

3D-Con 2023 QooCam EGO Camera Workshop

Gene Mitofsky

National Stereoscopic Association

Photographic Society of America – 3D Division Star Ratings Director APSA PPSA

International Stereoscopic Society

Photo West Arizona

Chicago Stereo Camera Club

Co-host, 3D-Con 2022-3 SSA Convention Exhibition

The following are my own observations, solutions and procedures and I am sure there are other ideas, opinions, and ways of doing things with the camera and any software mentioned (not endorsed).



Hi Everyone,

Here's Jiawei, CGO of Kandao., CGO of Kandao. We are so honored to join 3D-Con again and have Gene representing Kandao to share QooCam EGO, a viewer-integrated 3D camera.

We are a high-tech company creating innovative imaging products, and a pioneer in the field of 3D VR cameras, VR technology, and Ultra-HD video cameras. The first 3D camera we released was Kandao Obsidian. It won the CES Best of Innovation awards with its high-quality performance, professional depth mapping algorithm, and user-friendly workflow. QooCam EGO is our endeavor in the consumer market to lower the threshold for enjoying 3D photography, it comes with a viewer to allow users to enjoy 3D videos and photos right after shooting. For this year's 3D-Con, we provide one free QooCam EGO as a giveaway and coupons for every attendee.

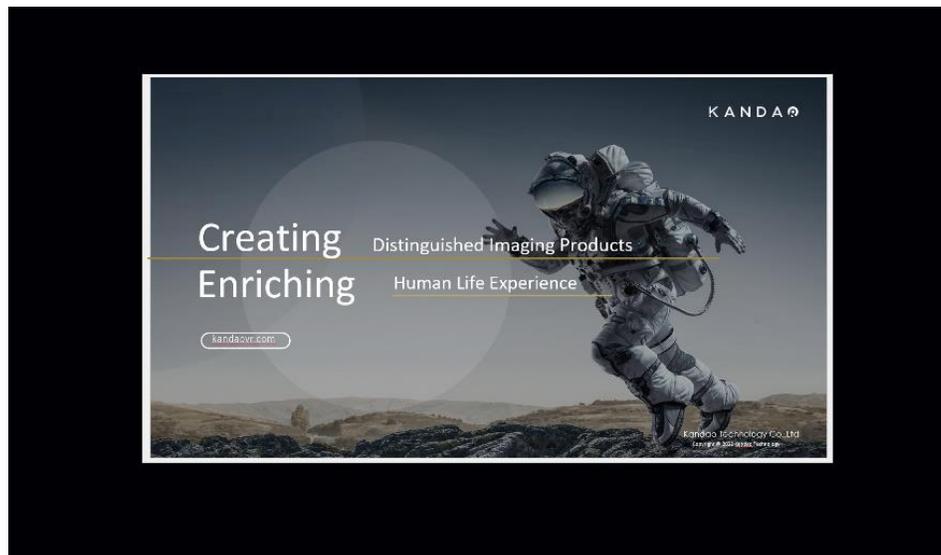
Thanks again for having us join this event. I am sure that 3D-Con 2023 would be a great success. Hope you enjoy the event!

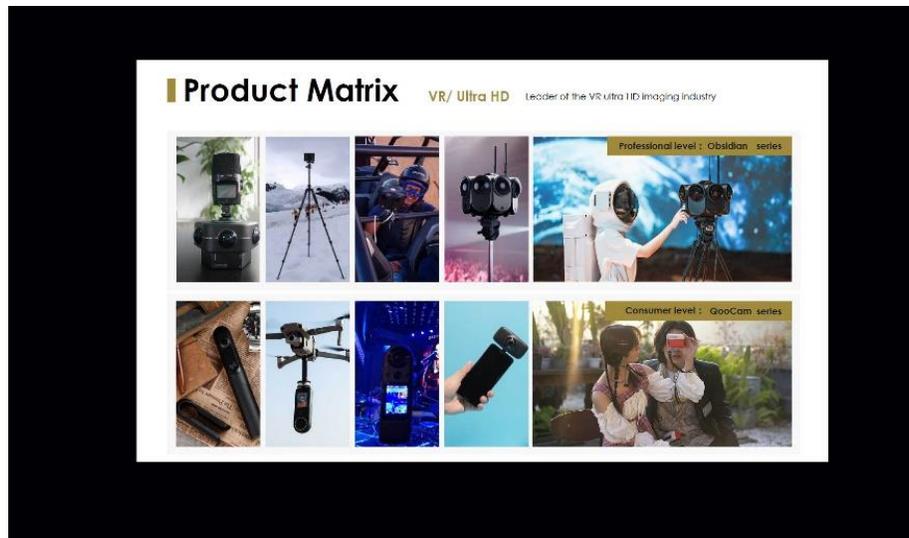
THE COMPANY

<https://www.kandaovr.com/>

Kandao is a VR research and hardware startup focused on creating next-generation imaging products, enriching the human life experience. Driven by the development of hardware and software, Kandao is a pioneer in VR technology, Ultra-HD video cameras, and video conferencing cameras. Founded in 2016, it is the first Chinese company honored by the CES Best of Innovation award in the digital imaging category, and the first company to have its 12K 3D VR camera used to live-stream in 8K VR.

Shenzhen Kandao Technology is a national high-tech enterprise, and is selected as one of the “little giant” enterprises by the Ministry of Industry and Information Technology. Adhering to the mission of “creating distinguished imaging products, enriching human life experience”, and driven by the mutual development of hardware and software, Kandao is a pioneer in the field of VR technology, Ultra-HD video cameras and video conferencing cameras. We set a new record for being the first Chinese company honored by the CES Best of Innovation Award in the digital imaging category, and the first Chinese company that won Japan Good Design Best 100 in the camera category. Over the years, we’ve earned many international authoritative awards such as CES Innovation Awards, iF Design Awards, Red Dot Design Award, IDEA Design Award, Japan Good Design Award, German Design Award.





Awards

iF DESIGN AWARD 2022 DESIGN AWARD is annually conferred by the iF International Forum Design, which is one of the world's most prestigious industrial design organization from Germany. The 3D camera, QooCam EGO which is released by Kandao in 2022, and Kandao Obsidian Pro are honored by iF DESIGN AWARD 2022 for their unique idea of design and their outstanding functions.

The Red Dot Design Award 2022 The Red Dot Design Award was organized by Design Zentrum Nordrhein Westfalen, the most prestigious design association in Europe, in 1995. It is known as one of the four world's major design awards with "iF Design Award", "International Design Excellence Awards (IDEA)" and "Good Design Award".

IDEA The International Design Excellence Awards (IDEA), established in 1980 by the Industrial Designers Society of America, enjoys a worldwide reputation. Its rigorous evaluation criteria includes design innovation, user benefit, social impact, etc. Kandao Obsidian Pro, a 12K 3D film-level VR camera, is the honoree of the IDEA Bronze Award; Kandao Meeting Pro 360°, an intelligent video conferencing camera, wins the Best in Show Award.

CES Innovation Awards 2022 CES 2022 Innovation Awards is an influential competition honoring remarkable design and engineering in 27 product categories. All submissions are rigidly reviewed by 83 leading experts in consumer technology, industrial design, engineering, and media. Kandao Meeting S won the CES Innovation Awards 2022 for the perfect combination of innovative technology and appealing industrial design.

Good Design Award The Good Design Award, founded in 1957 by the Japan Institute of Design Promotion, has a history of nearly a half-century. It is recognized as the most authoritative and influential design award in Asia, known as the "Oriental Design Oscar"

Award “. It is recognized as one of the 4 major international design awards along with the Red Dot Design Award, iF Design Awards, and the IDEA Design Award.

Good Design Award 2021 Best 100 Japan Good Design Award, as one of the 4 major design awards in the world, attracted a total of 5835 products to hit the stage in 2021. Kandao Obsidian Pro stands out with superb craftsmanship and remarkable performance. It is our honor to be named Good Design Best 100 alongside globally well-known brands such as Canon, Sony, Fujifilm, and Sigma. This award made us the only Chinese camera enterprise that earned Best 100 during the past 46 years since foreign companies joined the competition.

iF Design Awards 2021 iF Design Awards, abbreviated as "iF", was established in 1953. The award is regularly held by iF Industrie Forum Design, the oldest industrial design organization in Germany. It is famous for its "independent, rigorous and reliable" award concept and aims to enhance the public's understanding of design. Kandao Meeting Pro won the iF Design Awards 2021 for its unique design style and exquisite craftsmanship.

CES Innovation Awards 2021 CES Innovation Awards is set for 29 categories of consumer electronic products to recognize the outstanding achievements of consumer electronic products in design and engineering. It is the most important award in CES exhibition. Kandao Meeting pro and Kandao Obsidian Pro won the CES Design Awards in 2021 with their unique design style, exquisite craftsmanship and top technology.

