VISOR

User Manual

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Introduction

This manual describes how to use the dotOcean VISOR system with the dotOcean Cloud. VISOR consists of two parts, the VISOR Edge and the VISOR Cloud which are both explained in the user manual.

dotOcean Cloud

The application can be loaded from every browser by entering the following URL: https://cloud.dotocean.eu

Login

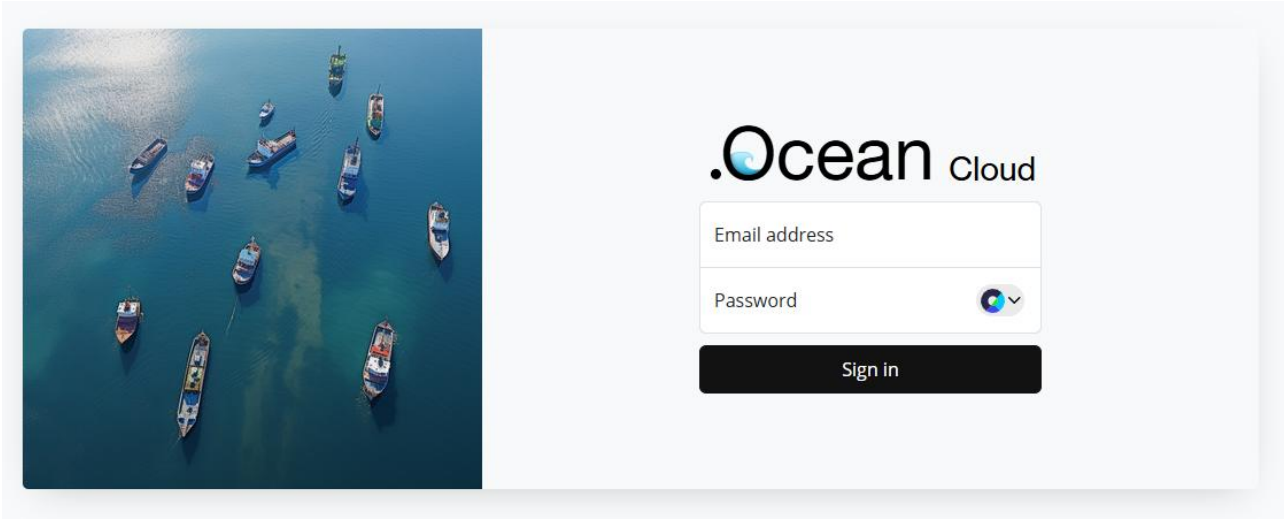


Figure 1: dotOcean Cloud login screen

To access the dotOcean Cloud, authentication is required. Enter the same email address and password (Figure 1) that has been created for Atlantis. For more information, see section 3.3.

Live view

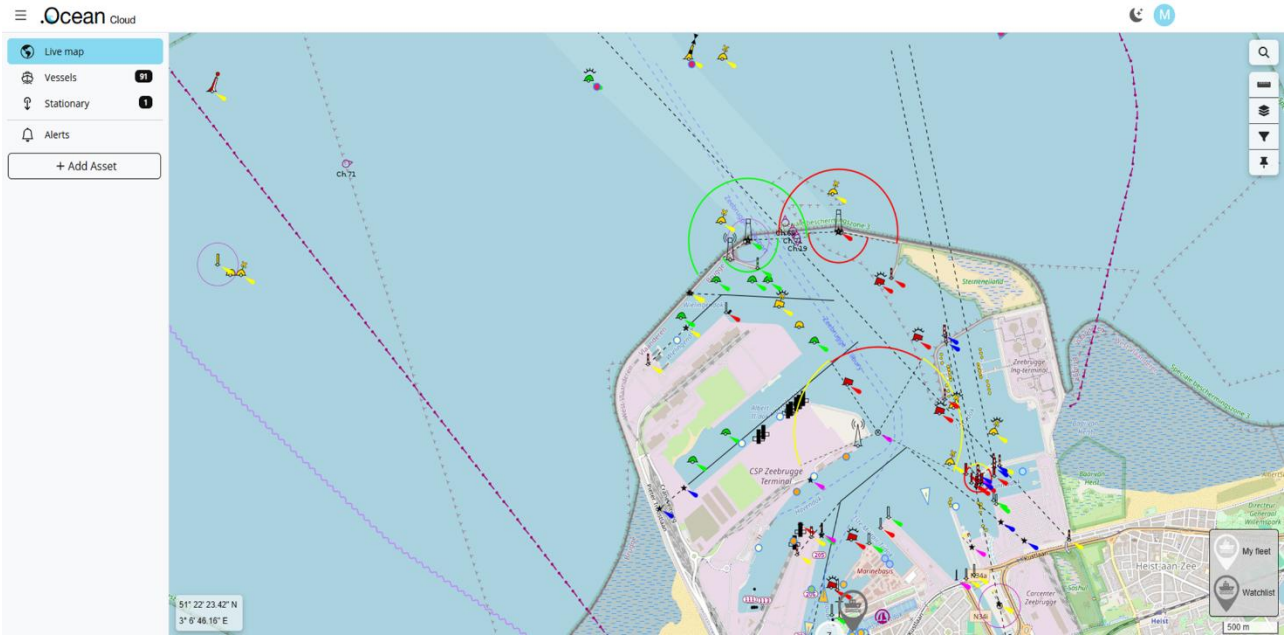
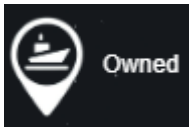
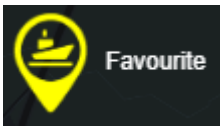


Figure 2: Live View

After logging in to the dotOcean Cloud, the **"Live view"** (figure 2) page will be shown. This page gives the user an overview of all the vessels in its fleet. There are two types of vessels:

- **Owned vessels:** These are the vessels that the user physically owns. It is represented with a white marker on the map. 

- **Favorite vessel:** These are the vessels that the user can "track" to see where they are. It is represented with a yellow marker.



When hovering over a vessel, a popup will be shown with a little more information about the vessel. The map marker can also be clicked. This will lead to a detailed page of the selected vessel.

