prompt saying "Network Error" when trying to upload the image. To correct this, please connect your device to either WiFi or a Bluetooth Tethered smartphone and try to upload the image again.

# Object Recognition

## Offline Recognition

*Note -- This mode is only available on the M300 at this time.

The Cyber Eyez Object Recognition system uses the power of machine learning Google Images to identify the items in your picture! To recognize objects, put Cyber Eyez in Recognize Object Mode, point the camera in the direction of the item(s) you would like identified and if you're in Offline Tensorflow mode, Cyber Eyez will start talking! Be sure to keep Cyber Eyez updated as this offline version will get better and better with time!

## Google Online Recognition

*Note – This mode requires an Internet connection using either WiFi (home, public, hotspot, etc.) or Bluetooth Tethering/Internet Connection Sharing to your smartphone.

If you're using Online Google mode, just short press button #3. You will hear a voice prompt saying "Uploading Image…Please Wait." Depending on your Internet Connection speed this may take as little as a few seconds or much longer. Once the result comes back, the system will begin reading the results to you with confidence scores. For example, if taking a picture of a computer monitor you

may hear a result similar to "I found the following objects: 98% Computer Monitor, 90% Display Device, 77% Screen" and more. We encourage you to take as many object pictures as possible as the system that does this recognition is a learning system and will continuously improve with usage.

# Troubleshooting Recognize Object Mode

## *Offline Recognition*

Computer vision and machine learning are still very early disciplines in technology and on smart glasses is even newer! The current "model" used recognizes over 1,000 objects, but they may not be the objects you want (it was designed by geeks after all). If Offline Recognition is telling you it's a dishwasher or a pencil, first try Google Online Recognition mode :). If you still get strange results, please see Getting Help or contact the Help Desk directly.

## *Google Online Recognition*

There is very little processing going on using the device directly for object recognition with the Google online mode. The only real issue we have experience is trying to use Recognize Object Mode with no Internet connection. If this happens, you will hear a prompt saying "Network Error" when trying to upload the image. To correct this, please connect your device to either WiFi or a Bluetooth Tethered smartphone and try to upload the image again.

# Skype

*Note – This mode requires an Internet connection using either WiFi (home, public, hotspot, etc.) or Bluetooth Tethering/Internet Connection Sharing to your smartphone.

Cyber Eyez is proud to offer free video chat services through our continued partnership with Microsoft using Skype. With Skype, you can video chat with millions of people around the world. We know Cyber Eyez does a lot of cool stuff, but sometimes all the technology in the world just won't beat a pair of friendly eyes telling you what they see. Now you can do that for free with Cyber Eyez. Press one button and in seconds you're connected to your loved ones and friends. Regardless of

what device they use they can see what the glasses see in real time and tell you in your ear through your glasses.

# Using Skype

1. Long press button #1 to bring up the menu

2. Short press button #1 until you get to Skype

3. Short press button #3. This will launch a video call to your configured Skype destination address in the Skype app on your glasses.

4. In a few seconds (depending on both your and your partner's internet connection) they will see what you see. Enjoy your call!

5. When you're ready to end the call, short press button #1 or #2 until you get to the Hang Up button

   a. If a text chat screen appears, but you are still hear your video chat, long press button #3 to go back to the video chat screen.

6. Short press button #3. You will be at the Skype home screen (sometimes it's an ad from Microsoft...sorry)

7. Long press button #2 to get back to the Vuzix home screen

# First Time Setup

1. On your pc or other device with Skype installed, find the "Live ID" of the account of the person you would like to Skype. We are looking for the id that starts with "live:"...

   a. In the Skype app, click on a contact and click again on his name on the top, or, long-press / right-click "View Profile" the contact.

   b. There, you will see his Skype Name. If he is not a contact, first find the user in the Skype app using search and then do the same thing.

2. Long press button #1 to bring up the menu

3. Short press button #1 until you get to Settings

4. Short press button #1 until you get to Skype

5. Short press button #3

6. Type in the Skype ID you want to contact. Type the entire ID like this: live:johndoe_1234. You can use the keyboard on the device or [Vysor](#) for this step.

