User Manual

MagniLink Viewer - iPad

Table of contents

1 Introduction to MagniLink Viewer

MagniLink Viewer is a software developed for iPad. The software can display images from a MagniLink camera system and the built-in cameras. The software can control camera properties such as magnification level, artificial colours and brightness.

1.1 Minimum system requirements

- iPad with a USB-C connector and M2-chip or newer.
- iPadOS 17.0 or later.

1.2 Recommended system requirements

- iPad Pro 13" with M2-chip or newer.
- iPadOS 18.0 or newer.

LVI has tested the software on several iPads with above specification without any problems, but there is no guarantee that the system will function on all iPads that comply with the specifications. LVI recommends testing the software on the iPad where the system is to be used, in order to ensure compatibility. Please look up the feature to reduce framerate and picture quality under camera settings, this to reduce any delay.

2 Installation of software

Enter **App Store** and click **Search** in the lower right-hand corner.
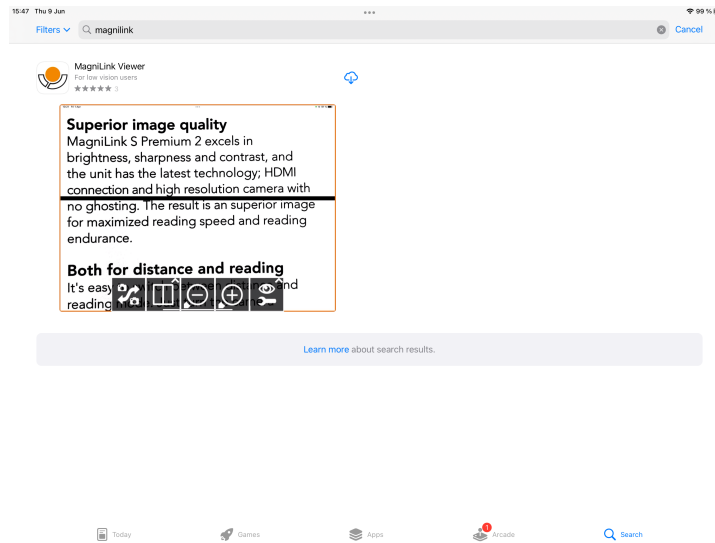
Click the download icon to install the software.
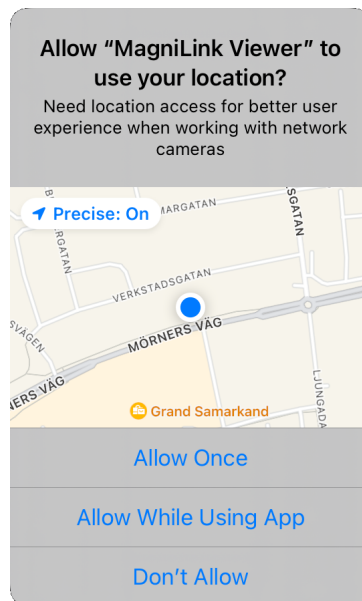
Click **Allow while using the app**.
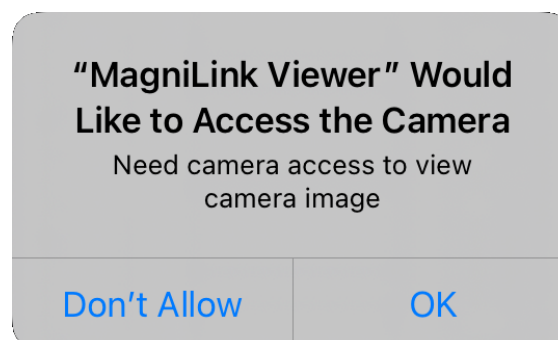
Click **OK**.

3 Camera system

3.1 MagniLink USB cameras

3.1.1 Activate driver

To control the camera functions, the driver MagniLink Driver 7 must be activated. If the driver is not active, a message is displayed. By pressing "Settings" you get to the iPad's settings where you can activate the driver.

3.2 MagniLink AIR

3.2.1 Connect to network

To be able to stream video from MagniLink AIR Uno or Duo, you must connect to its network. Open the iPad's WiFi settings and connect to the **ML_AIR** network. Enter the password provided.

To be able to stream video from a MagniLink AIR Distance, go to the iPad's Ethernet settings. Select manual IP configuration and enter the following.

- 192.168.100.99 as IP address.
- 255.255.255.0 as the subnet mask.
- 192.168.100.1 as router.

3.2.2 iPad settings

For the application to be able to find an AIR camera, the setting **"Search for MagniLink AIR cameras"** must be checked in the iPad's **Settings > Apps > MagniLink Viewer**.

4 Using the software

4.1 Functions via menus

4.1.1 Camera view

The following menu is displayed when the application is started.