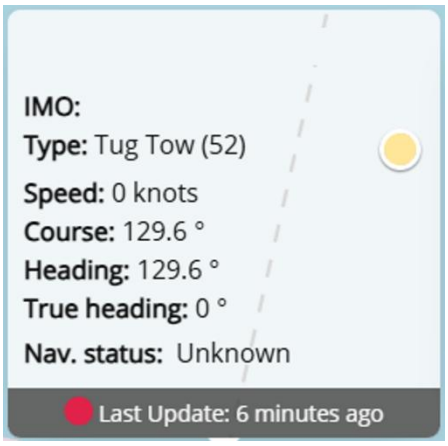


Figure 3: Vessel information popup

Add a vessel

1. In the navigation, click on **"Add Asset"**

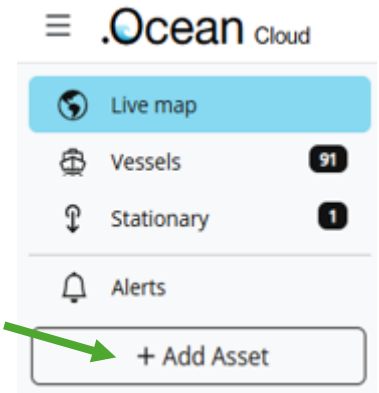


Figure 4: Add new Asset

2. Select device type **"Vessel"**
3. Search for a vessel by entering its MMSI number or name, or fill it in manually
4. Select **"My fleet"** or **"Watchlist"**
5. The MMSI number can also be filled in under **UUID**
6. Click on **"Add Asset"** to save it

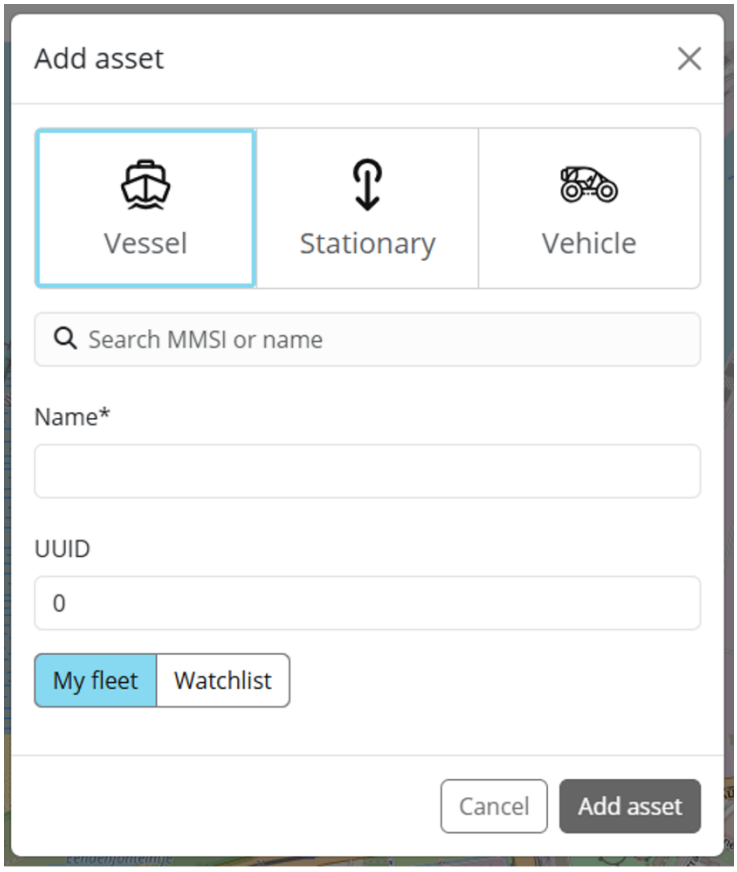


Figure 5: Add Asset dialog

Update/Remove a vessel

1. Navigate to the **detail page** of the **vessel** that needs to be deleted
2. Click on the **"Update Vessel"** button of the vessel on the top right

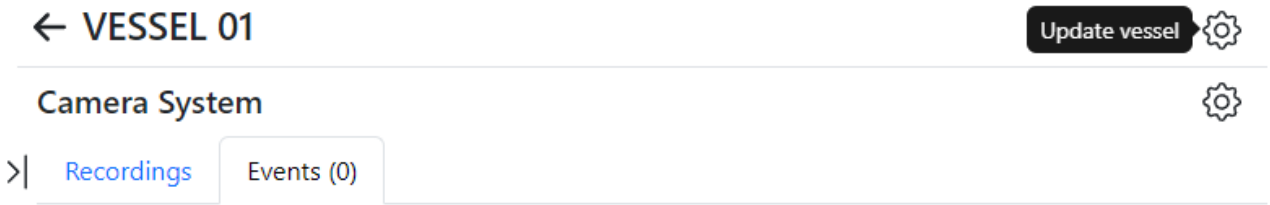


Figure 6: Update Vessel

3. Here you can **update** the properties of the vessel, as well as delete it. These actions will also prompt to give a confirmation.

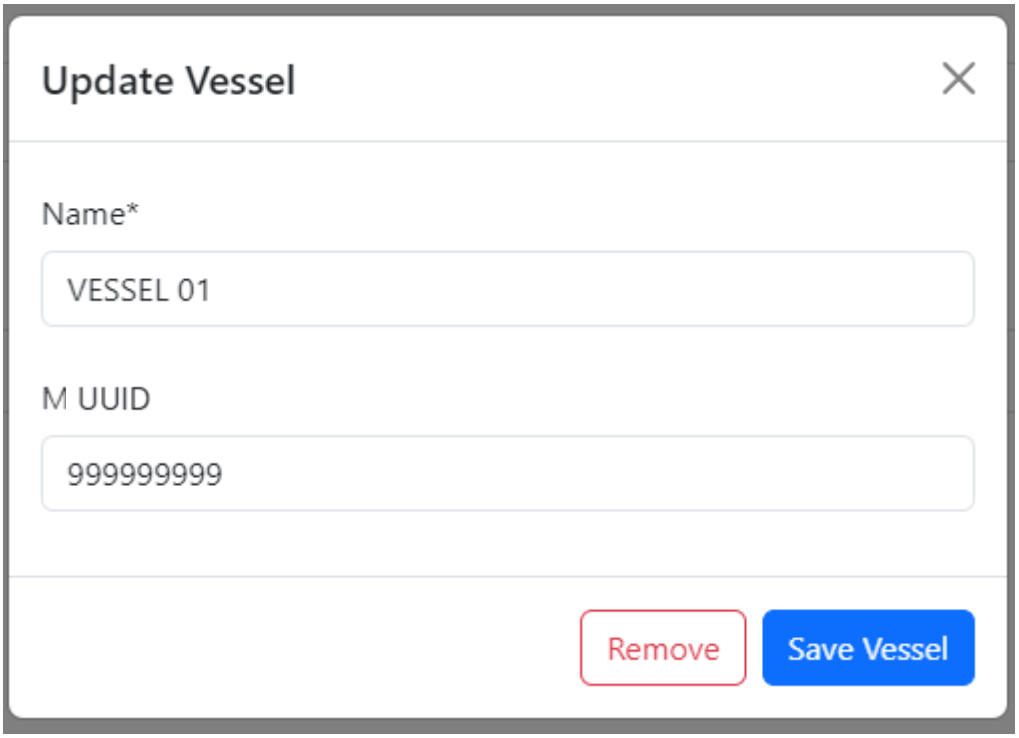


Figure 7: Update Vessel dialog

Add a camera system

1. Go to **"Vessels"** in the navigation

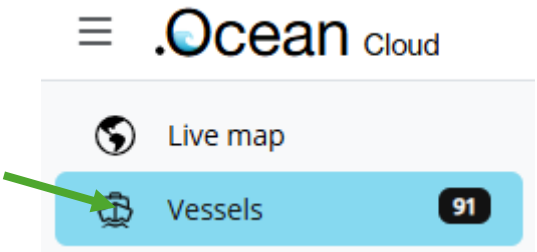


Figure 8: Navigation

2. Click on the respective vessel where the camera system should be added.

   Note: Modules like the camera system can only be added to an owned vessel.

