# 3D-Con 2022
# QooCam EGO Camera Workshop

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

 *Hi Everyone,*

*This is Dan Chen, CEO of Kandao, it's our great honor to join 3D-Con this year. Though I cannot attend in person, we have Gene represent Kandao to share the story of our company and introduce QooCam EGO, the 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 3D-Con, we also prepare one free QooCam EGO as a giveaway. I think that you will like it!*

*Finally, I would like to congratulate in advance on the success of 3D-Con 2022. I hope you enjoy the event!*

## THE COMPANY

https://www.kandaovr.com/

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.
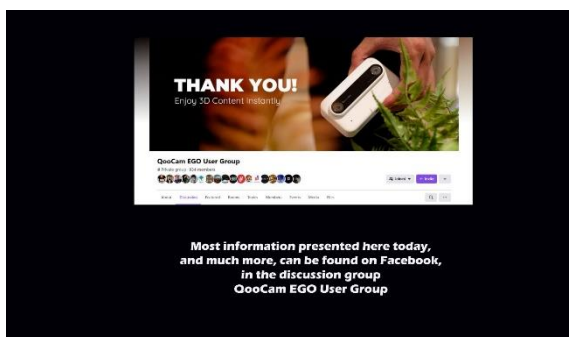
**Good Design Award 2021 Best 100** Japan Good Design Award, as one of the 4 major design awards in the world, attracted a total of 5835 products to hit the stage in 2021. Kandao Obsidian Pro stands out with superb craftsmanship and remarkable performance. It is our honor to be named Good Design Best 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 Obsdian Pro won the CES Design Awards in 2021 with their unique design style, exquisite craftsmanship and top technology.
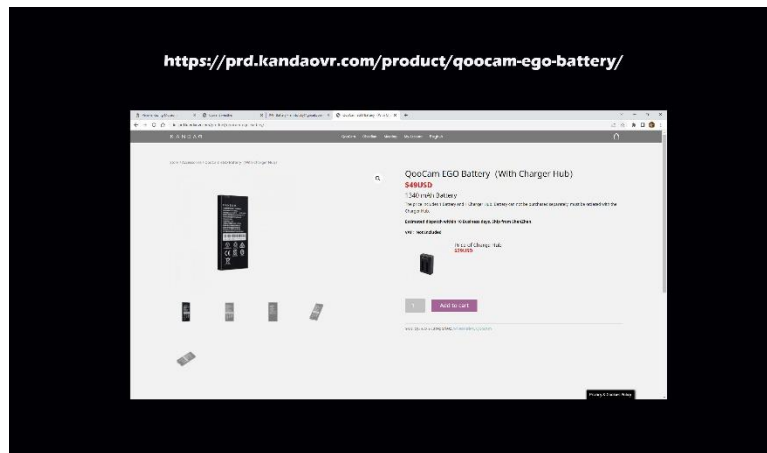
**The Red Dot Design Awards 2021** The Red Dot Design Awards is recognized as an international symbol of creativity and design. Winning the award means that the appearance and texture of products have won the most authoritative "Quality Assurance". Kandao Meeting Pro won the 2021 red dot design award for its excellent performance, exquisite workmanship and proud quality.
FIRMWARE Updates

# ACCESSORIES

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

**Plentiful Accessories**

USB Cable · Battery · Hand Strap · Lens Cloth · Storage Bag · Charger · Selfie Stick · Lanyard
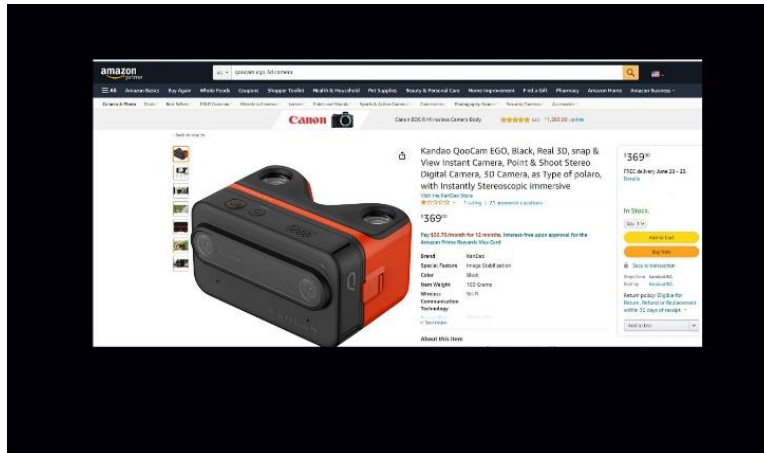
A way to make the buttons easier to push.