The Red Dot Design Awards 2021 The Red Dot Design Awards is recognized as an international symbol of creativity and design. Winning the award means that the appearance and texture of products have won the most authoritative "Quality Assurance". Kandao Meeting Pro won the 2021 red dot design award for its excellent performance, exquisite workmanship and proud quality.

FIRMWARE Updates

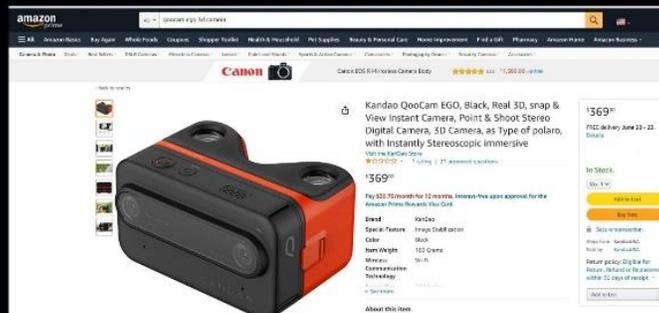


Most information presented here today,
and much more, can be found on Facebook,
in the discussion group
QooCam EGO User Group

[Photo-3d] Photo-3d - Digest #1366

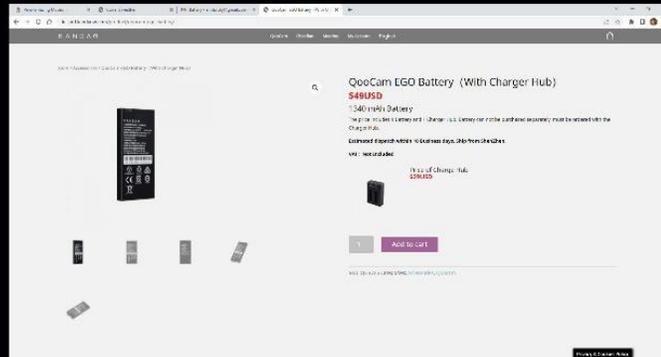


<https://stereoscopy.blog/>



ACCESSORIES

<https://prd.kandaovr.com/product/qoocam-ego-battery/>



A way to make the buttons easier to push.
Just some cheezy and cheezy plastic dazzle found in most craft stores. I use them on all my camera accessories to



"I have used an external Power Grip without the battery installed (see photo below). Have not used it to charge the camera." continuous runtime than the internal battery (6000 mAh vs 1340 mAh)

Dean Zwikel



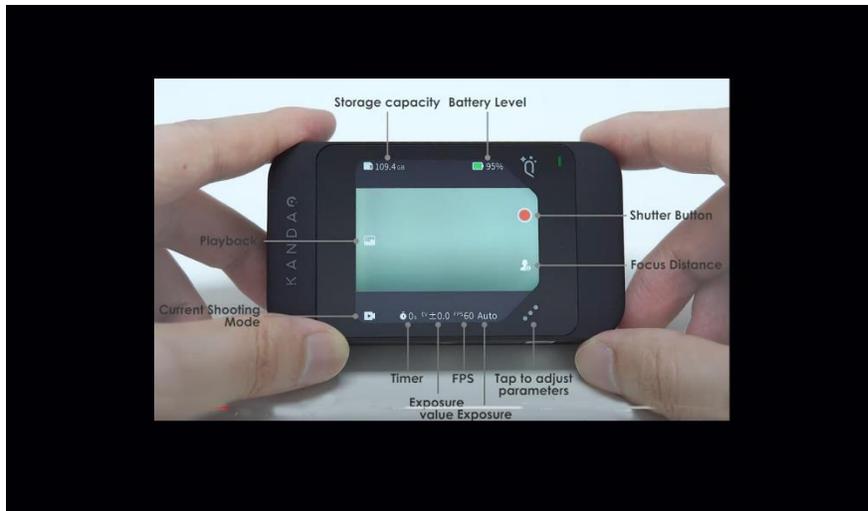
Amazon \$22 Vidpro PG-6X Rechargeable Battery Hand Grip - Selfie Charging Stick - Powerbank Extension Rod Kit Includes Detachable Bracket USB Cable Smartphone Clamp Compatible with Action Cameras Phones & More



EGO internal battery = 1340 mAH, PG 6X Handle/battery = 6000 mAH Make sure to get the exact chip they recommend, this chip is the most successful when updating the camera. You can purchase the camera or better yet, purchase the “kit” which included the correct chip.

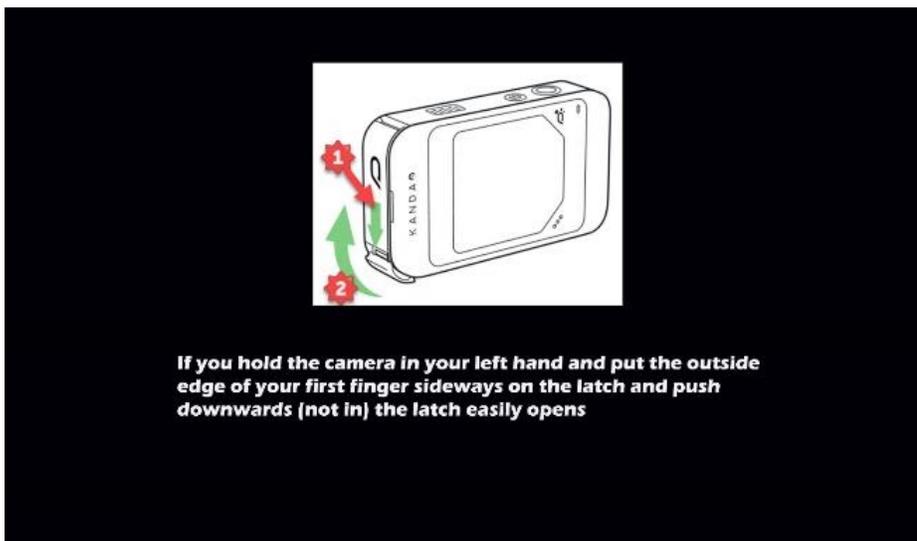
THE CAMERA - GETTING STARTED

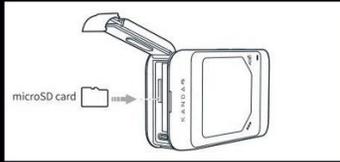




The hatch is in fact in two parts: you have first to slide down the bottom part (green arrow #1) then lift the door upwards (second green arrow)

If you hold the camera in your left hand and put the outside edge of your first finger sideways on the latch and push downwards (not in) the latch easily opens





Videos and photos will be stored into the inserted microSD card after shooting. Maximum supported capacity of microSD card is 256GB. UHS Speed Class 3 is recommended.

Using a Sandisk Ultra 128GB Micro SD card, I was able to record for 3 hours 26 minutes continuously in 4K.



**Swipe up
shooting settings**

**Swipe down
Camera settings**





- 1. Go to settings and make sure Wi-Fi is on**
- 2. Wait a minute or two for all the nearby Wi-Fi signals to appear**
- 3. Choose your network or cell phone hot spot and put in the password.**

To link to the app on your cell phone

- 1. Go to Settings and turn on hotspot**
- 2. Give the Hotspot a name and password.**

CONNECTING THE CAMERA TO THE INTERNET

CAMERA SETTINGS (RECOMMENDATIONS)



Auto Lock turns the screen off, as fast as 1 min. Touching the power button turns it on and the camera is ready to shoot right away.

Auto Shutdown turns the camera off. The fastest time is 5 minutes, I am using 10.

I do not turn the camera off, just put it in my pocket. I might pull it out in a minute or two, it is ready to take pictures. If I don't take a picture for 10 minutes, then it will shut off and I have to go through the lengthy turn on process.

This seems to be a good compromise between saving battery and having the camera ready to shoot. Experiment to find your own best settings.

George



If you are using the camera in low-light situations in AUTO mode, be prepared to get blurry pictures.

AUTO mode drops the shutter speed until it bottoms at 1/15s (the lowest speed the camera uses). Impossible to hand hold

Change AUTO to Sports mode 1/120.

Outside on a sunny day, the shutter speed of 1/120 is irrelevant. The camera will use higher shutter speeds at the lowest ISO (100).

As the light drops, the 1/120 will become relevant and important for getting sharp shots. The speed will drop until it reaches 1/120 and then the ISO will increase until it hits the ceiling, then the speed will drop to 1/15, in that order.