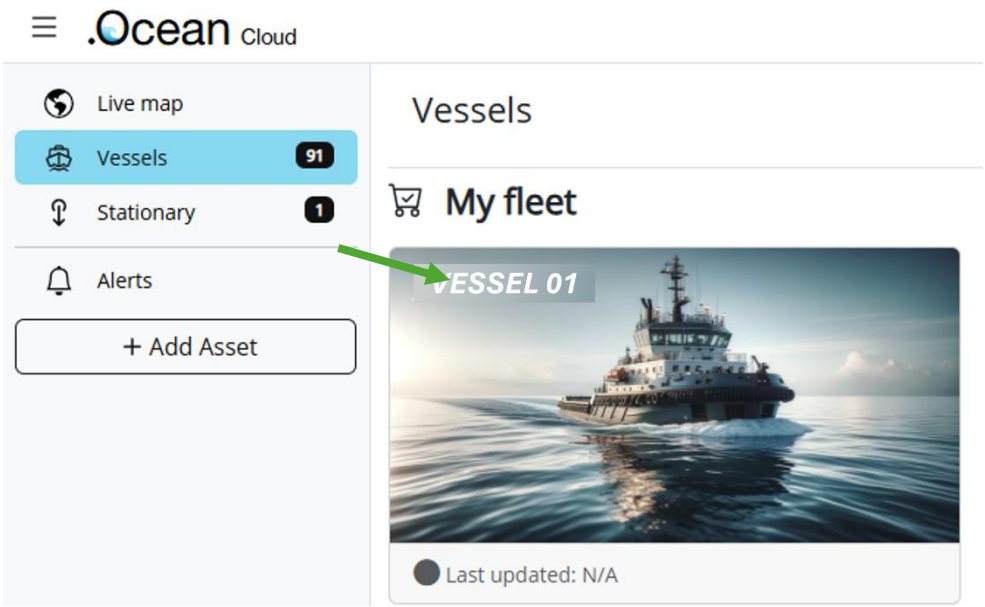


Figure 9: Owned vessel

3. Click on **"Add Module"** in the list of modules.

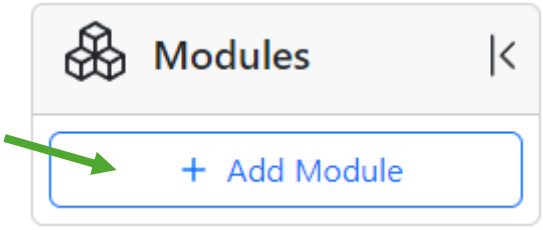


Figure 10: Add Module

4. Select **"Camera"** module
5. Enter a **name** for the camera system
6. Enter an **address** where the external camera system can be reached (this will be configured or provided by dotOcean)
7. To link the camera system to the vessel, a unique **GUID** must be filled in here. dotOcean will provide this ID.
8. Click **"Add Module"**

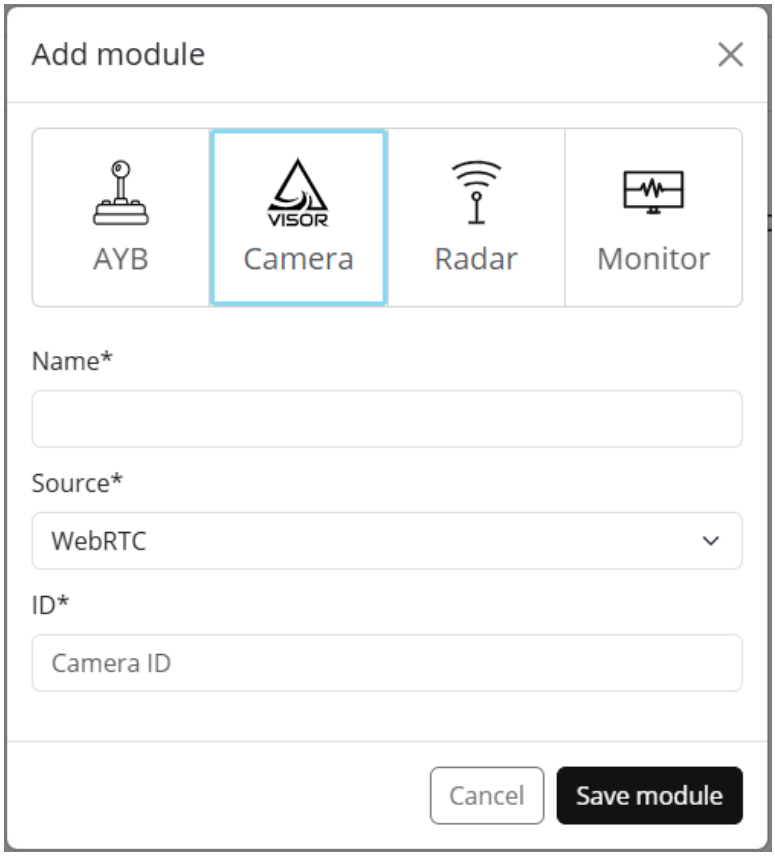


Figure 11: Add Module dialog

Update/Remove a camera system

1. Navigate to the **detail page** of the **camera system** that needs to be deleted
2. Click on the **"Update Module"** button of the camera system on the top right

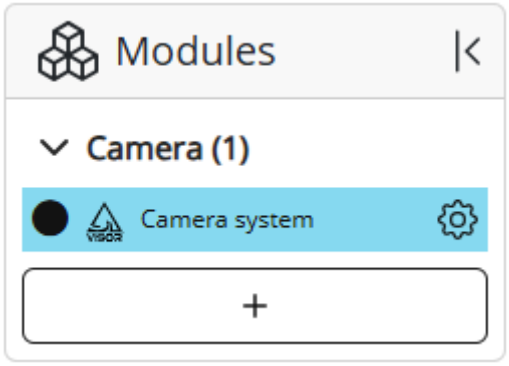


Figure 12: Update Module

3. Here you can **update** the properties of the module or **remove** and **confirm** it

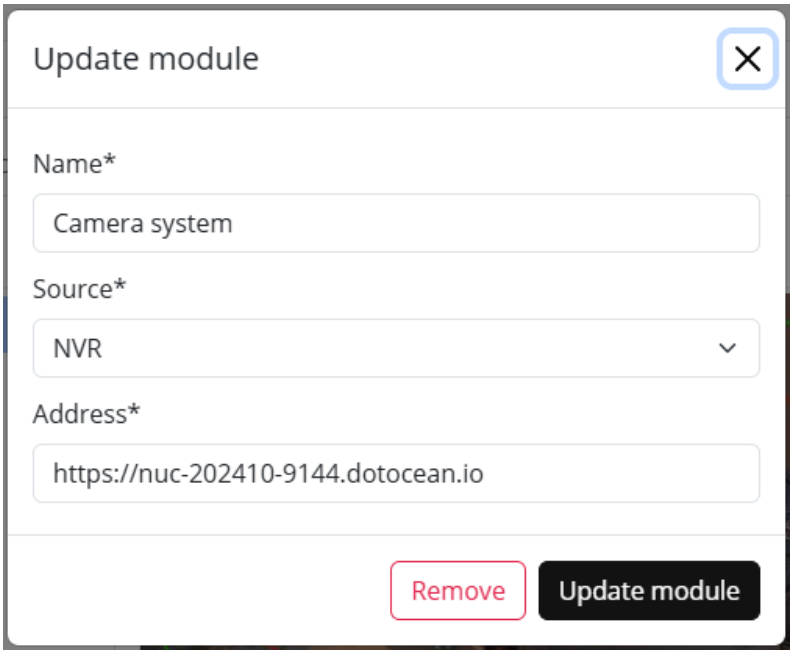


Figure 13: Update Module dialog

Add a user

For User Management, the Atlantis platform is being used:

1. Browse to the Atlantis website: https://atlantis.dotocean.eu/

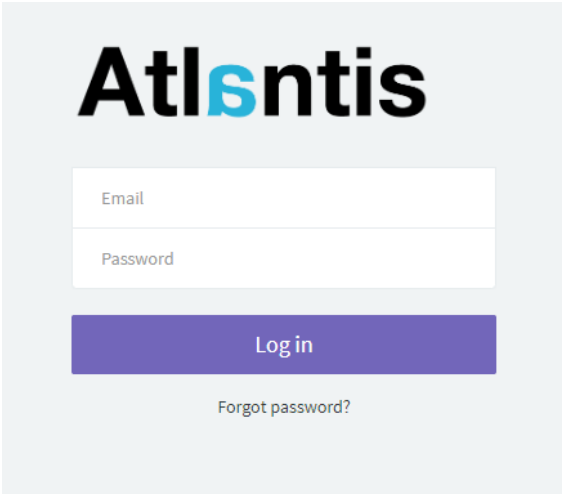


Figure 14: Atlantis login page

2. Log in with a user that has **"Admin"** rights
3. Go to the **"Administration – Users"** section in the navigation

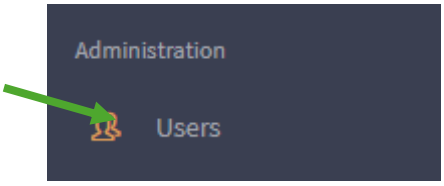


Figure 15: Navigation

4. Click on the plus on the top right side of the user list

5. Enter the information of the new user and click on the green checkmark to save

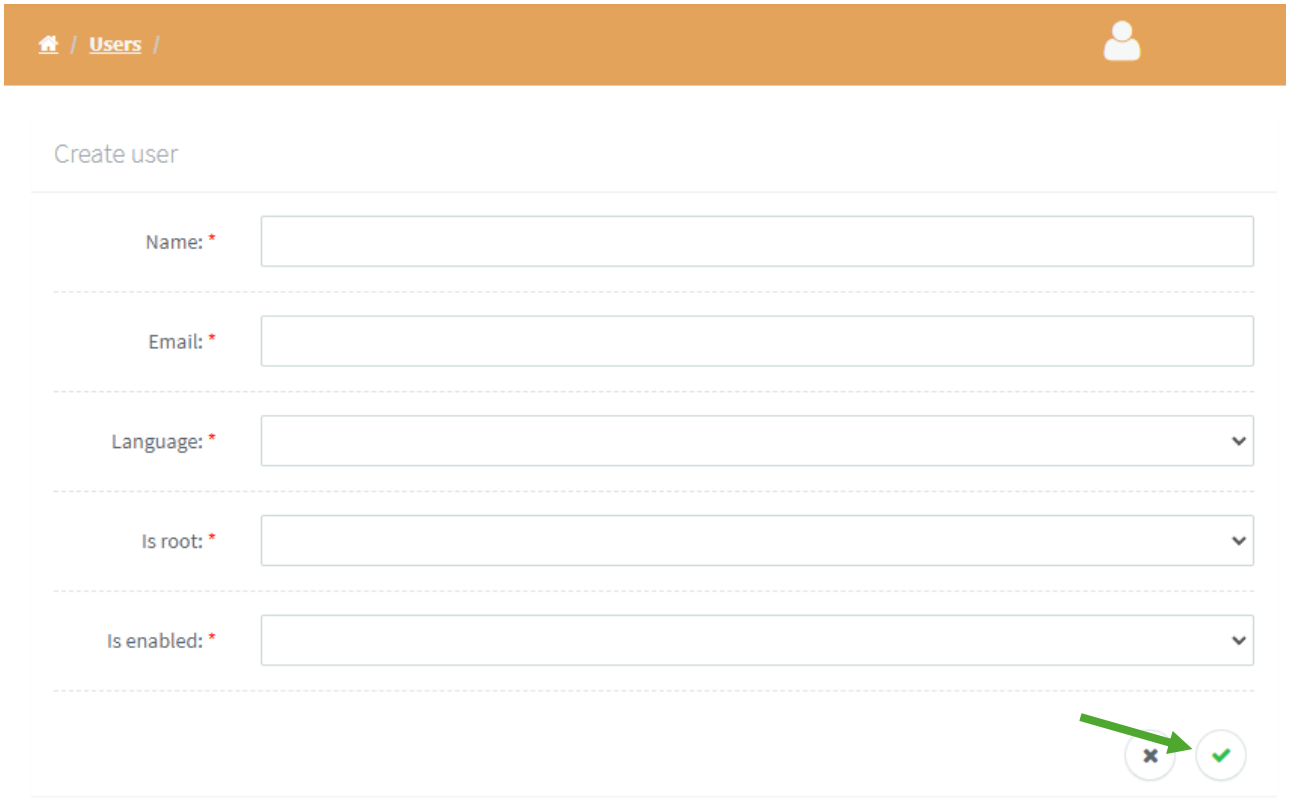


Figure 16: Add user screen

6. The new user will now receive an email to set a password

Netbird VPN client

To access the recordings of the camera systems on the vessels, it is necessary to have a VPN connection:

1. **Download** and **run** Windows installer: https://pkgs.netbird.io/windows/x64

   For Linux, macOS and others please visit https://docs.netbird.io/how-to/installation
2. Click on **"Settings"** from the Netbird icon in your system tray and enter the following **"Management URL"**: **https://vpn.dotocean.io:33073**
3. Click on **"Connect"** from the Netbird icon in your system tray
4. **Sign up** using your email address

Camera System

Monitor and dimmer

The monitor is located on the deck next to the captain, for a convenient, yet unobtrusive view of the VISOR system. A dimmer is connected to the monitor, to manually adjust the brightness. Turning left decreases the brightness, turning right increases the brightness.

Figure 17: Monitor dimmer

Figure 18: Installed monitor with dimmer on the left

Recordings homepage (VISOR Cloud Premium)

The default page is the Cameras overview, which can be reached by pressing the *Recordings* tab, the dotOcean logo or the *Cameras* button.