Switch views
Switches to the OCR view. Press and hold to switch to the Notepad view.

Change camera
Switch between the LVI camera and the front and rear cameras.

Split Mode
Opens a submenu where you can set the split mode.

Lock autofocus
Locks the autofocus mode. This can be used when you wish to write by hand. In this way, autofocus is not affected by the pen or your hand. Press the button a second time to reactivate autofocus.

Focus up
Reduce focus distance. When this function is used, autofocus is turned off.

Focus down
Increase focus distance. When this function is used, autofocus is turned off.

Lamp
Change lamp brightness. There are five modes: Off, 25, 50, 75 and 100 percent.

Switch between rear and front camera
This feature is available on iPhone and older iPads where you cannot view the two built-in cameras at the same time.

Change Image Source
Used to swap image sources (if there are more than two sources).

Change split mode
Change between vertical and horizontal split mode.

Move split left
Moves the split mode to the left.

Move split right
Moves the split mode to the right.

Decrease magnification

Increase magnification

OCR
Start OCR. When the OCR process is complete, the application switches to the OCR view and reading begins. You cannot switch using press and hold.

AI (license required)
Takes a picture and switches to the AI view. It is then possible to ask questions about the picture. With a long press, the application switches without taking a picture.

Take picture and record video
Opens a submenu with the following buttons.

Scan QR code

Scans a QR code. If the QR code contains a link, a dialog will open where you can open the link. It is also possible to activate a license by scanning a QR code.

Freeze

Freezes the camera image. A new press releases the freeze.

Take picture

There is an audible click, and the image is saved. The image can then be opened in the "Images" app. The file name will be today's date and the current time.

Record video

Start recording. The application will display an icon indicating that recording is in progress. Stop recording by pressing the button again. The clip can then be opened in the "Images" app. The file name will be today's date and the current time.

Notepad

Opens the camera image in the notes tool.

Video settings

Opens a submenu with the following buttons.

Whole image

Switch between full image and cropped image. In full image, the image is scaled so that the entire image is displayed. In cropped image, the image is scaled so that it covers the entire screen.

Switch natural colours

Switch between natural colours and grey scale.

Switch artificial colours

Switch between artificial colours. Press and hold to switch back.

☀	**Reduce brightness/contrast**
☀	**Increase brightness/contrast**
▶◀	**Mirror the camera image** Press again to reverse the mirror image.
↻	**Rotate the camera image** Rotates the camera image clockwise. Press and hold to rotate anti-clockwise.
<	**Reference line/vertical bar left/up** Adjusts the position of the reference line. Press the button to move the reference line to the left. Hold the button in to change the reference line to horizontal and move it upwards. The reference line then becomes a vertical bar, which diminishes the viewing area. To make the bar horizontal, press the button again.
>	**Reference line/bar right/down** Same as the previous command but in the opposite direction.
⚙	**Settings** Opens the Settings view.

4.1.1.1 MagniLink AIR

The following buttons are only available together with a MagniLink AIR system

◇	**Pan** Open a submenu with the following options.
⇦	**Pan left**
⇨	**Pan right**

Tilt up

Tilt down

Position 1
Move the camera image to position 1. Press and hold to save the position.

Position 2
Move the camera image to position 2. Press and hold to save the position.

Position 3
Move the camera image to position 3. Press and hold to save the position.

Position 4
Move the camera image to position 4. Press and hold to save the position.

Position 5
Move the camera image to position 5. Press and hold to save the position.

Position 6
Move the camera image to position 6. Press and hold to save the position.

4.1.2 OCR view

The OCR view consists of three components.

- At the bottom is a menu bar with buttons.
- To the left is a list of pages that have been OCR processed previously. By clicking on a page, you can navigate to it.
- An area showing the OCR processed page. The current page number is displayed top right.

Switch views
Switches to the camera view. Press and hold to switch to the Notepad view.

Handle documents
Opens a submenu where the following alternatives are found.

Hide sidebar
Hides the list on the left where previously OCRprocessed pages are displayed.

Open document
From the dialog box, select the file you wish to open. It is possible to open PDF files and saved ZIP files.

Save document
A dialog box where you can choose the file format (PDF, Zip and RTF) appears. You can then choose where you want to save the file.

Remove
Remove the current page.

Notepad
Opens OCR processed pages in the notes tool.

AI (license required)
Opens the OCR-processed text in the AI tool.

Start reading
Start reading. Press again to stop reading.

Previous
Skip backwards in the text. Depending on which reading mode is selected, you will skip back to the previous character, word, sentence or block. Press and hold to switch to the previous page.

Next
Skip forwards in the text. Depending on which reading mode is selected, you will skip forwards to the next character, word, sentence or block. Press and hold to switch to the next page.