7. Press button #1 until you highlight the OK button

8. Short press button #3 to return to the Settings menu

9. Long press button #3 to return to Cyber Eyez

10. Long press button #1 to bring up the Menu

11. Short press button #1 until you get to Skype

12. Short press button #3

13. The first time you press button #3 to start a Skype call, a pop-up will appear asking which app you would like to use to complete this action with the options of Skype and Firefox.

    a. Short press button #1 until Skype is highlighted. You will hear "Selected Skype in list"

    b. Short press button #3 to get to the buttons

    c. Short press button #1 twice to get to the Always button

    d. Short press button #3

14. Skype will launch an Skype login page to provide your Skype name, email or phone number and password. Please use [Vysor](#) to complete this page.

15. Enter Skype Name and password in the appropriate fields and click on Sign-in

16. A pop-up will appear asking to Allow Skype to access your contacts. Short press button #1 to highlight Allow

17. Short press button #3

18. A pop-up will appear asking to Allow Skype to take pictures and record video. Short press button #1 to highlight Allow

19. Short press button #3

20. A pop-up will appear asking to Allow Skype to record audio. Short press button #1 to highlight Allow

21. Short press button #3

22. A pop-up will appear asking to Allow Skype to make and manage phone calls. Short press button #1 to highlight Allow

23. Short press button #3

24. A pop-up will appear asking to Allow Skype to access photos, media and files on your device. Short press button #1 to highlight Allow

25. Short press button #3

26. You will be on the main Skype home screen

27. Long press button #2 to go back to the Vuzix home screen

28. Navigate to and launch Cyber Eyez

29. Take the steps in Using Skype start a call

# Toggle Flashlight [On/Off]

*Note -- This mode is only available on the M300.

The M300 has a flashlight built right in! While the M300 User Guide gives you lots of ways to control it from the Vuzix screens, those don't work inside apps like Cyber Eyez (yet). But have no fear! The flashlight control is right in the main menu and super easy to get to. Just long press button #1 to open the menu. Then short press button #1 several times until you get to Toggle Flashlight...here the glasses are smart enough to know if it's on or off and will tell you! So if they're off, it will say, "Toggle Flashlight On" and vice versa if the light is on.

# Settings

Cyber Eyez has LOTS of settings that can be adjusted to make sure it functions at top levels in your environment(s). While this may seem like a lot to learn, most users do not need to adjust these settings most of the time. If you do find yourself in a scenario where you just aren't getting the results you expect, start with the settings and most likely there will be a "sweet spot" between pre-process image, image resolution, image compression, etc.

To adjust the settings for Cyber Eyez, long press button #1 to bring up the menu. Short press button #1 several times until "Settings" is highlighted. Short Press button #3 to enter the Settings screen. To get back to Cyber Eyez, either short press button #1 several times until you hear the "Quit" option

or long press button #3 to go back one screen at a time until you are back to the Cyber Eyez main screen.

## Pre-Process Image

Cyber Eyez is doing a LOT of work in the background when you snap a picture to make the text as readable as possible for the OCR engine. Depending on lighting conditions, glare, contrast levels, etc. sometimes this is or isn't the best option. This checkbox will enable and disable Pre-process Image. Short press button #3 to turn the check on or off.

## Compress Image Percentage

Cyber Eyez will compress the image to speed up the OCR engine results. To change this, access the Settings screen and scroll to the Image Compression Setting. Short press on button #3 to bring up the available compression options. You may need to go up or down on this setting to find the "sweet spot" for your environment. Please note though, the less compressed the image is the longer it will take to process the OCR, but the accuracy will go up.

## Zoom Factor

The zoom factor setting determines how much to zoom in or out each time the command is received. To zoom more quickly, choose a larger number. To zoom in smaller increments, choose a smaller number.

## Image Resolution

This setting will set the resolution of the pictures taken. This setting can affect how much of a page is captured, the quality of the image (improving or making OCR and recognition services worse) and the size of the file stored on the disk.

# Camera Pause Time Before Snapshot

This setting is a built in delay to display the picture taken on the screen for a second or less. This setting is mostly useful during training sessions to help adjust "[Necks and Elbows](#)" as appropriate.

# Save Images

This setting will enable or disable saving the images you capture on your device. Turning this off will save disk space, but make troubleshooting and image share impossible. We highly recommend that until you are very comfortable with Cyber  Eyez usage that you leave this checkbox checked. The images can be retrieved or deleted by plugging the device into your PC with the USB cable and navigating to [M100/M300] → Internal Storage → Pictures.

# Update

\*Note – This mode requires an Internet connection using either [WiFi](#) (home, public, hotspot, etc.) or Bluetooth Tethering/Internet Connection Sharing to your smartphone.