George

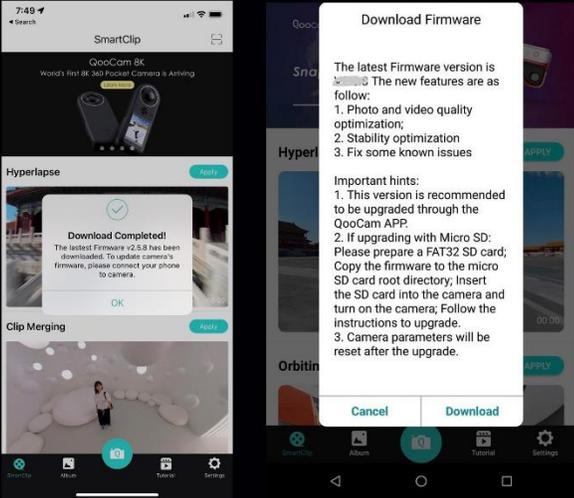
Internet



1. Go to settings and make sure Wi-Fi is on
2. Wait a minute or two for all the nearby Wi-Fi signals to appear
3. Choose your network or cell phone hot spot and put in the password.

To link to the app on your cell phone
1. Go to Settings and turn on hotspot
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CONNECTING THE CAMERA TO THE INTERNET



Download Firmware

The latest Firmware version is **v2.5.8**. The new features are as follow:

1. Photo and video quality optimization;
2. Stability optimization
3. Fix some known issues

Important hints:

1. This version is recommended to be upgraded through the QooCam APP.
2. If upgrading with Micro SD: Please prepare a FAT32 SD card; Copy the firmware to the micro SD card root directory; Insert the SD card into the camera and turn on the camera; Follow the instructions to upgrade.
3. Camera parameters will be reset after the upgrade.

Cancel **Download**

For the latest firmware, app download, or Studio download go to <https://www.kandaovr.com/download/>

QooCam EGO's YouTube Metadata Injector



QooCam EGO's YouTube Metadata Injector

A tool for QooCam EGO's users to add Metadata before uploading videos to YouTube.

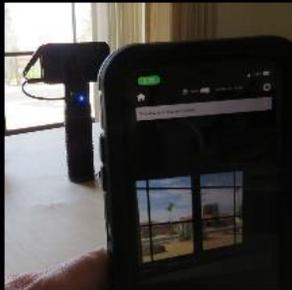
Windows

Mac OS

WINDOWS_EXE 1.0.0
2022-07-22

MAC OS 1.0.0
2022-07-22

IPHONE app for EGO Camera



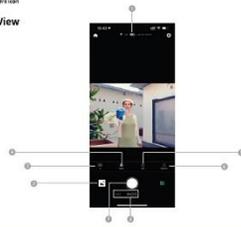
QooCam APP

Connect the QooCam App with the Camera

Tap the camera icon on the home page of your QooCam App to connect to your QooCam EGO, and follow the instructions to operate.



Camera View



EN 17

Ⓜ Status bar on top: Displays the battery level and the capacity of the microSD card.

Ⓜ Album: Tap to view photos and videos.

Ⓜ Tap to adjust exposure.

Ⓜ Modes: auto mode / sport mode (* Sport mode limits the slowest shutter speed to guarantee the clear recording of moving objects. Anti-flicker will not work when shutter speed in 1/250s.)

Ⓜ Tap to adjust timer.

Ⓜ Tap to select the focus distance.

Ⓜ Shutter button

Ⓜ Shooting modes switching

File Transfer to a Phone



EN 18

One handy feature is you can use your app as a remote trigger.

Shooting

TIPS TO SHOOT SHARPER PHOTOS WITH QOOCAM EGO

1. The camera is very lite so slight hand movements can affect the focus. The default setting is "AUTO". (If you choose sport mode, the slowest shutter speed and I use it only for indoor photography. Use "SPORT" mode for most photography.

2. The shutter dot requires only a VERY slight touch to trigger the shutter. If you don't have a very light touch, I recommend using the 3 sec. timer and possibly a tripod if possible.

3. Plan ahead. The camera shoots at 28mm so compose your shots and consider cropping in post production.

4. Autofocus is really selective focus. You can use autofocus or manual focus (for manual I use 1 less than maximum for landscape and 1 more than the more than minimum for close up, but use autofocus.

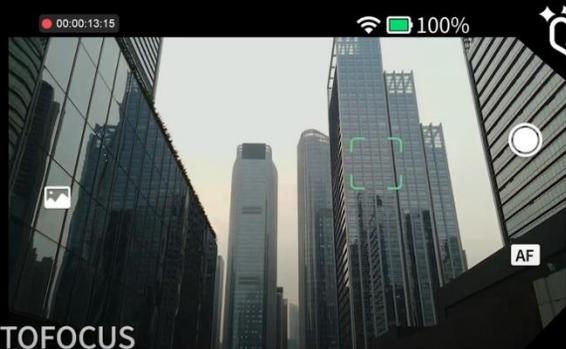


Swipe up
Auto is set at 1/15 sec
Sport setting is the best for handheld

Swipe from right
distance setting or
Auto (select) focus

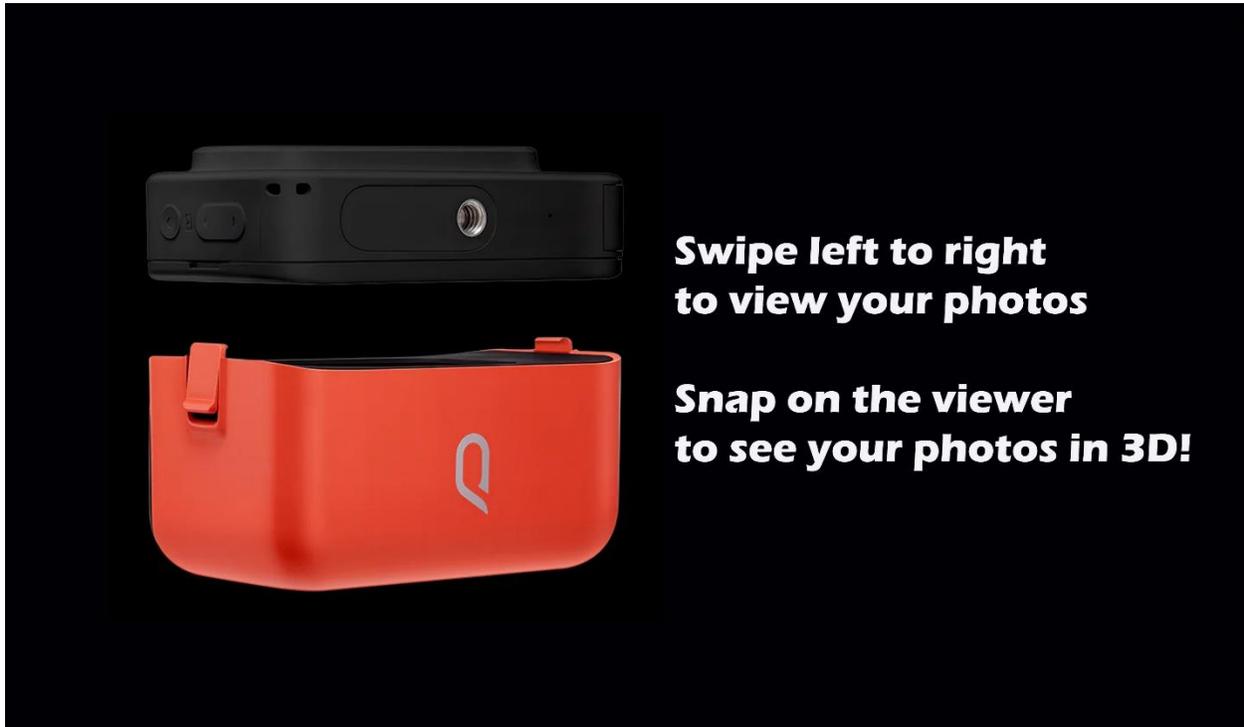


Select the suitable focus settings according
to the distance from the subject.



Tap the little box and wait for it to stop blinking

Viewing



Autoplay Mode

Autoplay is particularly useful when you're using the viewer, as it allows you to automatically play through all of your media files in a slideshow.

You can customize the settings to change the speed of the playback, making it a personalized experience.





**You can view your EGO videos
(Anaglyph)
with VLC Media Player (free)**

Open VLC, Media - Open

**choose your mp4 file (in a folder
already transferred from camera to
computer)**

Change settings.....

**Tools - Effects and Filter
Video Effects - Advanced
Anaglyph 3D, Close**

**Video (main menu)
Aspect ratio 16:9 or 4:3**

Saving



SAVE YOUR PHOTOS

File transfer –

**Go to settings, change USB from charge to
transfer (camera will reboot).
Plug cable into computer, directory will pop up.
Copy files to any drive/directory/folder you
want.**

Extremely fast transfer.