Text settings
Opens a submenu with the following settings.

Switch reading mode
Switch to next reading mode. The modes available are: character, row, sentence and block.

Switch display mode
Switch display mode. The display modes available are "page view", "row view", "word view", "image view", "image and word" and "image and row".

Increase font size

Reduce font size.

Image settings
Open a submenu with the following buttons.

Switch natural colours
Switch between natural colours and grey scale.

Switch artificial colours
Switch between artificial colours. Press and hold to switch back.
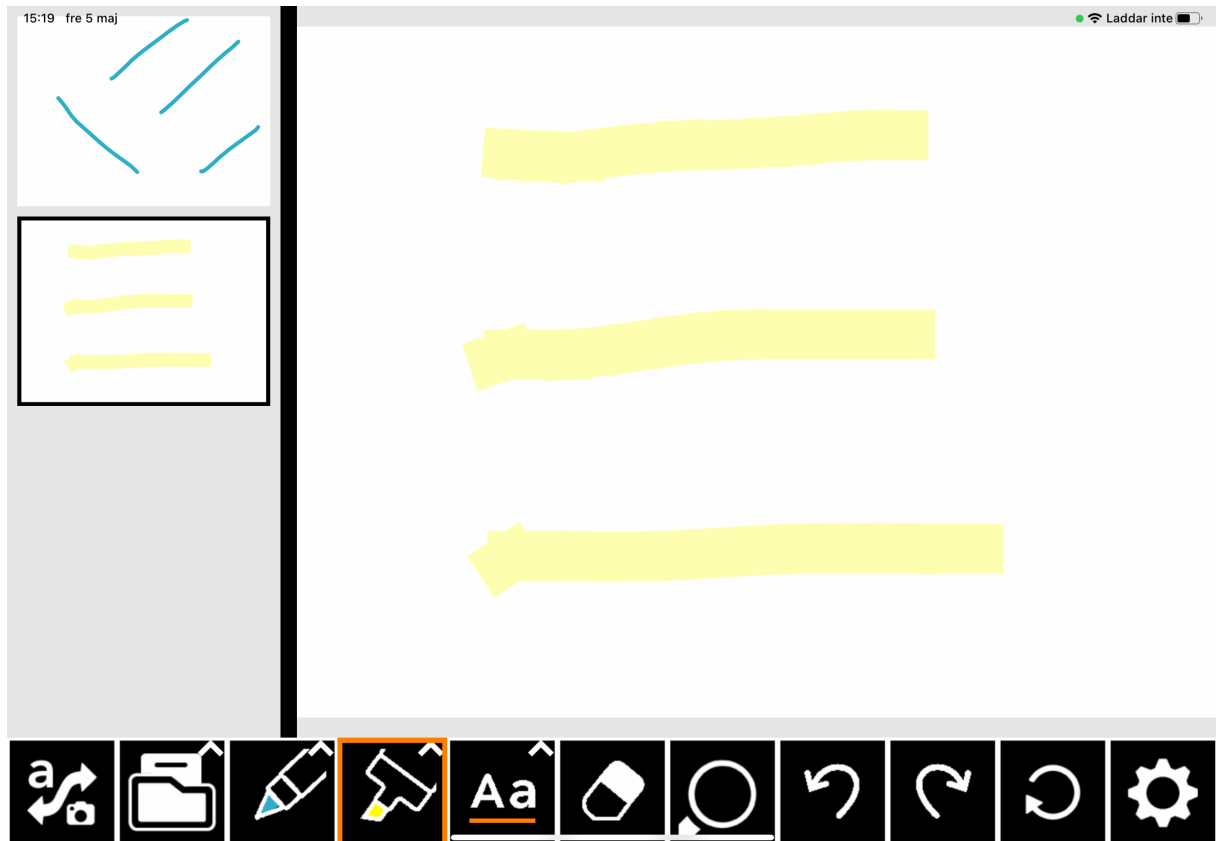
Increase brightness/contrast

Reduce brightness/contrast

Settings
Opens the Settings view.

4.1.3 Notepad view

The notes tool consists of three components.

- To the left is a list of images that have been opened previously. By clicking on an image, you can navigate to it.
- An area where you can draw, enlarge and pan through the image.
- At the bottom is a menu bar with buttons.

Switch views
Switches to the camera view. Press and hold to switch to the OCR view.

Handle documents
Opens a submenu where the following alternatives are found.

Hide sidebar
Hides the list on the left where previously OCR processed pages are displayed.

New image
Opens a new blank image that you can draw in.

Save document
A dialog box where you can choose the file format (PDF and JPEG) appears. You can then choose where you want to save the file.

Open document
From the dialog box, select the file you wish to open. It is possible to open PDF files and saved ZIP files.