Cyber Eyez updates are always free and this is how you get them!  After you click on Update your device will reach out to our servers and fetch the latest version of Cyber Eyez automatically. To install the update, long press button #2 to go back to Vuzix Home and navigate to Downloads. Here you will find an item with the current date called "Cyber Eyez Get Latest." Once the download has finished, you will be able to highlight it by short pressing button #1 or #2. Once it's highlighted, short press button #3 to begin the installation. Once it is finished, click on the Finish button and enjoy your new version!

## *Troubleshooting Update*

From time to time updates are released that change the security certificate used to create Cyber Eyez. This is for your safety and done automatically. Unfortunately, it may also cause an error when installing a new version that an application with the same name already exists. If this happens to

you, please make sure the Download is complete and available before taking the next step. Once you've confirmed in Downloads that the latest Cyber Eyez is there and ready to install navigate to Vuzix Home → Settings → Apps. Short press button #3 one time to highlight the first item in the Downloaded Apps tab. If this is NOT Cyber Eyez, continue short presses on button #1 until Cyber Eyez is highlighted. Short press button #3 to select Cyber Eyez. Short press button #1 one time to highlight the Uninstall button and short press button #3 to begin the uninstall process. Once the uninstall is complete, go back to Vuzix Home → Downloads and install the latest Cyber Eyez version.

## Get Google Text-To-Speech

*Note – This mode requires an Internet connection using either WiFi (home, public, hotspot, etc.) or Bluetooth Tethering/Internet Connection Sharing to your smartphone.

Google Text-To-Speech will come pre-installed and configured on your device, but you never know what will happen out there and we want you to have access to all the tools you need. Just in case Google Text-To-Speech is somehow uninstalled from your unit, you can use this option to download the package and reinstall it. After clicking on this item, please follow the instructions for "Update" using Google Text-To-Speech in place of Cyber Eyez to reinstall it.

## Get Google Talkback

*Note – This mode requires an Internet connection using either WiFi (home, public, hotspot, etc.) or Bluetooth Tethering/Internet Connection Sharing to your smartphone.

Google Talkback will come pre-installed and configured on your device, but you never know what will happen out there and we want you to have access to all the tools you need. Just in case Google Talkback is somehow uninstalled from your unit, you can use this option to download the package and reinstall it. After clicking on this item, please follow the instructions for "Update" using Google Talkback in place of Cyber Eyez to reinstall it.

# Getting the Latest Version

Software updates are free for life! You'll want to check for the latest Vuzix operating system and Cyber Eyez software updates at least once every couple of months.

# Updating Cyber Eyez

The latest and greatest guide to update Cyber Eyez is always available on our website on our Support Forums. If you find the steps below do not match your environment, please refer to the online version.

Cyber Eyez has a built in method for updating in the Settings menu.

*You must be connected to WiFi to update*

1.  Go to the Vuzix Home screen

2.  Navigate to and launch Cyber Eyez

3.  Long press button #1 to bring up your menu

4.  Short press button #1 repeatedly to get to Settings

5.  Short press button #3 to open Settings

6.  Short press button #1 several times until you reach Update and hear "Update to the latest version."

7.  Short press #3

8.  You won't hear anything, but the download will start in the background.

9.  Long press #2 to go back to Vuzix Home

10. Navigate to and launch Downloads

11. Use #1 or #2 to highlight "Cyber Eyez get Latest" and short press #3 to begin the installer

# Troubleshooting a Cyber Eyez Update

If you get an error that says "Install blocked" please take the following steps:

1.  Short press #1 to get to the Settings button

2. Short press #3 to open Settings

3. Short press #1 until you get to "Unknown Sources"

4. Short press #3 to select it

5. Short press #1 until you reach the "OK" button

6. Short press #1 to select OK

7. Repeat the steps above from step 8

# Updating the Vuzix Operating System

The latest and greatest guide to update the Vuzix Operating System is always available on our website on our [Support Forums](). If you find the steps below do not match your environment, please refer to the online version.

Just like an iPhone or tablet your glasses have an operating system that receives updates from Vuzix periodically (usually 3 or 4 times a year). To make sure you've got the latest security updates and bug fixes, you'll want to be sure to update your Vuzix install from time to time. Luckily, this is easy and the procedure is the same on the M100 and the M300.