**Another way is to remove the microchip insert
it into an adapter and insert into a computer.**

SHARING

Double the Joy When Sharing



Join EGO Community for Exclusive Joy

Our Video-talkie in-cam chatroom lets you send video to your EGO partner without connecting the phone, or you can share your fantastic work with all users via QooCam app.

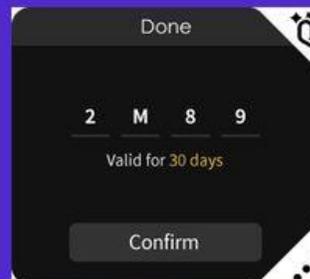
Sharing photos and videos

Share by uploading to the cloud and generating the unique PIN code

Connect your camera to the Internet via through a network or thought your cell phone's hot spot

● *Tips for Generating PIN Code:*

1. Select a video/photo, then tap the three-dot at the bottom right corner and share.
2. Set a valid period as 30 days and confirm.



A New Worldwide 3D Community

1. Connect to the internet (home network, cell phone hot spot, etc)
2. View photo you want (swipe left to right)
3. Tap the 3 dots in the lower right corner and tap "share".
4. Choose the duration then password y/n
5. You will get a 4 letter/number code.

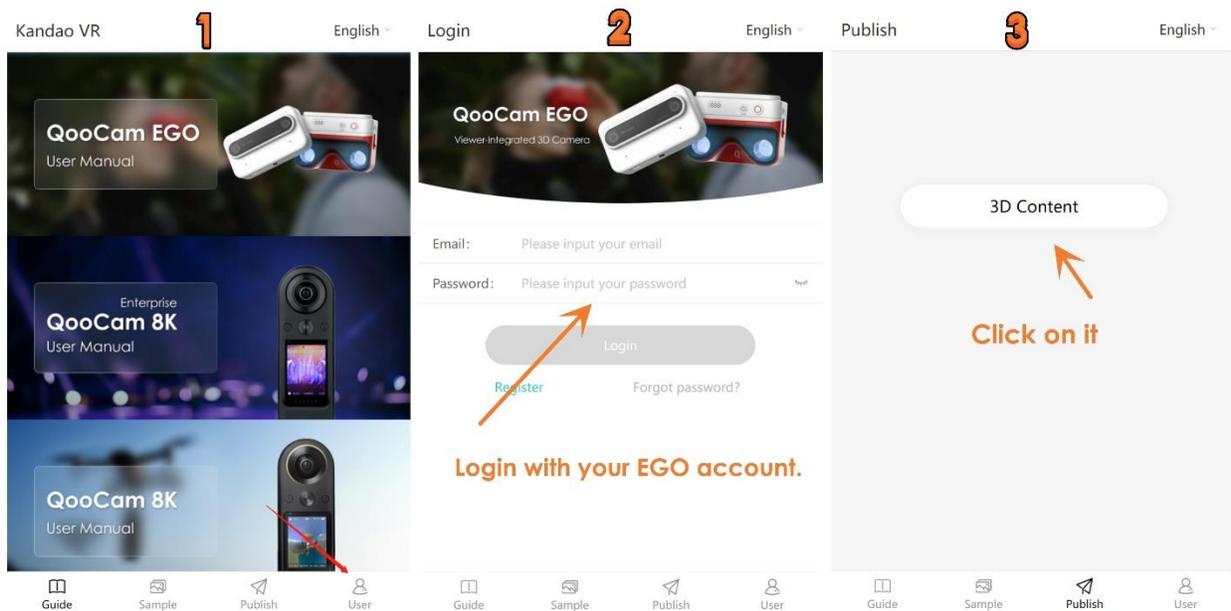
Share that code (facebook, text, email, etc.) with any other EGO user
They will swipe down, choose download, enter the code and
SEE YOUR PHOTO!

A New Worldwide 3D Community

1. You can find Kandao VR Mini-program on WeChat or you can visit the corresponding website at <https://wechat.kandaovr.com/> if you don't use it.

2. Login with your QooCam EGO account.

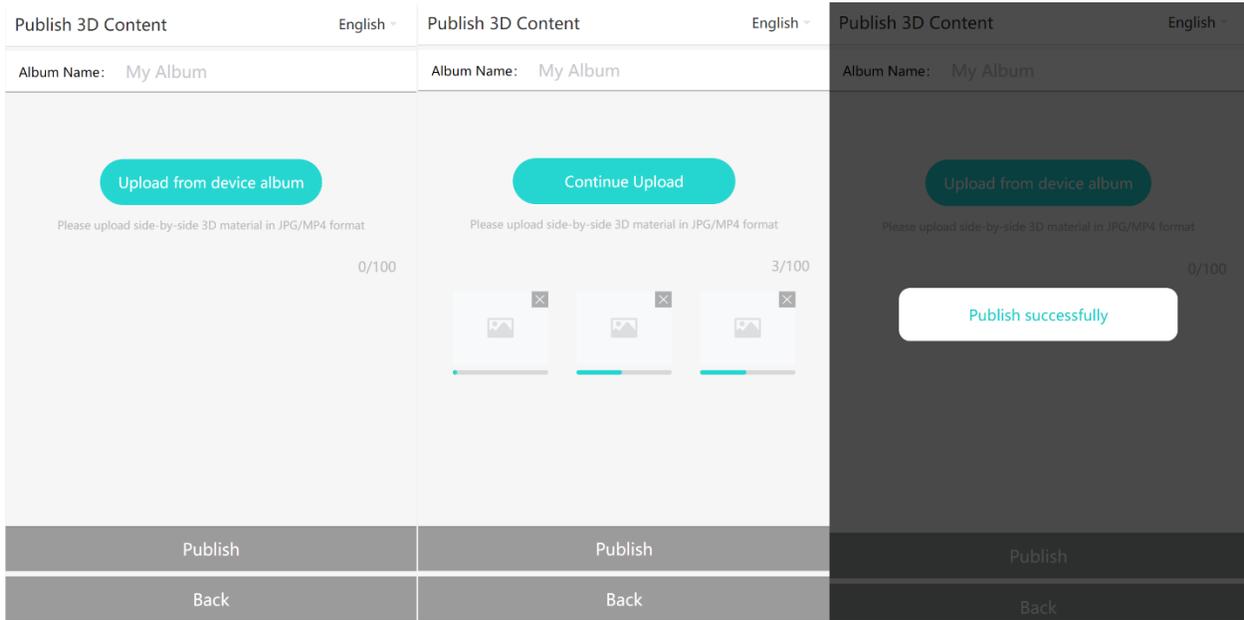
3. Click on "Publish" in the navigation bar and select "3D Content" on the page that appears.



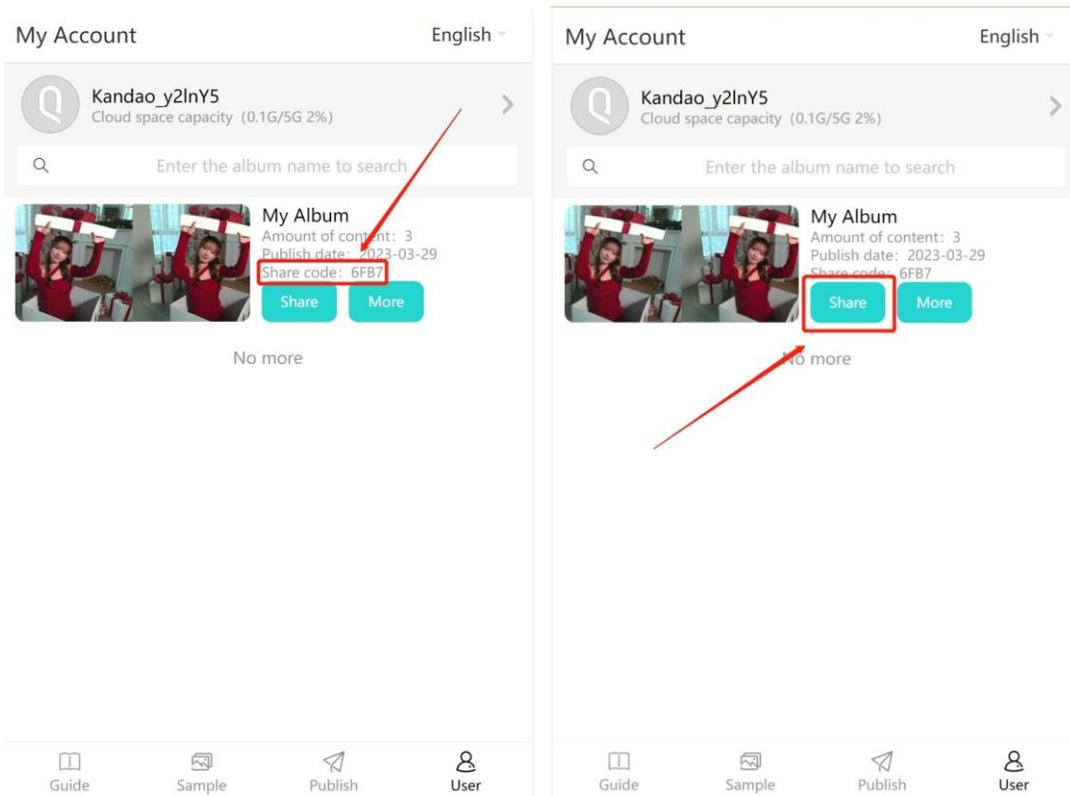
4. Fill in the "Album Name" (not necessary) and upload your MP4/JPG format videos/images from your PC or mobile device by clicking on "Upload from device"