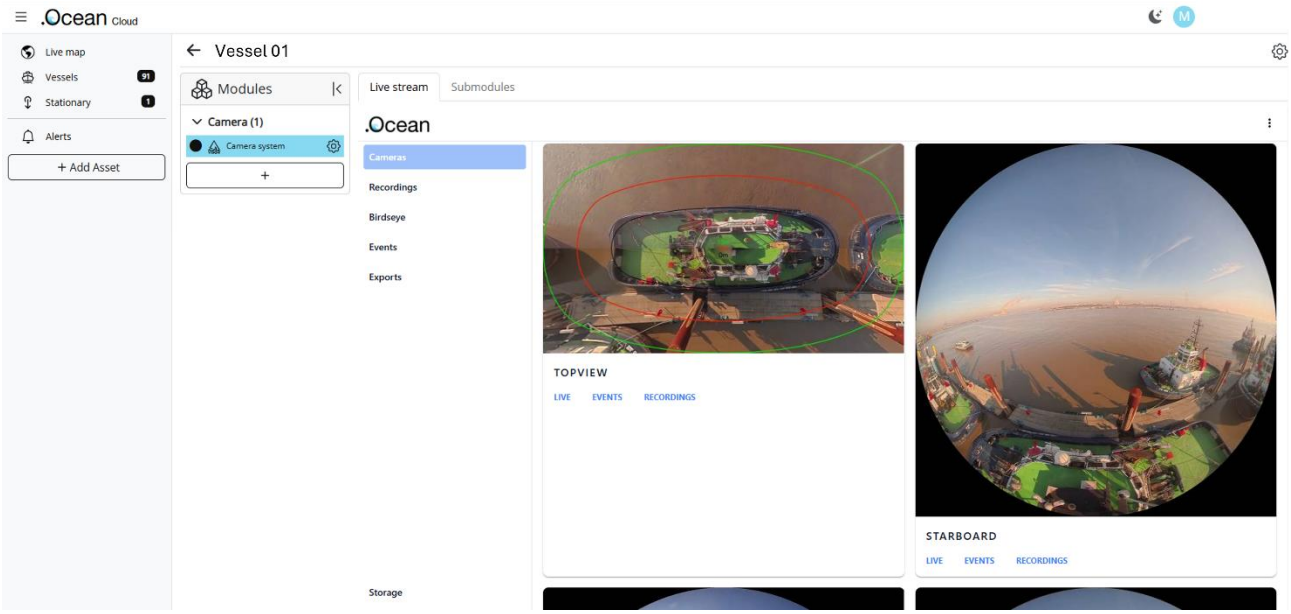


Figure 19: Cameras overview

Watch a live camera feed

Clicking the LIVE button below the camera thumbnail opens the livestream of that specific camera stream.

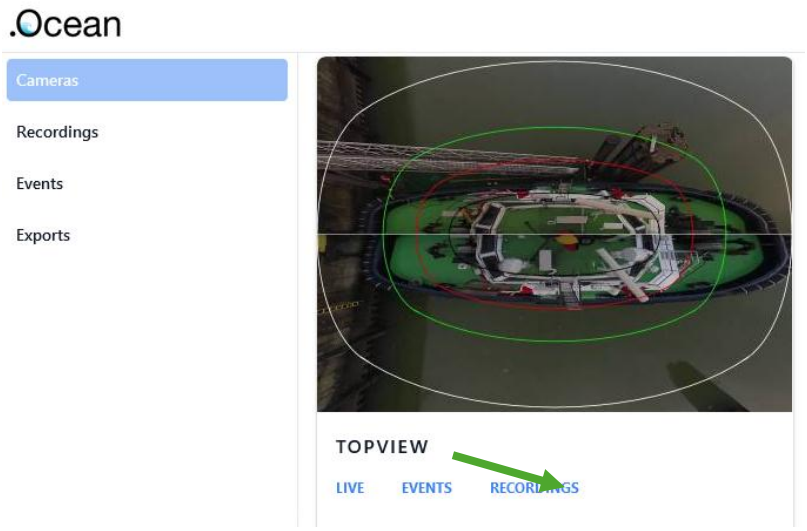


Figure 20: To live view

Watch a recording (VISOR Cloud Premium)

To playback a specific time of a stream, one can click the thumbnail or the RECORDINGS button below each stream to go to the recordings of that specific stream. Alternatively, you can click on Recordings in the sidebar and then select the stream of choice.

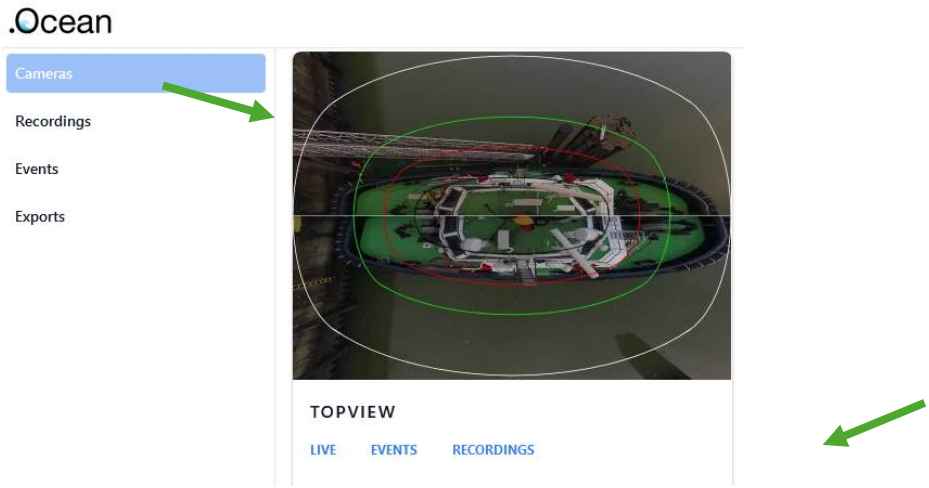


Figure 21: to recordings view

On the right side, the date and time can be selected with a range of one hour. This loads a video of one hour where the minutes and seconds can be selected by clicking on the timeline that appears on the bottom of the video, when hovering or clicking with the cursor over the video. In the timeline there is also an option to pause, go back 10 seconds, go forward 30 seconds, set the playback rate between x0.5 and x8, and set the video full screen.

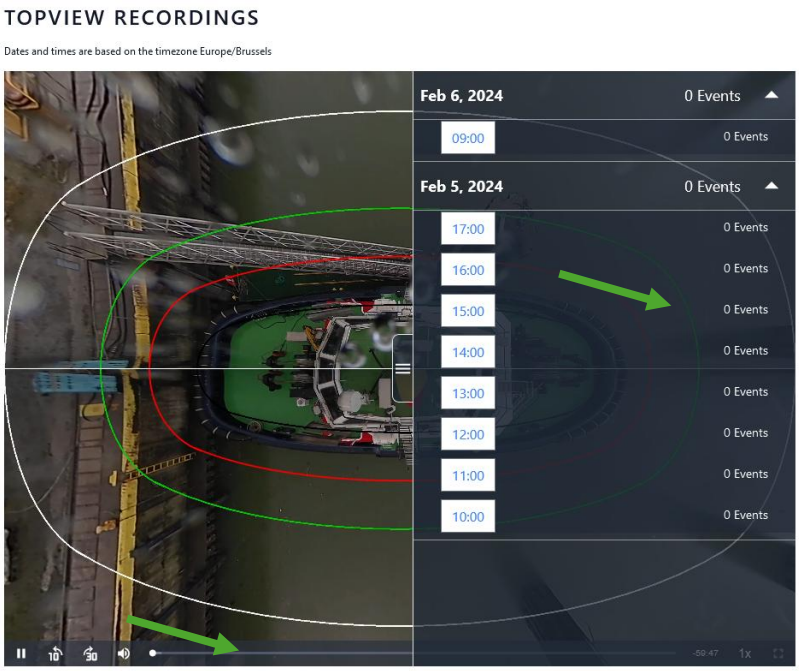


Figure 22: recording

The streams are recorded for a preconfigured amount of time (ex. 10 days). Older recordings are automatically removed.
When the storage is full, the oldest recordings will be removed to make room for the latest recordings.