Just some cheepy and cheezy plastic dazzle found in most craft stores. I use them on all my camera accessories to

**Includes a**

"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

With power handle vidPro $22 -

1- Camera off ,battery in it charges

2 - Camera on plugged in in works, not sure which battery is working.

3- Camera on battery off it works (no heat)

Not sure specs of handle or how long the battery lasts, but this way I have 2 power sources. (potentially 3 if I use a battery pack to charge the handle.

Cassie

https://smile.amazon.com/dp/B01M8GQNAW?sc=1...

I know the battery is on the small size but I wanted a small handle and the price was great!

Vivitar APM-7582 5200mAh Compact Power Grip for GoPro or Action Cameras   $5

Hohem All in 1 3-Axis Gimbal Stabilizer for Compact Cameras/Action Camera/Smartphone w/ 600° Inception Mode, 0.9lbs Payload for iPhone 11 Pro Max/Gopro Hero 8/Sony Compact Camera RX100 - iSteady Multi  $150 Amazon

EGO internal battery = 1340 mAH, PG 6X Handle/battery = 6000 mAH

# THE CAMERA GETTNG 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)**

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**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**



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
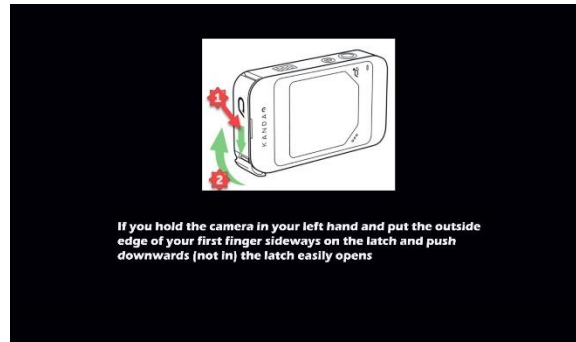


**Download Firmware**

The latest version of firmware V2.0.10 is available.
Main features are as followed:

1. Add battery saved mode
2. Add auto sleep and auto shutdown options
3. Add touch screen shutter
4. Support to save WiFi
5. Interactive optimization
6. Fix some known issues

Cancel            **Download**



**Download Firmware**

The latest version of firmware V2.1.29 is available.
Main features are as followed:

1. Supported setting the validity period and password of the sharing code;
2. Added custom button Q key;
3. Added USB file transfer mode;
4. Optimized the volume of video playback;
5. Optimized the interface interaction fluency;
6. Fix some known issues

Cancel            **Download**

When you do the newest firmware it will erase your pictures so back them up first.

It will also erase your internet and hotspot passwords so be prepared in advance





# 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.

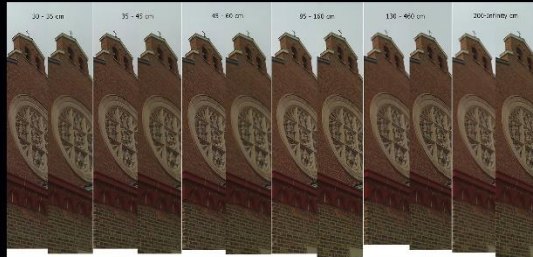Outside on a sunny day, the shutter speed of 1/120 is irrelevant. The camera will use higher shutter speeds at the lowest ISO (100).

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

# SHOOTING RECOMMENDATIONS

**George**

I made a graph of the AUTO exposure program. It is very simple but you need to be aware of how it works to avoid blurry or underexposed pictures.

The Shutter Speed changes from an unspecified top speed to 1/15s
The ISO goes from 100 to 1500

Sunny day exposure is about 1/2000s at 100 ISO. The speed can go up if you use positive exposure compensation.

At the light decreases, the shutter speed drops with the ISO fixed at 100, until the low shutter speed limit is reached (1/15s)

Then the ISO increases until the top ISO is reached (1500)
After than the speed remains at 1/15 and the ISO at 1500 and the camera underexposes without warning.

(chart on next screen)



QooCam EGO
AUTO Exposure Program

**George**
When there is plenty of light, the speed is high and ISO fixed at 100. As the light drops, the speed drops, until 1/120. Then it remains fixed at 1/120, while the ISO increases.

When the ISO tops at 1500, the pictures become underexposed (without any warning from the camera).
So, in Sports mode, the speed is a "minimum shutter speed" (it can go higher but never goes lower).