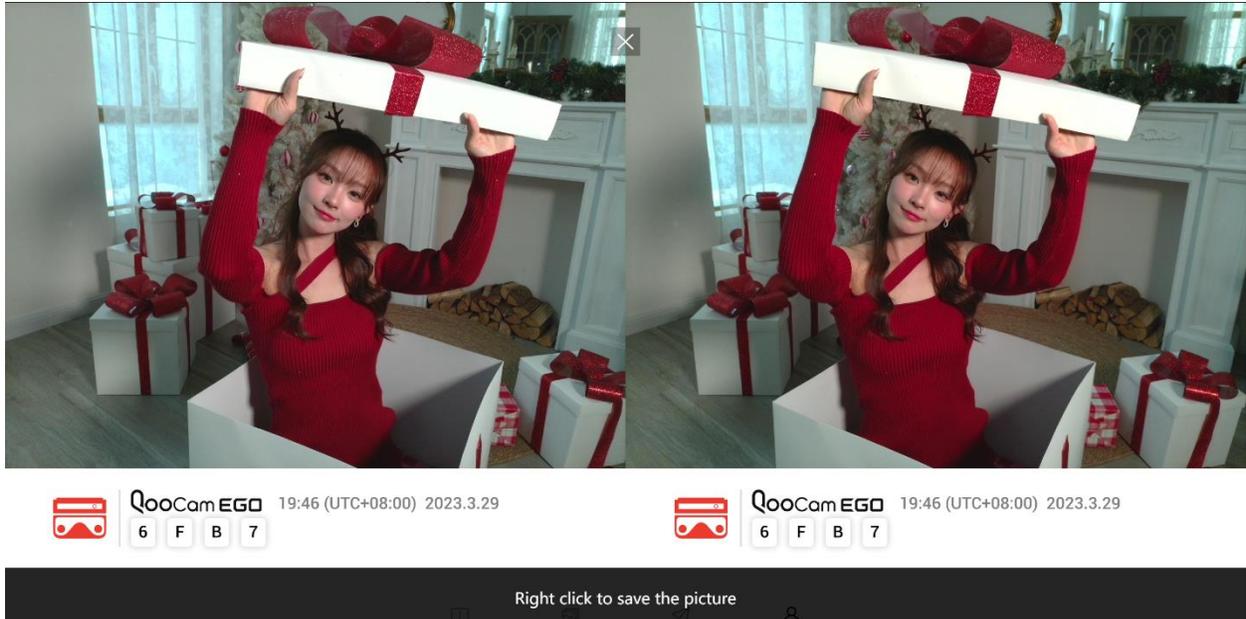
album."

5. Once the files are uploaded, click on "Publish" to complete the upload.

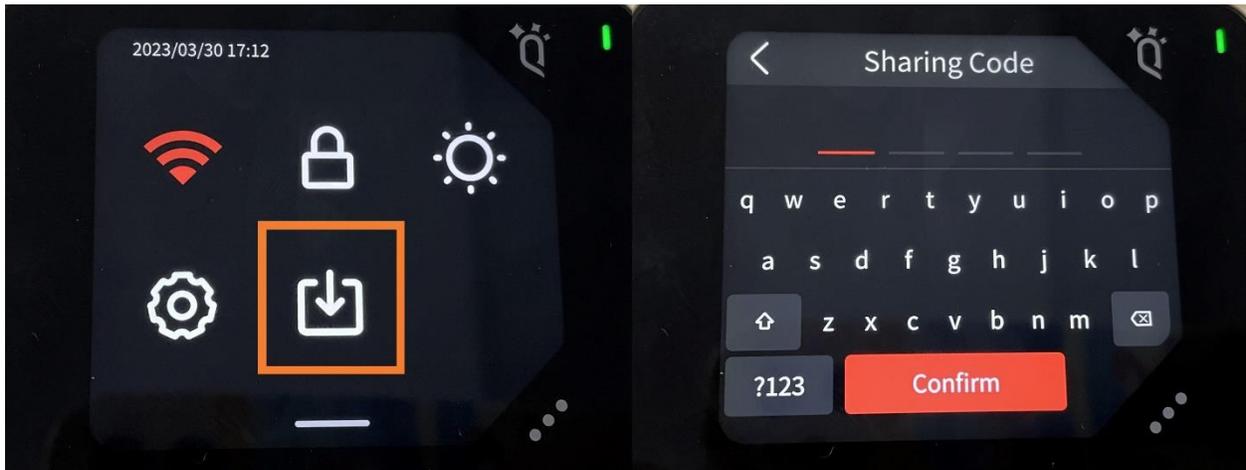


6. After successful publishing, you can find all the albums you have uploaded on the User page. Each album comes with a 4-digit sharing code. You can edit or delete albums as needed.





7. Turn on your QooCam EGO and connect to Wi-Fi or Hotspot. Swipe down from the top of the screen and tap on the download icon. Enter the sharing code, and you can enjoy the content you uploaded.



This method, suggested by QooCam EGO's CEO Dan Chen, is a quick and easy solution that saves time and is convenient especially when you want to view 3D content on the EGO after post-production with other software.

It's a great way to share your QooCam EGO content with your friends and family, or even with the wider QooCam Community. Happy sharing with just a few clicks!

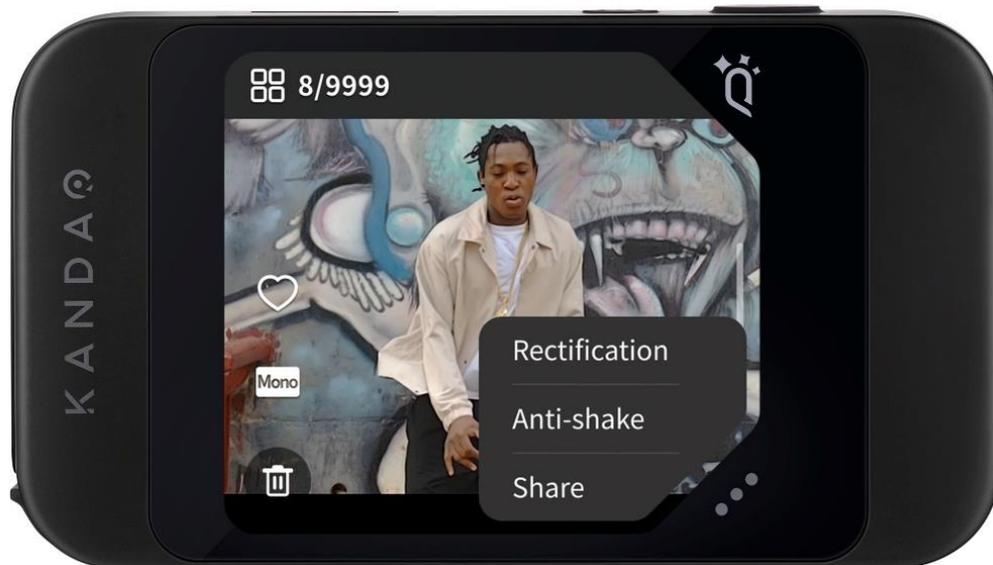
The image displays four sequential screenshots of the Kanda VR Mini-program interface on WeChat:

- Screenshot 1 (Login):** Shows a login screen with fields for Email and Password, a Login button, and links for Register and Forgot password? Below the fields is the URL [\(https://wechat.kandaovr.com/\)](https://wechat.kandaovr.com/).
- Screenshot 2 (Publish):** Shows a 'Publish' screen with a '3D Content' button. An orange arrow points to the button with the text 'Click on it'.
- Screenshot 3 (Publish 3D Content):** Shows a 'Publish 3D Content' screen with an 'Album Name' field containing 'My Album', a 'Continue Upload' button, and a progress indicator '3/100'.
- Screenshot 4 (My Account):** Shows a 'My Account' screen with a search bar, a 'My Album' section, and a 'No more' message.

Register and/or login

**Kandao VR Mini-program on WeChat
You can create albums and viewers can enter on the 4 code to view all of the photos in the album.**

Video Stabilization



After recording the video, tap the three-dot button at the bottom right corner and select "Anti-shake" to stabilize your video.