Remove
Remove the current page.

Pen
Draw with a pen. Press and hold to open a dialog box where you can choose the colour and size.

Highlight
Highlight with a highlighter. Press and hold to open a dialog box where you can choose the colour and size.

Text tool
Insert text. Press and hold to open a dialog box where you can choose the colour, size and font. You can move text around after inserting. Double-click the text to change it.

Delete

Enlarge and pan in the image.

Undo

|	
↻	**Restore** Restore after pressing undo.
↺	**Rotate** Any changes you made to the image will be removed if you rotate.
⚙	**Settings** Opens the Settings view.

4.1.4 AI view

To use the AI tool, you need an internet connection and a valid license.

With the help of the AI tool, you can, among other things, summarize long documents for faster reading, translate text between several languages and get detailed answers to questions on different topics.
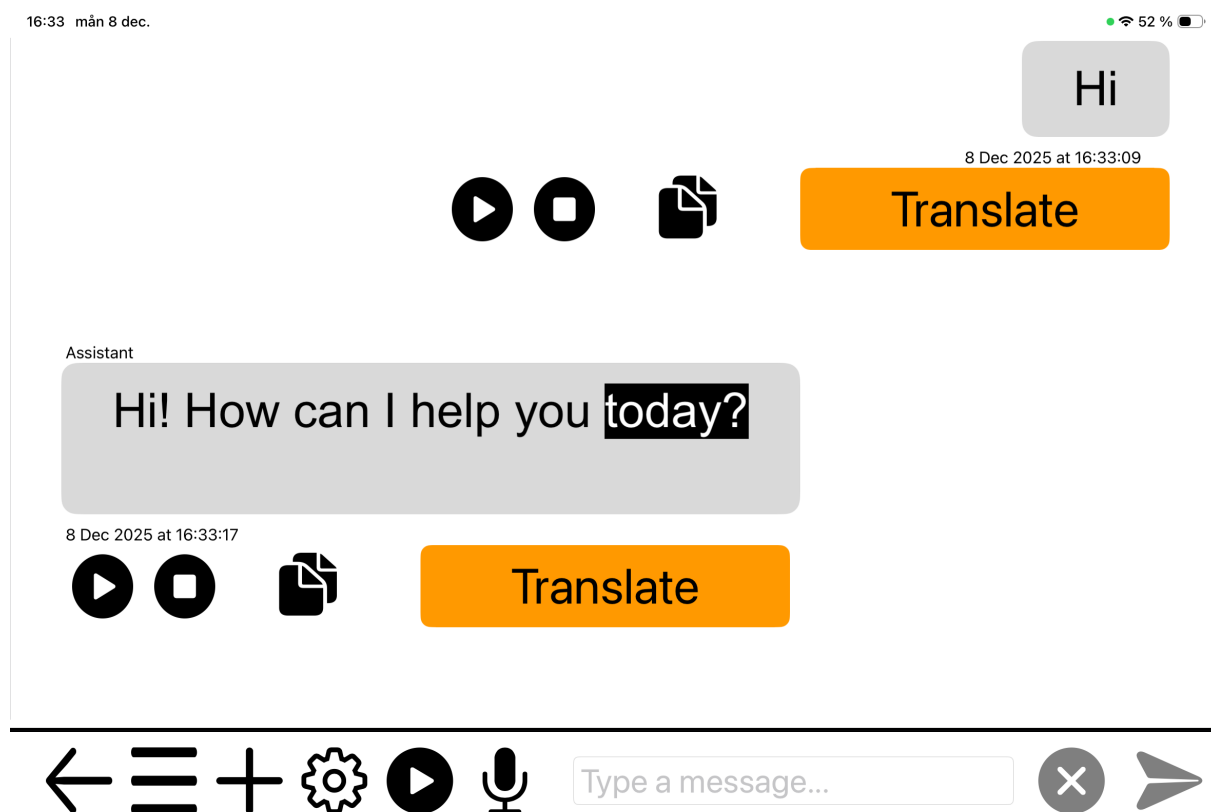
The AI tool consists of three components.

- A list of conversations. By clicking a conversation, you can make it active. The list is hidden by default and can be shown by pressing a button.
- An area where messages are displayed as chat bubbles.
- At the bottom there is a menu bar with buttons and an input field.

Back
Back to the camera view.

Create conversation
Creates a new conversation and adds it to existing ones.

Settings
Opens the settings.

Start reading
Starts reading. A new press stops the reading.

Voice input
When the button is pressed, the input starts. When you release the button, the input stops.

Clear
Clears the input field.

Send
Sends the text in the input field.

Copy
Copies the text in the chat bubble to the clipboard manager.

Stop reading aloud
The next reading will begin from the start of the text.