Export a video (VISOR Cloud Premium)

Export supports generating a video of all the available streams and recorded time. Note that this is also limited to the retained recordings days. The playback factor support realtime and timelapse, where the timelapse is 25 times faster than realtime.

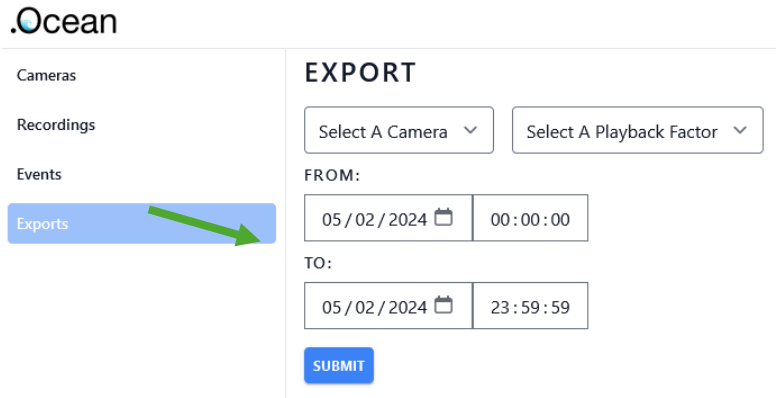


Figure 23: exports

After submitting, a video will be generated in the background.

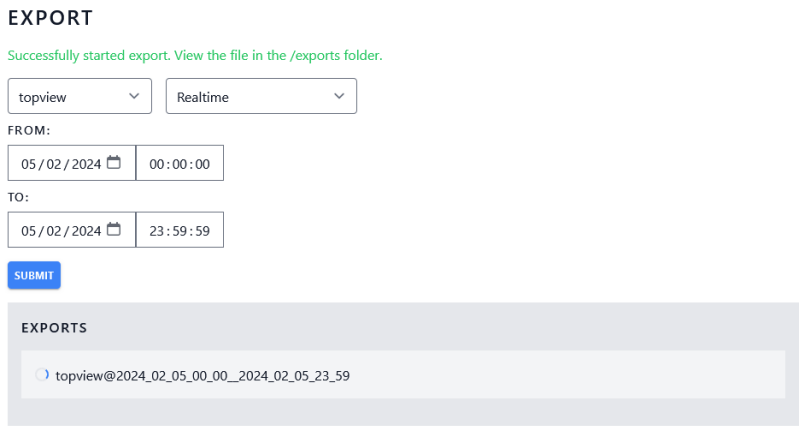


Figure 24: generating export

Once the generation is complete, the video can be played by pressing the green play button, downloaded by pressing the name and removed by pressing the red bin.

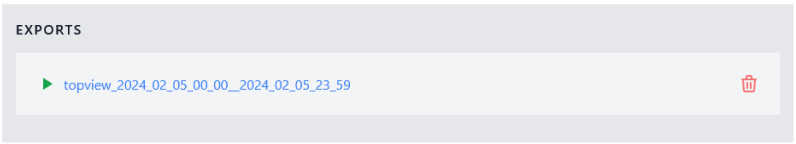


Figure 25: completed exports

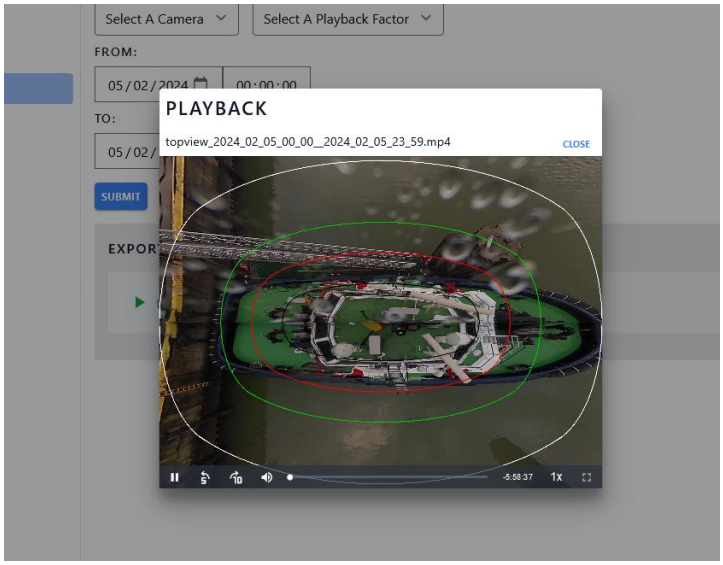


Figure 26: play exported video

Deleting an export will always prompt a confirmation.

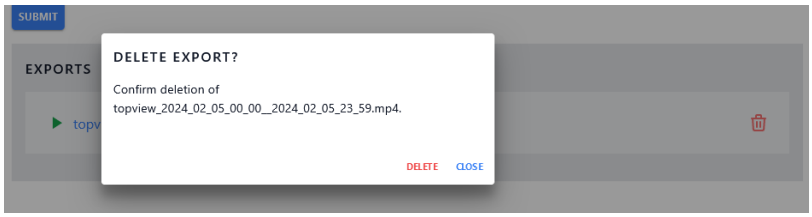


Figure 27: remove exported video

*These generated videos/exports will never be removed automatically. This means that in case the storage is running low, the amount of time that can be recorded will decrease. It is advised to clean up these exports frequently, to not interfere with the configured recording duration.

Check remaining storage

The storage button is located on the bottom left, in the sidebar. This page gives an overview of the remaining storage, as well as the bandwidth of each camera stream.