Qoocam Studio

<https://www.kandaovr.com/download/>



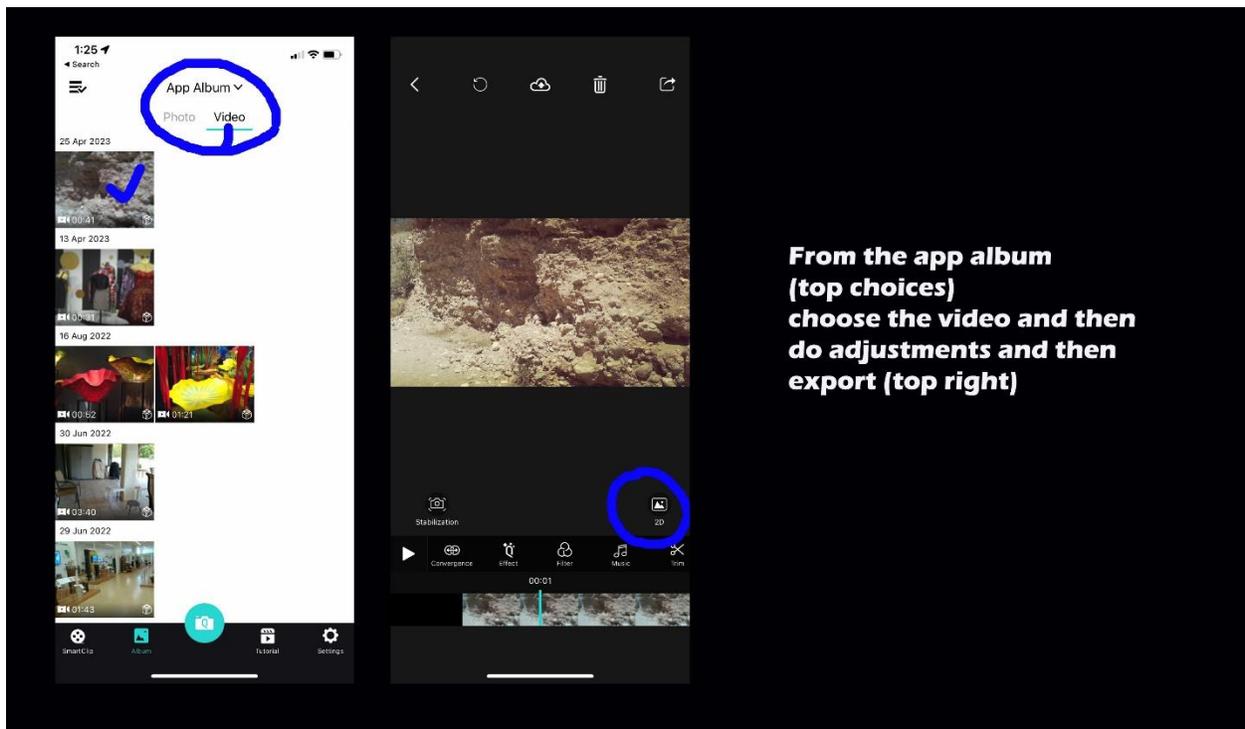
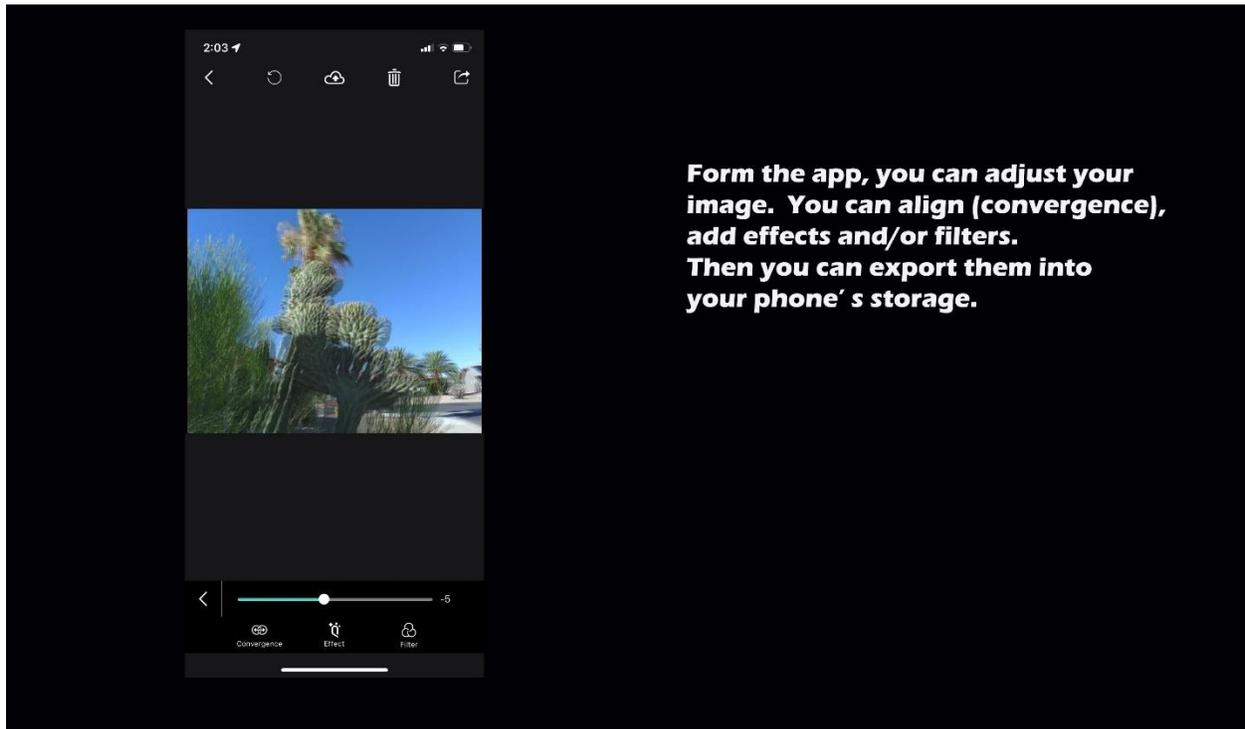
Qoocam Studio
You can Stabilize and output movies in different formats.
(Great for LG TVs.)

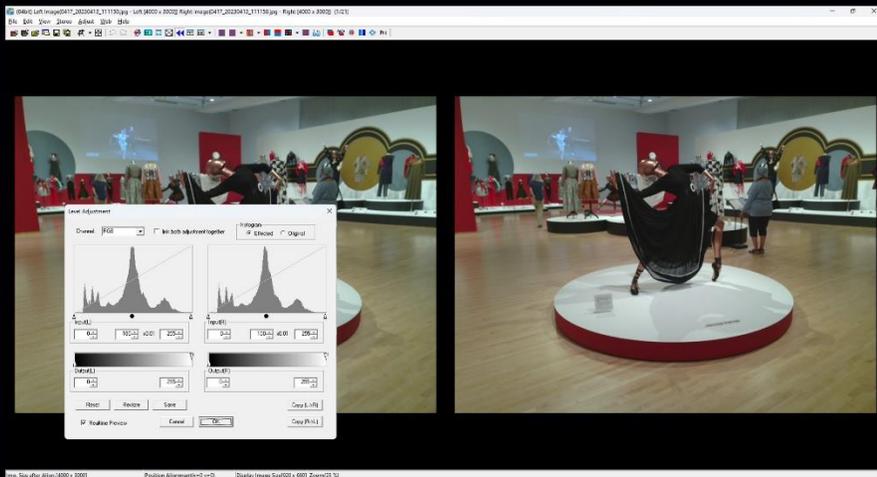
You can capture one frame and save it.