1. Navigate to the home screen

2. Navigate to and launch Settings

3. Scroll all the way to the bottom by short pressing button #3 several times until you hear "About smart glasses"

4. Short press button #1 until you have highlighted the Check for Updates button (it's the first one on the screen and may be selected by default)

5. If an update is available, you will be prompted to download it

6. Once the download completes, the "Check for Update" button will now say "Verify and Install". Short press button #3 on the Verify and Install button to begin the installation process

7. Your glasses will reboot, possibly multiple times. Be patient and the update will be finished when the device stops rebooting

8. Enjoy the latest version!

# Vysor

Unfortunately some apps are not very smart glasses friendly (right now this applies to the first sign-in for Alexa and Skype) and require the use of a tool called Vysor to control the screen with a mouse and keyboard. We realize how inconvenient and inaccessible this is for many people and are sincerely sorry. We are working with Vuzix, Amazon and other app providers to get better solutions in place, but until we can at least you only have to do it once!

## Installation

After you have Vysor installed on your PC or Mac, proceed with the following steps.

1. Open Vysor on your desktop
2. Connect your glasses to your workstation with the USB cable:
3. Press the View button across from the text label with M300 and your serial number
4. On the glasses, a pop-up titled Allow USB Debugging will appear
5. Short press buttons #1 or #2 until the check box called "Always allow from this computer" is highlighted
6. Short press button #3 to activate the checkbox. The glasses will say "checked."
7. Short press button #1 until the OK button is highlighted
8. Press button #3

## Using Vysor

After you plug in your device to a USB port and launch Vysor a mirror image of your device screen will be on the workstation. You can control it using your keyboard and mouse. You may need a sighted individual to help control the mouse for some actions. If this is not the case, please follow the steps in Troubleshooting Workstation Connections.

# Troubleshooting PC/Mac Connections

## Can't Find your Android

If you plug your device in via the USB cable to your There are several common remedies you can try when you plug in your device and it's not found including:

- Restart your device and restart your computer. You'd be surprised how often this fixes things.
- Set Your USB Mode to PTP (it is usually MTP or Charge Only)
- Make sure you are using a USB DATA cable! Accidentally using a charge cable will not allow data transfer with the computer.
- Enable USB Debugging
- On Windows, download your the Universal ADB Drivers: https://adb.clockworkmod.com

### *Set Your USB Mode*

One of the most common causes of failure for Vysor to be able to find the glasses is related to Android security and the USB mode. Most of the time, everything works fine in Charging mode, but from time to time you may need to change it to File Transfer.

1. Navigate to the Vuzix home screen by long pressing button #2
2. Navigate to and launch the Settings app
3. Short press button #1 until you get to Storage & USB
4. Short press button #3 to open Storage & USB
5. Long press button #1 to bring up the USB Mode menu
6. Short press button #3 to activate it
7. Short press button #1 until you get to File transfers
8. Short press button #3 to select it

Your workstation should now recognize your device. If not, please continue with the following steps.

## Enable USB Debugging

Some applications (like [Vysor](#)) may require access to a special mode called "USB Debugging." This is not dangerous, it is just a way to access things on the glasses in real time using a USB cable. To enable USB Debugging:

1. Navigate to the Vuzix home screen by long pressing button #2
2. Navigate to and launch the Settings app
3. Short press button #1 until you get to About Smart Glasses
4. Short press button #3 to open About Smart Glasses
5. Short press button #1 repeatedly until you get to Build Number
6. Short press button #3 7 times until you get a message that says "Congratulations! You are now a developer!"
7. Long press button #3 to go back one screen
8. Short press button #2 until you get to Developer Options
9. Short press button #1 until you get to USB Debugging
10. Short press button #3 to toggle it on or off

## USB Debugging Authorization

If you've taken all these steps and still can't locate your device, it may be related to that original pop-up and allowing USB debugging. To fix it, we can revoke all "allowed" devices and then plug it back into our workstation to get the pop-up again.

1. Navigate to the Vuzix home screen by long pressing button #2
2. Navigate to and launch the Settings app
3. Short press button #1 until you get to Developer Options
4. Short press button #3 to open Developer Options
5. Short press button #1 until you get to Revoke USB Debugging Authorizations
6. Short press button #3. A pop-up will appear asking to confirm.
7. Short press button #1 until you are on the OK button
8. Short press button #3

If you're now completely exhausted and exasperated, we get it and we apologize for the struggle..it is real. Please contact the Help Desk.