> **Note**
>
> This app uses AI-powered services to provide responses and suggestions. While we strive for accuracy, AI-generated content may be incorrect or outdated. Always verify important information independently.
>
> Do not share sensitive personal information with the AI, as we cannot guarantee confidentiality.
>
> We are not responsible for any consequences resulting from reliance on AI-generated outputs. Please report any issues or concerns.

4.2 Functions via gestures

Some functions can be controlled via gestures on the tablet. Pressing and holding means keeping the fingers in place for more than half a second. It is possible to choose which gestures you want to switch off in the settings.

4.2.1 Camera view

Pinch	**Change magnification**
Rotate two fingers	**Rotate the image**
Press with two fingers on the top of the screen	**Natural colours**
Swipe with two fingers vertically over the top of the screen	**Artificial colours**
Swipe with two fingers vertically over the top of the screen	**Contrast**
Press and hold with one finger on the top of the screen	**Start OCR**
Press and hold with two fingers on the top of the screen	**Start OCR (**without switchingviews)

Press and hold with three fingers on the top of the screen	**Take picture for notes tool**
Press and hold with one finger on the bottom of the screen	**Switch full screen**
Double-click with two fingers on the bottom of the screen	**Switch views**
Double-click with one finger on the bottom of the screen	**Hide menus**
Double-click with one finger on the top of the screen	**Switch camera**
Press with three fingers on the top of the screen	**Change split mode**
Press with three fingers on the bottom of the screen	**Open settings**

4.2.2 OCR view

Pinch	**Change magnification**
Swipe with one finger	**Pan through the image**
Press with two fingers on the top of the screen	**Natural colours**
Swipe with two fingers vertically over the top of the screen	**Artificial colours**
Swipe with two fingers vertically over the top of the screen	**Contrast**
Double-click with one finger on the bottom of the screen	**Hide menus**

Double-click with one finger on the top of the screen	**Hide sidebar**
Double-click with two fingers on the bottom of the screen	**Switch views**
Swipe with two fingers vertically over the bottom of the screen	**Switch reading mode**
Press with three fingers on the bottom of the screen	**Open settings**
Press and hold with two fingers on the bottom of the screen	**Change display mode**

4.3 Functions via the keyboard

You can connect to a USB or Bluetooth keyboard and control some of the application's functions via the keyboard.

The shortcut commands can be changed in Settings. Below are the standard settings for shortcut commands.

4.3.1 General

fn + F1	**Natural colours**
fn + F2	**Positive picture with increased contrast** Artificial colours; White/Black, Yellow/Black, Green/Black, Red/Black, Yellow/Blue, White/Blue Press F2 to toggle through the different colours. (Shift + fn + F2 toggles backwards.)
fn + F3	**Negative picture with increased contrast** Artificial colours; Black/White, Black/Yellow, Black/Green, Black/Red, Blue/Yellow, Blue/White Press F3 to toggle through the different colours. (Shift + fn + F3 toggles backwards.)

Arrow up	**Zoom in**
Arrow down	**Zoom out**
Arrow left	**Decrease brightness**
Arrow right	**Increase brightness**
Cmd + ,	**Open the preferences dialog** This key combination is the standard way to open the preferences dialog in a Mac application.
Option + H	**Hide menus**
V	**Switch between camera view and text view** If a text has been OCR-processed, this command switches between camera view and text view.

4.3.2 Camera view

Option + Arrow left	**Guiding line left/up**
Option + Arrow right	**Guiding line right/down**
Option + R	**Rotates the camera picture clockwise** Each time you press this key combination the picture rotates 90° (90°, 180°, 270°, 0°).
Shift + Option + R	**Rotates the camera picture counter clockwise** Each time you press this key combination the picture rotates 90° counter clockwise (270°, 180°, 90°, 0°).
R	**Rotate image clockwise steplessly**
Shift + R	**Rotate image anticlockwise steplessly**

Option + I	**Mirror camera image** By pressing Option + I, you can mirror the camera image. This is a useful feature if you for example would like to use the camera as a magnifying makeup mirror.
fn + F5	**Take a snapshot** There is an audible click, and the image is saved. The file name will be today's date and the current time.
fn + Option + F5	**Start/stop video recording** Start recording. The application will display an icon indicating that recording is in progress. Stop recording by pressing the button again. The file name will be today's date and the current time.
C	**Switch camera**
Z	**Change image source**
X	**Change split mode**
Shift + left arrow	**Move split left/up**
Shift + right arrow	**Move split right/down**

4.3.2.1 MagniLink AIR

The following commands are only available together with a MagniLink AIR system

A	**Pan left**
D	**Pan right**
W	**Tilt up**
S	**Tilt down**

Ctrl + 1	**Save position 1**
Ctrl + 2	**Save position 2**
Ctrl + 3	**Save position 3**
Option + 1	**Go to position 1**
Option + 2	**Go to position 2**
Option + 3	**Go to position 3**

4.3.3 OCR view

fn + F4   **OCR process**
This command takes a picture for OCR processing. The program then switches to text view and the OCR processed text is read aloud.