You can align and stabilize your video

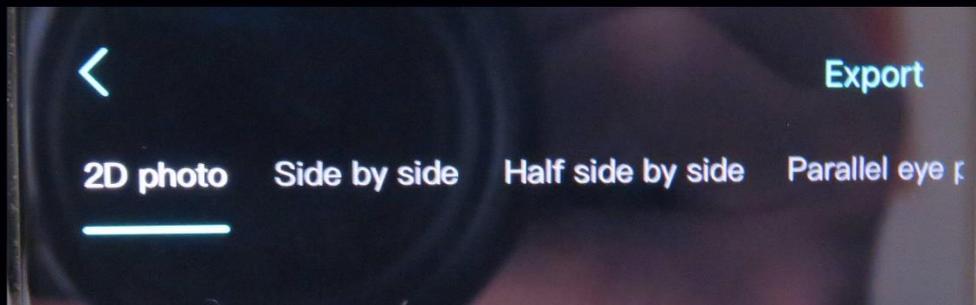
Other Adjustments and Exporting





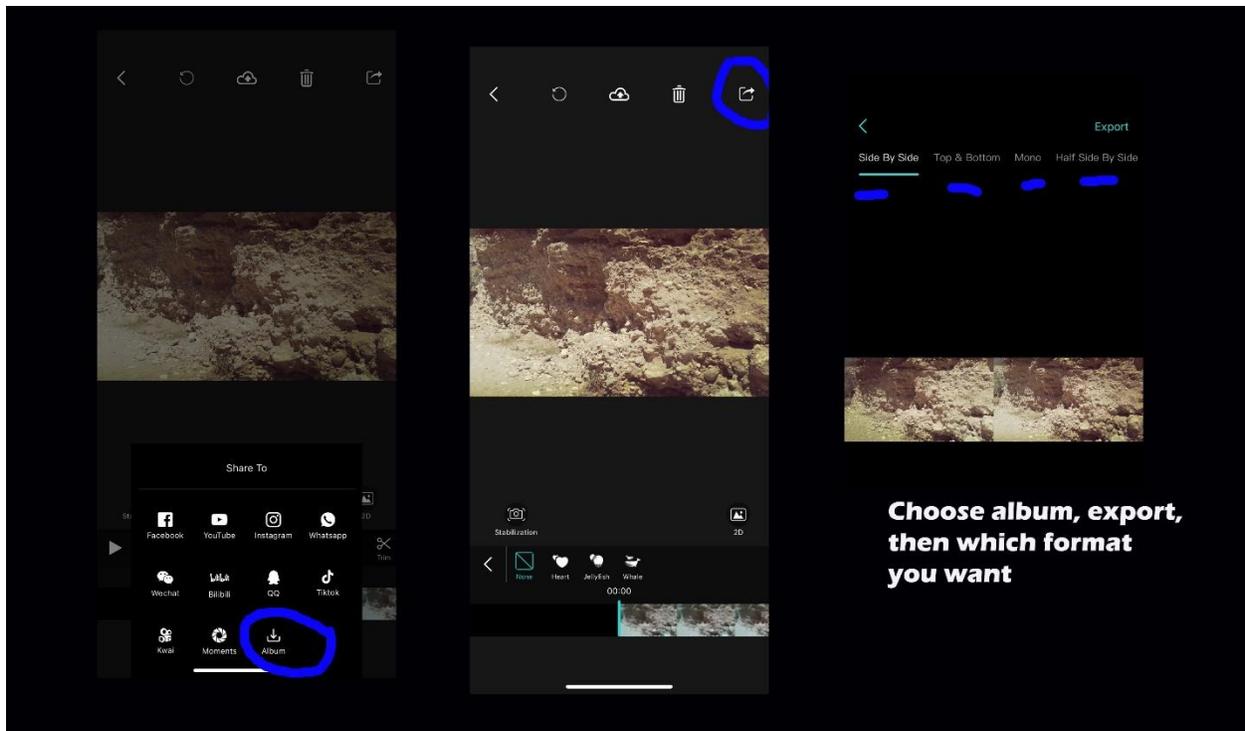
I used Stereophoto Maker for alignment, setting the window and color adjustments.

Export Choices



Exporting a video from the App, you have several choices.

**Half side by side is best for the LG 3D TV
Sometimes you want to convert and share your video in 2D**



RENAMING OTHER PHOTOS

Hidden Trick!

Renaming Files to View Side-by-side Content from

1234_12345678_123456

any 4 numbers

1234

date YrMonthDay

20230805 (Aug 5 2023)

any 6 numbers

123456

Copy the renamed file to the corresponding folder on your QooCam EGO's SD card.
For photos, save them in the PHOTO > 01 folder. Must be jpg

Copy the renamed file to the corresponding folder on your QooCam EGO's SD card.
For videos, save them in the VIDEO > 01 folder. Must be mp4

Additional tips and procedures

For pictures

- Connect EGO to computer by wire (or chip)
- Copy from EGO folder to Computer folder
- Open Stereo Photomaker to align, etc and output as MPO
Or in the Q app, convergence.

For video - To stabilized mp4 video

- copy from EGO folder to Computer folder
- Open QooStudio to stabilize and render mp4

Magix software will export to an anaglyph format.

- Download to computer, then with Qoostudio, stabilize the video
- Load the mp4 into Magix , and in the popup choose “don’t activate 360”
- Highlight the video in the timeline, go to effects - Video objects, then 3D, then properties
- In the right side popup, choose SBS full width, left first
- Then export mp4 and choose anaglyph (or many other choices)

For half frame LG TV -Two methods

- with Magix movie software
- through EGO software and app.

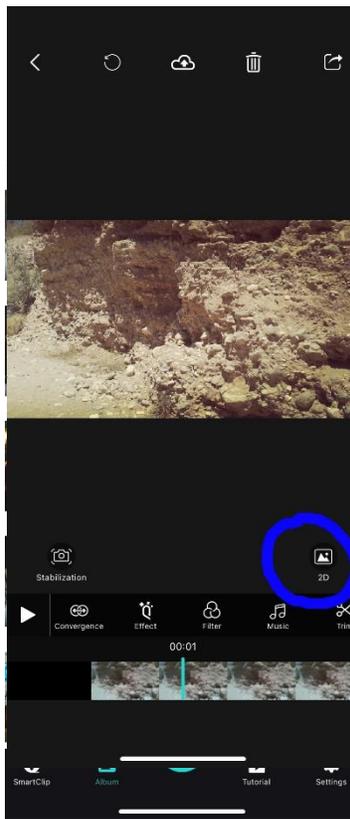
Connecting EGO to cell phone app

- Go to videos, hold to check, choose camera album (top) and download (to app)
- On app, on top, pull down for APP ALBUM
- Tap to go to edit (upper left icon)
- Click the share icon, then choose album
- Next screen will ask for format, choose what format you want (half, sbs, etc)
- It will export to your cellphone albums
- Then transfer from cell phone to computer

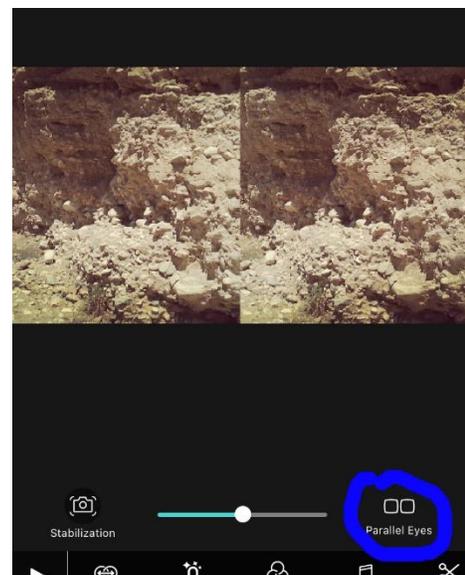
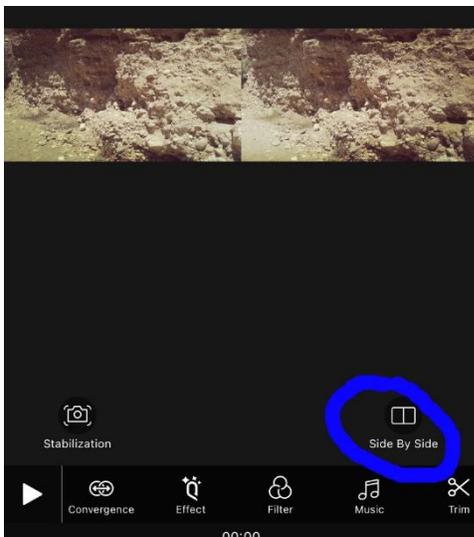
Load Magix to convert to anaglyph

Export from app to Iphone (then from Iphone to computer)