I went trail running last night (a "night run") and took this picture in Sport Mode. The exposure data show 1/125 and ISO 1500. The picture is visibly underexposed, but was corrected easily (I used Photoshop Elements)

For low light/sports/action 3D photography, this camera has an advantage over both the Fuji W3 and the Panasonic 3D1. In the Fuji you cannot really control the shutter speed and pictures at ISO 1600 look bad. The Panasonic 3D1 has no options (it's fully automatic). The EGO has a faster lens, Sports mode where you can fix the shutter speed (right now it only had two options 1/120 & 1/250, but I am sure more will be added later), and records decent pictures at ISO 1500. Plus, the EGO is shock/drop/water resistant, while the other two are not.

**Distance adjustment does matter**

# 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 netowrk 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

# 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.
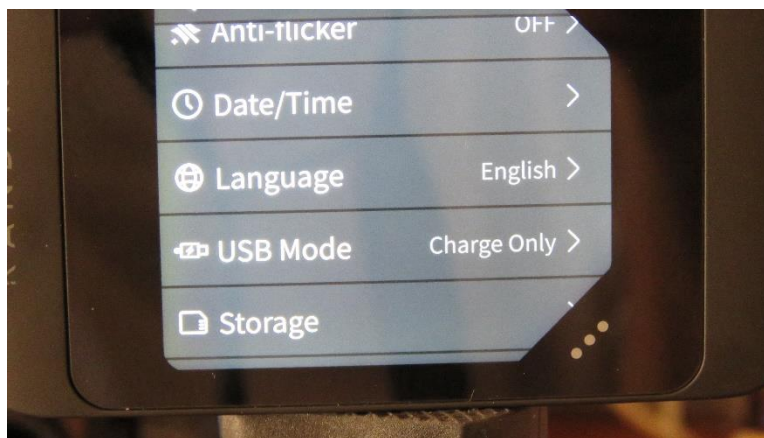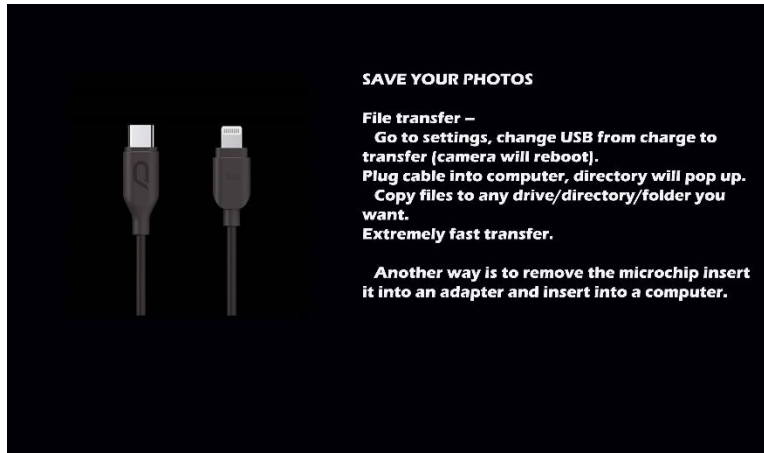2. Set a valid period as 30 days and confirm.
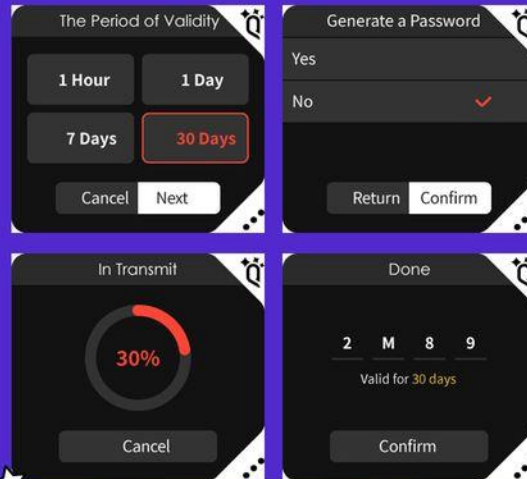


**A New Worldwide 3D Community**

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
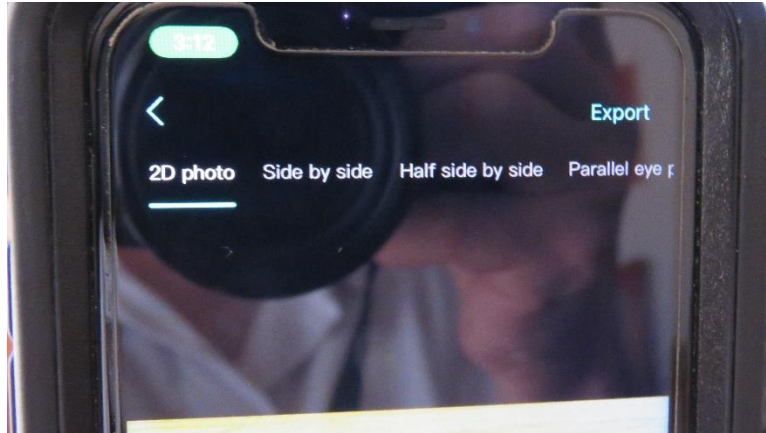They will swipe down, choose download, enter the code and
SEE YOUR PHOTO!