Minus   **Decrease font size**

Plus   **Increase font size**

1   **Start/Pause reading**
If no reading is currently in progress, reading starts, otherwise reading is paused.

2   **Stop reading**
This command stops the reading. The next reading will begin from the start of the text.

3   **Read previous**
With this command, the user can go backwards through the text. If the reading mode is sentence, you move backwards through the text one sentence at a time. If the reading mode is word, you move backwards through the text word by word. If the reading mode is set to character, one character is read for each keystroke.

4	**Read next** With this command, the user can move forward in the text. If the reading mode is sentence, you move forward through the text one sentence at a time. If the reading mode is word, you move forward through the text word by word. If the reading mode is set as character, one character is read for each keystroke.
5	**Switch reading mode** This command selects the reading mode that is to be employed when the "Read previous" or "Read next" command is entered. The modes are, character, word, sentence, view and block. Which modes can be selected depends on the display mode.
B	**Display mode** Switches to display mode for OCR-processed text. The available display modes are: "page view", "row view", "word view", "image view", "image and word" and "image and row".

4.3.4 Notepad view

fn + F7	**Take a picture and open in Notepad**
Option + N	**New Page**
Option + O	**Open image**
Option + S	**Save image**
Cmd + Z	**Undo**
Shift + Cmd + Z	**Redo**
Option + R	**Rotate clockwise**
Shift + Option + R	**Rotate anti-clockwise**

Option + P   **Select pen tool**

Option + L   **Select the highlighter tool**

Option + T   **Select text tool**

Option + E   **Select the eraser tool**

Option + F   **Select the pan tool**

4.4 Information and settings window

The Information and settings window consists of a number of different tabs that contain application information and alternative settings.
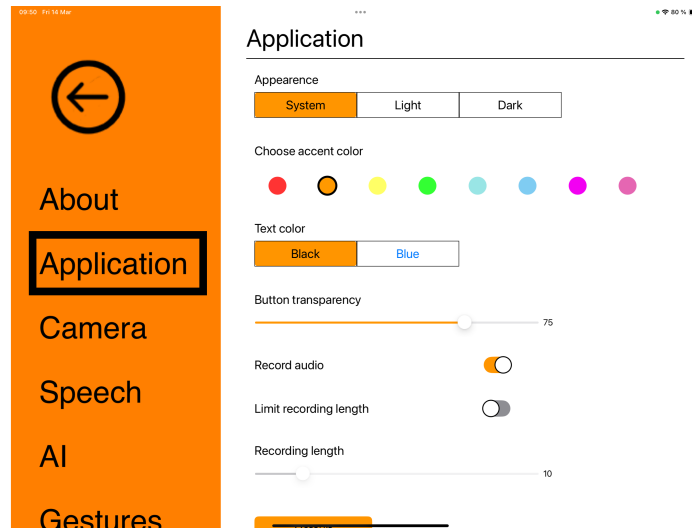
4.4.1 About the application
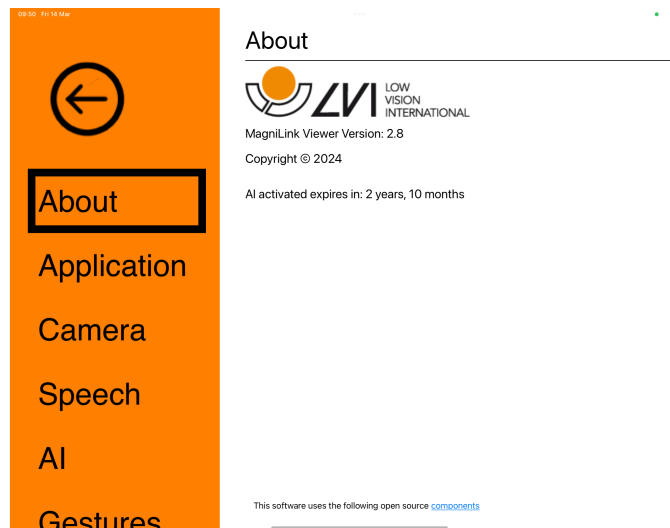
Under this tab you will find information about the camera and the software version.

If you want to activate the AI feature, you can do so by entering a license code and clicking "Activate".