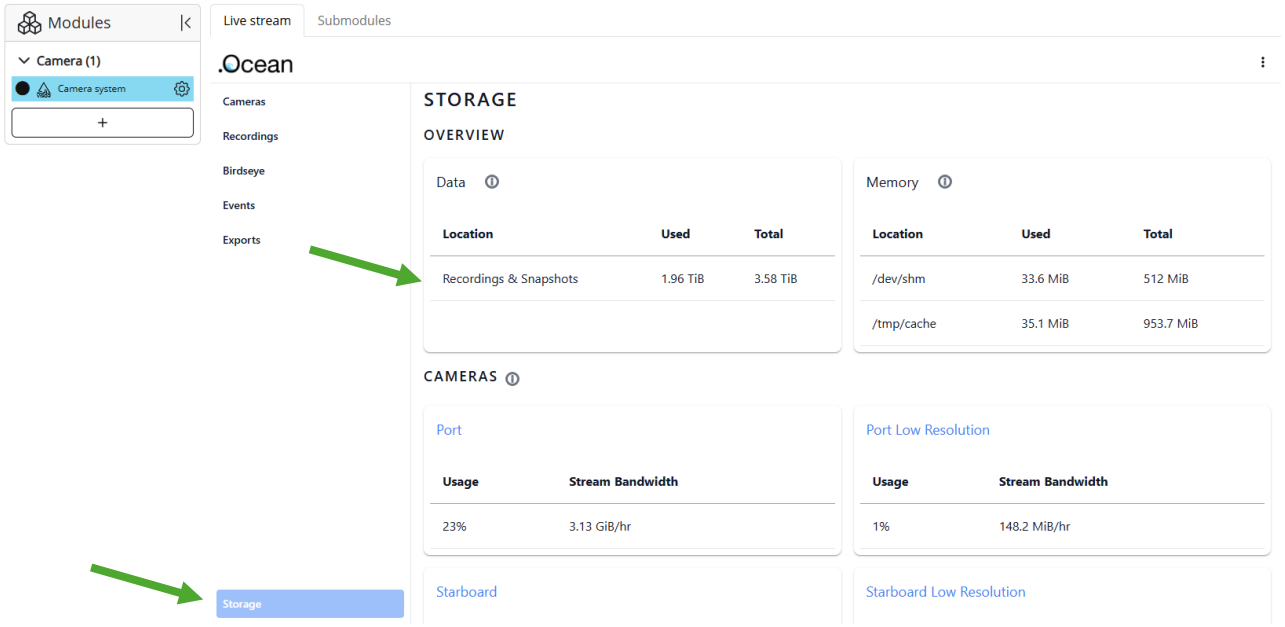


Figure 28: storage

Set light or dark theme mode

By pressing the three dots on the top right, a menu opens. Three visual options are presented, *Auto dark mode* will look at the settings of your computer and browser, while *Light* and *Dark* mode will set the visual mode fixed.

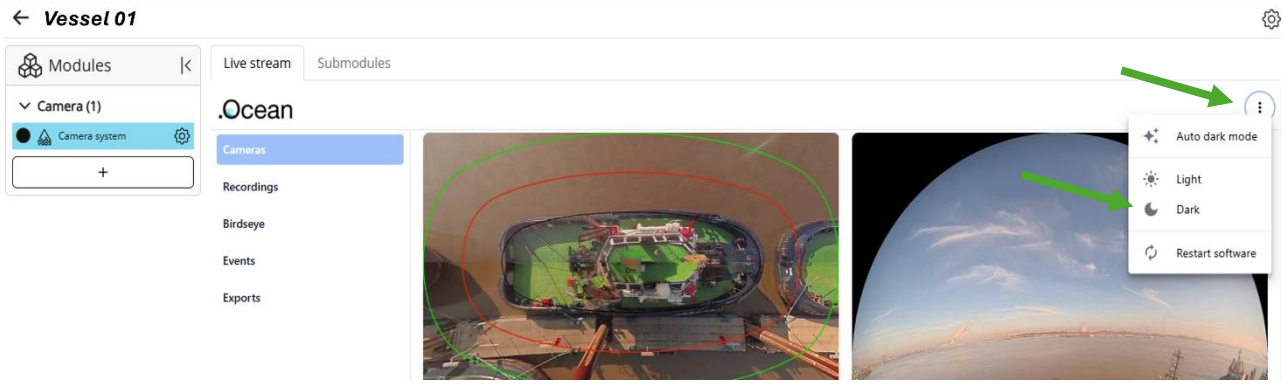


Figure 29: theme settings

Restart the software

By pressing the three dots on the top right, a menu opens. After pressing *Restart software* and confirming the dialog popup, the service will restart.

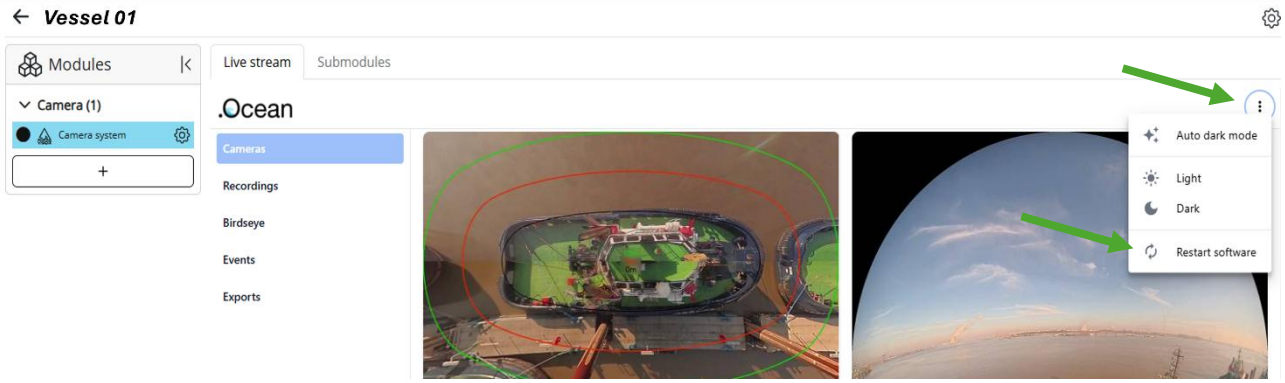


Figure 30: restart software

Reboot the system

Power lights and the power button are located on the right, as seen in Figure 31. To reboot the system, the power button can be held for 10 seconds, or until the fan stops. Wait 20 seconds and press the power button again to restart the system.

Figure 31: device front

Connections of the system

All the connections required for the installation are located on the same side. Power, Ethernet and Mini DisplayPort.

The power connector on the left side supports a voltage range of 12 to 48 VDC. The system requires about 300 W of power.
Of the six ethernet ports the four together are PoE and the middle two are reserved for the two cameras, it does not matter which camera goes in what port. Port 1 (ethernet port) is used for the Internet connection.

Below the ethernet ports, four Mini DisplayPort can be seen, the display is connected here, it does not matter which one. An adaptor piece (Mini DisplayPort male to HDMI female))can be used to convert to HDMI or standard DisplayPort.