**A New Worldwide 3D Community**

**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.



Anti-flicker     OFF >

🕐 Date/Time     >

⊕ Language     English >

USB Mode     Charge Only >

Storage

# EXPORT VIDEO FOR LG 3D TV

**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!

**VIEWING**



**STEREOPHOTO MAKER SUGGESTONS**

**Individual Cropping**

If you have cropped 4:3 then it does not matter which one you choose.

If you do not have an exact 4:3 ratio, then you have to select either
"Don't keep Aspect Ratio" or "Keep Ratio with Border"

Remember that every time you do an alignment, even as slight as moving the stereo window a small step, you need to resize.

George

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**Masuji Suto**

How to batch auto-align images taken with Qoocam EGO using SPM and view them in Qoocam EGO's viewer.

The requirements for playback on QooCam EGO are as follows
1. Resolution must be 4000 x 3000 x 2, single left-right image.
2. File name follows the rule of EGO's format.
3. Need the Exif information
The key to achieving this in a batch conversion of SPM is to
1. set the output to JPG and optionally, "Add Thumbnail..." (for embed Exif).
2. set the image size to 4000x3000
3. if the file name is a file taken with EGO, it will be written to the output folder with that name, no problem.
For photos taken with cameras other than the Qoocam EGO, use SPM's batch rename function to rename them to the Qoocam EGO file name format.
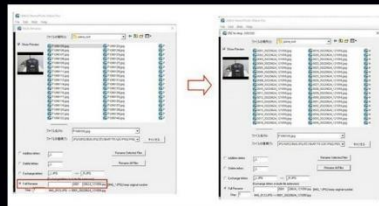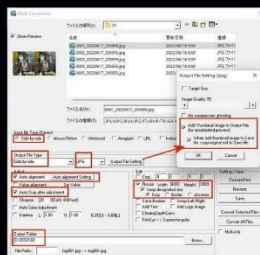File name follows the rule of EGO's format.
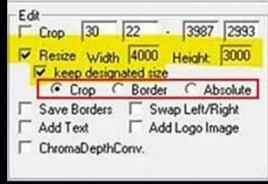Need the Exif information

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For photos taken with cameras other than the Qoocam EGO, use SPM's batch rename function to rename them to the Qoocam EGO file name format.

# Other 3D photos put on EGO

Masuji   I've been able to put folders of existing 3-D pictures on the camera for use with the viewer. I use the multi-conversion in SPM to resize everything in a folder to 4000x3000 (check the box for "keep designated size" and select "border").

Then I use a bulk rename utility to rename all of the images with a number sequence and naming convention ####_date_time i.e. 0001_20220614_170000

Then I copy the folder onto the SD card and rename it with a two digit number ## i.e. 02

With the viewer on the camera, I can see all of my images in stereo.

There is an odd issue - the images show a "broken" icon when viewed on the camera screen in 2-D without the viewer attached, but they show up fine when the viewer is put on.

# LINKS

Kanda 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/2022/06/08/straight-from-the-box-review-qoocam-ego-a-new-digital-stereo-3d-camera/)

[https://stereoscopy.blog/category/cameras/](https://stereoscopy.blog/category/cameras/)

**Firmware update**
[https://www.kandaovr.com/download/index.html](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=IT6l6-WTAf4&t=44s)

**[https://www.youtube.com/watch?v=IJpO5LVD6vs&t=564s](https://www.youtube.com/watch?v=IJpO5LVD6vs&t=564s)**

New features   [https://www.youtube.com/watch?v=IJpO5LVD6vs](https://www.youtube.com/watch?v=IJpO5LVD6vs)

**EGO review [https://petapixel.com/2022/02/08/the-kandao-qoocam-ego-shoots-and-displays-3d-photos/](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](https://www.youtube.com/watch?v=99-WP8Hqw7I)**

**EGO  Sharing [https://ww0.kandaovr.com/resource/ego_to_ego_en.mp4](https://ww0.kandaovr.com/resource/ego_to_ego_en.mp4)**