4.4.2 Application Settings

Appearence
Choose between light, dark or system appearence

Accent color
Choose accent color

Text color
Choose textcolor

Button transparency
Set the transparencey for the camera buttons

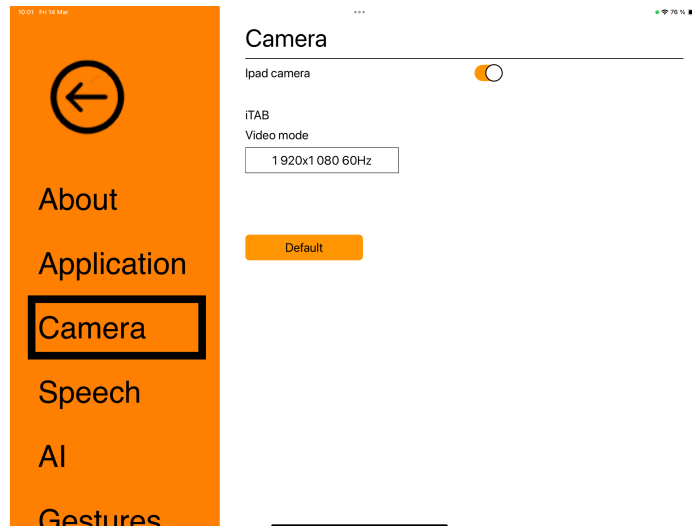## Record audio
Choose whether to record video with audio

Limit recording length
Activate this function to limit the recording length.

Length in minutes
If you have chosen to limit the recording length you can set the limit herein minutes, from 1 to 60 minutes.

4.4.3 Camera settings

iPad camera

When this is deselected, it is not possible use the built-in cameras.

Video mode

Select between the different video modes of the camera

4.4.4 Speech Settings
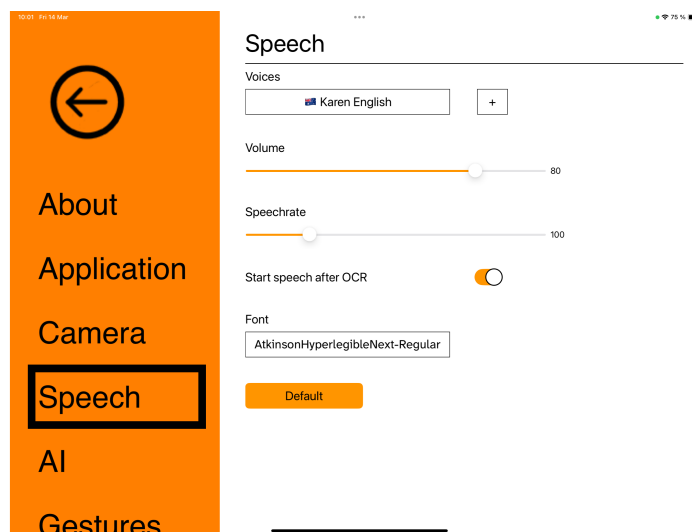
Voices

If several voices are available, the user can choose between them. You can get other voices by downloading languages in the iPad's settings. The OCR engine only supports languages that use the Latin alphabet.

Volume

Setting for the sound level of the voice.

Speaking speed

Setting for the speaking speed.

Start speech after OCR

If this box is checked, text will automatically be read aloud after an image has been OCR processed.

Font
Here the user can set the font for displaying the OCR processed text. The choice of font has no bearing on the OCR result.

4.4.5 AI Settings

About		AI	
Application		Use weather service	⬜
Camera		Start speech	🟠
Speech		Send text after voice input	🟠
AI		Font size	
Gestures			32
Shortcuts		Automatic language detection	⬜
EUC		Default	
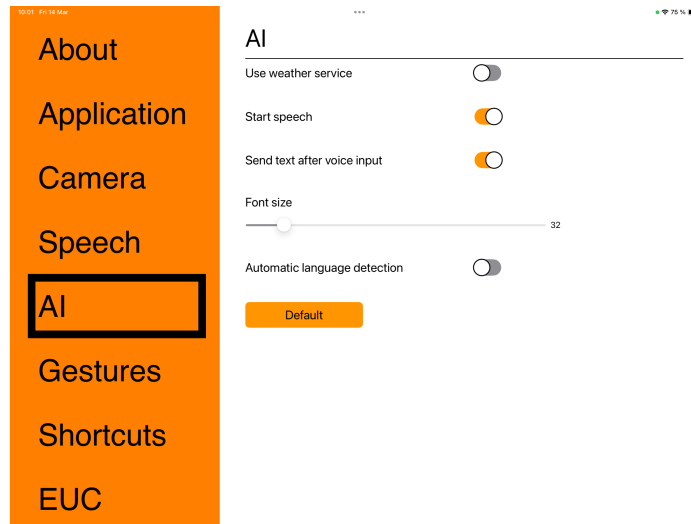
Start reading
When this is checked, the reading starts immediately when you receive a message.