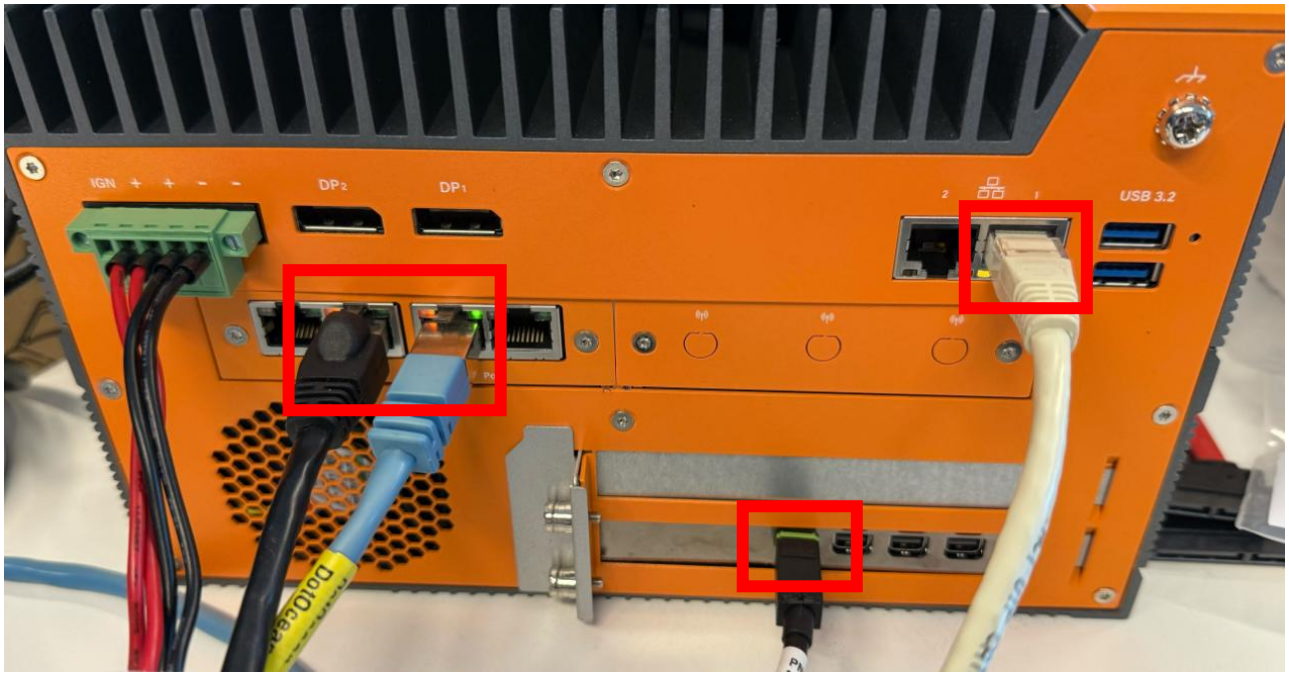


Figure 32: device back

Check the LEDs of the system

When the system is connected and power is provided, the power led, next to the power button, should light up immediately.
The ethernet port 1, and the two middle PoE ports should have a connected cable and a led should light up on those ports. Do note that it can take up to a minute for the PoE ports to light up, depending on the camera. The blinking of the LEDs is normal.

Figure 33: ethernet ports

Power cycle the system (disconnect - reconnect power)

The system can be power cycled by disconnecting the power connector from the device, waiting 20 seconds and reconnecting the connector. This makes sure the PC and connected cameras are reset.

Figure 34: device power

Maintenance

Contact dotOcean via email (support@dotocean.eu) every six months for software maintenance updates.

Clean the lenses of the cameras according to the **camera installation manual (Bosch Security Systems B.V.** *version: 2024-01 | V03 | F.01U.385.630),* page 29, topic 8.1 Cleaning.

It is important to keep the lens clean to ensure optimum performance. Dust, grease, or fingerprints should be removed from the lens surface. When cleaning the lens, take extra care not to damage the special coating used to reduce light reflections.

- Remove dust with a blower-brush or grease-free soft brush.
- Wipe water drops off the lens with a clean, soft lint-free cloth and dry the lens surface.
- Use special lens cleaning paper or cloth treated with lens cleaning fluid to gently wipe off any remaining dirt

Clean the exterior of the computer with a dry lint-free cloth.

Troubleshooting

Below are some topics to troubleshoot various topics. Some checks as well as some solutions and actions are described. To resolve certain issues, multiple actions can be taken, but it is best to start with the first described action and continue to the next step if the issue was not resolved. If there are no more actions to try, please contact dotOcean for further assistance.

Cannot open the dotOcean Cloud

Make sure you are connected to the internet.

dotOcean Cloud does not load Camera System

Make sure you are connected to the dotOcean VPN.

Display shows a black screen

Make sure the display is powered, and the HDMI cable is correctly and firmly connected.
Check if the dimmer is not completely turned to the left and is connected to the monitor.

Display shows Loading...

Loading... is displayed when the display is waiting for the feed of the topview stream. This is normal during the startup of the system, and should be resolved within two minutes. If this takes too long, check the actions below.

- **Restart the software**, this can help to reconnect to the camera streams. This can be done remotely in the dotOcean Cloud.
  Wait until the system is completely restarted and check if the issue is resolved.
- **Reboot the system**, this restarts all the services of the PC.

Topview displays: No frames have been received, check error logs

- **Restart the software**, this can help to reconnect to the camera streams. This can be done remotely in the dotOcean Cloud.
  Wait until the system is completely restarted and check if the issue is resolved.
- **Reboot the system**, this restarts all the services of the PC.

Port or Starboard show: No frames have been received, check error logs

- **Restart the software**, this can help to reconnect to the camera streams. This can be done remotely in the dotOcean Cloud.
- Check the connections of the cameras according to the explanation in **Connections of the system**.
  Also **Check the LEDs of the system**, make sure the specified LEDs are lid or blinking.

- **Power cycle the system**, this also resets the cameras and makes sure the system starts fresh.

Support

If you have any remarks or questions, don't hesitate to contact us at support@dotocean.eu or https://support.dotocean.eu/hc/en-us

Warranty

dotOcean offers a one-year warranty against manufacturer's defects on the assembly and all parts of the VISOR system. Warranty is only valid for original purchase and is non-transferable. Manufacturer defects do not include malfunction or damage resulting from improper use, lack of proper maintenance, misuse, abuse or vandalism, unauthorized modification or alteration. Travel expenses, accommodation and freight cost involved to be covered by the buyer. This warranty does not cover failure of product or components due to any act of nature; lightning, floods, hurricanes, tornadoes or any other such catastrophic events. All repairs must be authorized by dotOcean. Unauthorized repairs will not be reimbursed under any circumstances.

Disclaimer

dotOcean provides VISOR as an aid to enhance situational awareness during the operation of your vessel. Our system is designed to enhance your situational awareness and provide valuable assistance in navigating your vessel. However, it is intended to complement, not replace, the captain's vigilance, judgment, and adherence to navigational rules and regulations. The ultimate responsibility for safe operation remains with the vessel's captain.

1. The captain/operator of the vessel remains fully responsible for the safe operation of the boat at all times.
2. VISOR should not be solely relied upon for navigation or avoidance of obstacles, as it is a supplementary tool, and performance may vary depending on environmental conditions or other factors.
3. dotOcean shall not be held liable for any incidents, damages, or injuries, including but not limited to collisions with other vessels, impacts with fixed or floating objects, or harm to individuals, resulting from the use or misuse of VISOR.
4. The captain/operator is solely responsible for ensuring compliance with maritime laws and regulations and for taking appropriate action to prevent accidents or harm.

By using VISOR, you acknowledge that safe navigation and operation of the vessel remain your sole responsibility. Always operate your vessel with care and in compliance with applicable maritime laws.

Spare parts

- Mini DisplayPort male to HDMI female converter
- Cameras: Bosch Flexidome 5100i IR
- Monitor: Beetronics 27HD7M
- Monitor dimmer: Beetronics DMK7