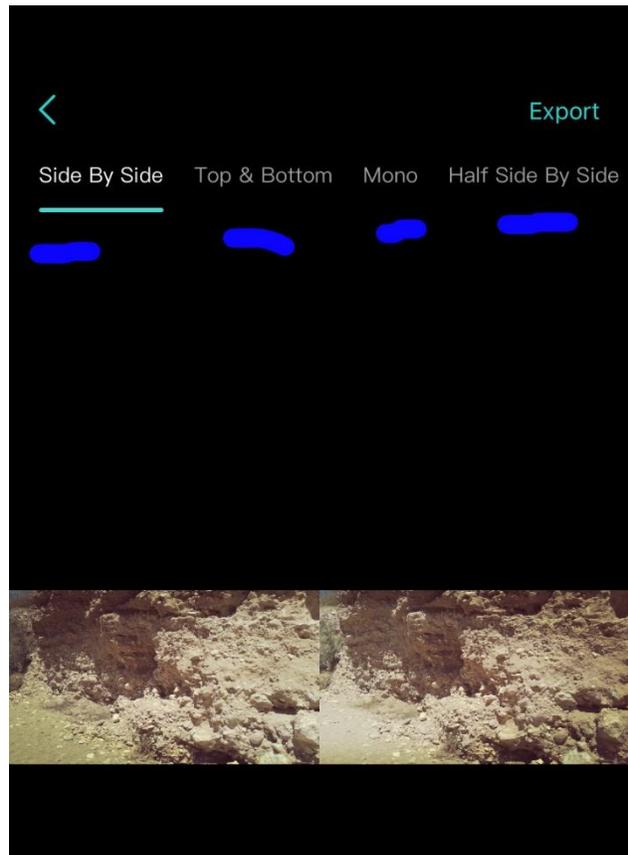
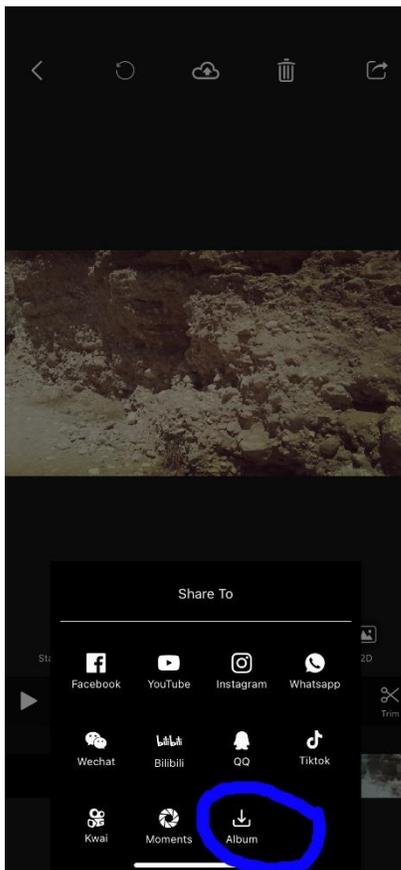
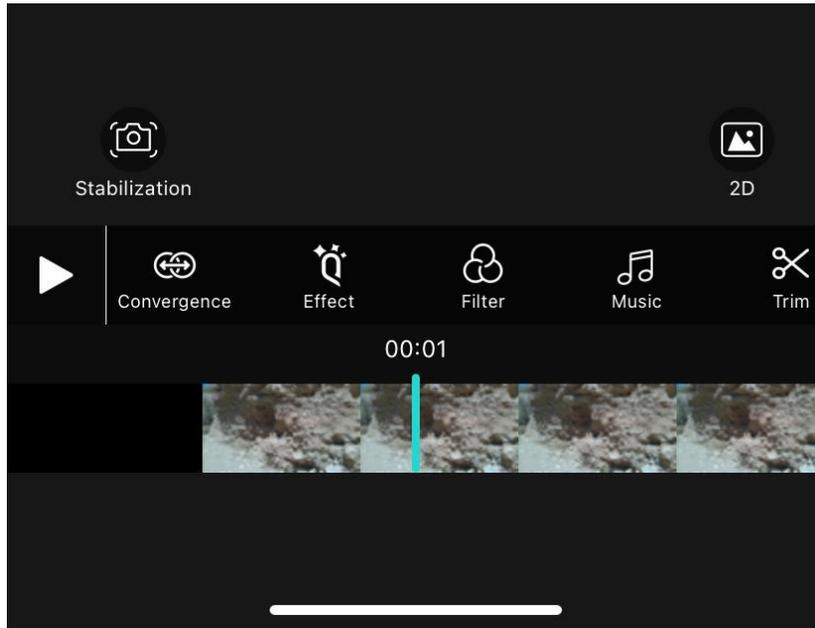
After connecting the camera to the app and saving the video, go to the app, and from the top, pick video album, and select video. Half frame is for LG 3D TV



You can change the view from 2D, to Parallel to SBS



Other adjustment options





Stabilization



2D



None



Heart



Jellyfish



Whale

00:00



For LG TV half frame

EXPORT video FullSBS or HalfSBS

LG TV success! EGO to Computer to LG TV

- 1. Connect camera to app**
- 2. In view mode select video (or photo)**
- 3. Click lower left icon or Home then albums to view camera content**
- 4. Select one, it will ask download to app album -download**
- 5. Go to app album (pull down)**
- 6. Select photo/video**
- 7. Upper right icon to download**
- 8. Many choices, pick Album (bottom row)**
- 9. Choose format (SBS halfSBS etc) FOR LGTV CHOOSE HALF SBS)**
- 10. Click export – it goes to your cellphone picture directory**
- 11. Connected cellphone to computer, downloaded video computer**
- 12. Downloaded video from computer to flash drive**
- 13. Inserted into LG 3D TV and works great!**

SAVE YOUR PHOTOS

File transfer –

Go to settings, change USB from charge to transfer (camera will reboot).

Plug cable into computer, directory will pop up.

Copy files to any drive/directory/folder you want.

Extremely fast transfer.

Another way is to remove the microchip insert it into an adapter and insert into a computer.

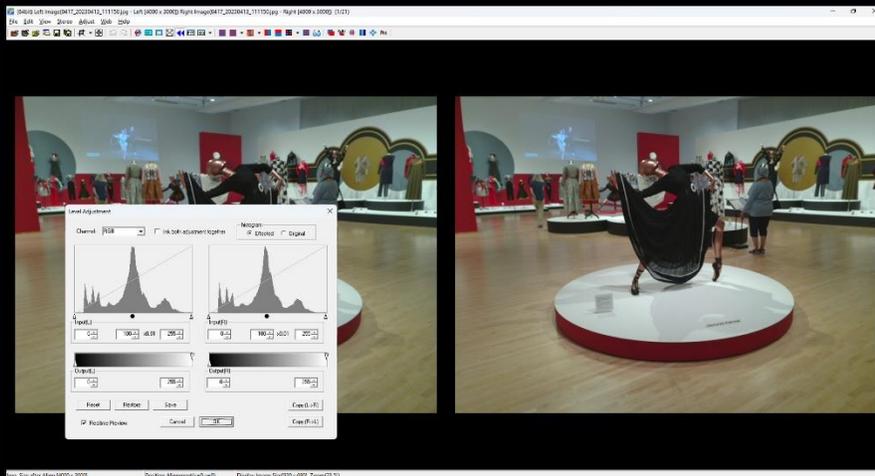


ALIGNING

You can use the app or Stereo Photomaker



**You can align (convergence),
add effects and/or add filters
inside the app**



**I used Stereophoto Maker for alignment,
setting the window and color adjustments.**

LINKS

Kandao company ad https://prd.kandaovr.com/product/qoocam-ego/?gclid=CjwKCAjw_ISWBhBkEiwAdqxb9mH3lueKR26IDMKkTV_vTsYQN37F3cLiRepOaKDOKkKQZs4MJUDmeRoCc48QAvD_BwE

EGO camera Launch <https://youtu.be/WA2n4DYbIAI>

EGO camera quick start manual and video <https://www.kandaovr.com/user-guide/>

Stereoscopic Blog <https://stereoscopy.blog/2022/06/08/straight-from-the-box-review-qoocam-ego-a-new-digital-stereo-3d-camera/>

<https://stereoscopy.blog/category/cameras/>

Firmware update

<https://www.kandaovr.com/download/index.html>

Yuqing Guo review <https://www.youtube.com/watch?v=IT6l6-WTAf4&t=44s>

<https://www.youtube.com/watch?v=IJpO5LVD6vs&t=564s>

New features <https://www.youtube.com/watch?v=IJpO5LVD6vs>

EGO review <https://petapixel.com/2022/02/08/the-kandao-qoocam-ego-shoots-and-displays-3d-photos/>

EGO Iphone app <https://www.youtube.com/watch?v=99-WP8Hqw7I>

EGO Sharing https://ww0.kandaovr.com/resource/ego_to_ego_en.mp4

WhChat batch sharing <https://us.kandaovr.com/blogs/news/file-sharing-in-qoocam-community?fbclid=IwAR2ISywlG5y3PxHfptE69hVbv4dLUCeINWU-hVeqIPxFf-JIJMRNsEF0R9w>

<https://wechat.kandaovr.com/>

New Features <https://us.kandaovr.com/blogs/news/new-firmware-for-qoocam-ego>

Quick start instructions <https://youtu.be/NxcTwyPKp5o>

Mgiguser camera review <https://www.youtube.com/watch?v=AofZsdkMw9A>

Shooting tips <https://us.kandaovr.com/blogs/news/shoot-sharper-photos-with-qoocam-ego>

Update <https://us.kandaovr.com/blogs/news/new-firmware-for-qoocam-ego>

Firmware video <https://www.youtube.com/watch?v=xnrIKTnjig>