Send text after voice input
When this is checked, the text is automatically sent after voice input.

Font size
Here you can set the font size.
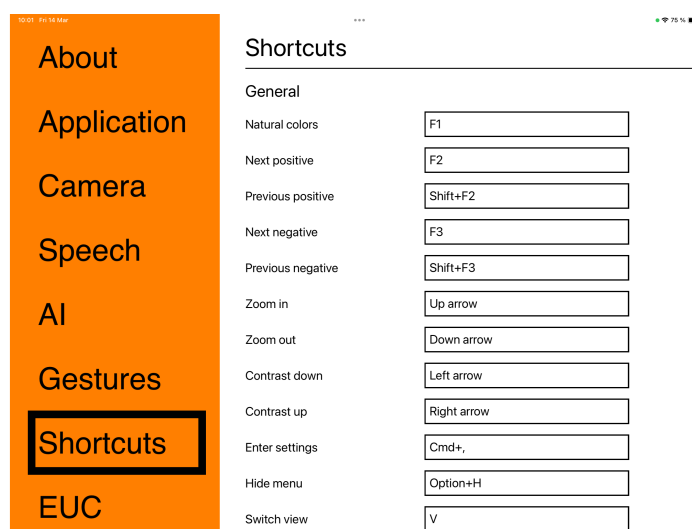
Automatic language detection
When this feature is enabled, the application tries to identify the language and change the voice accordingly.

4.4.6 Gestures
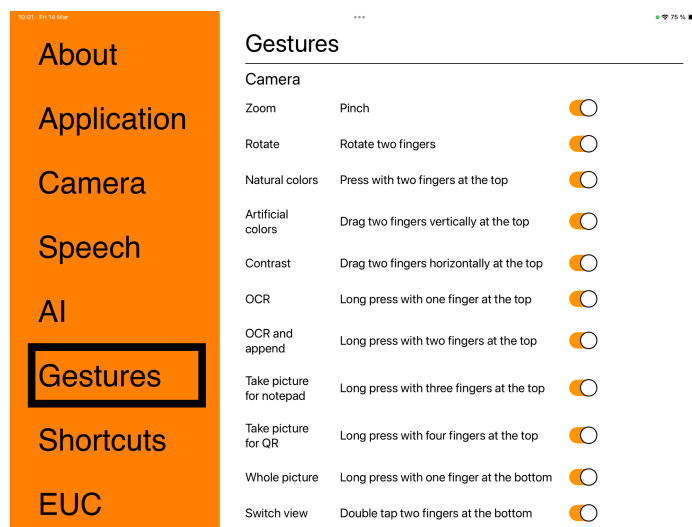
Here you can choose which gestures will be used. To turn off a gesture, you can untick the relevant box.

4.4.7 Short cut commands

Here the short cut commands used for the application can be changed. To change a short cut command, tab to the command that is to be changed and enter the new keyboard combination. If a combination already being used for another command is entered, the other command will be erased. A new keyboard combination will need to be entered for the other command.

4.4.8 EUC
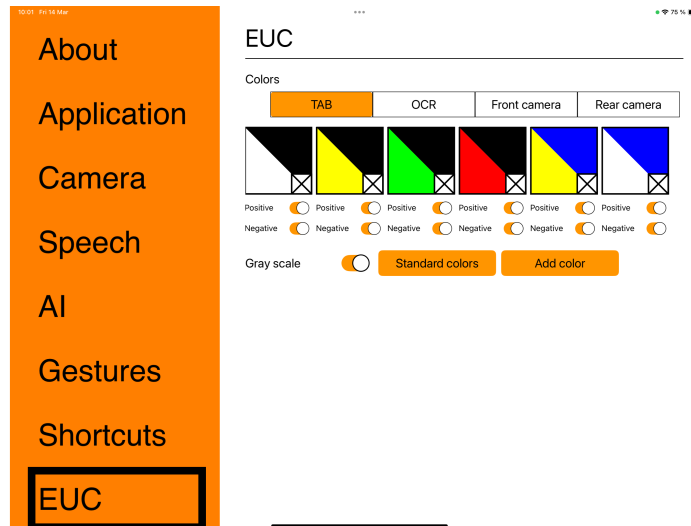
The camera can be configured under this tab.

Colours

It is possible to remove and change the camera's artificial colours.

• To remove a colour combination, press X.

• To add a colour combination, press Add.

• To change a colour combination, press one of the triangular fields and a colour dialog box will appear. Select colours and press OK.

• To remove either the positive or the negative component. Uncheck the "Positive" or "Negative" checkboxes.

• To restore the colours, press "Default colours".

Grey scale

Choose if you wish to have grey scale or not.

Alphabetical index