KOKO

USER MANUAL: FIRMWARE 1.7

Designed & manufactured in Barcelona by OVIDE

OVIDE

PLACEMENT AND FUNCTION OF PARTS

⟳ OVIDE

HARDWARE

Ovide Koko rear panel

③ Battery socket (V/Gold/B mount)

▼ DISK ▼

⑩ USB-C

USB

⟳ OVIDE

⑨ Removable SSD

DC IN

DC power in ②

⑦ Audio in/out (bidirectional)

AUDIO IN/OUT

LAN

Ethernet ⑪

⑧ Headphones 3.5mm TRS

EAR

— IN — 1 2   — IN/OUT — 3 4   — OUT — 5 6

POWER

Power button ①

SDI video inputs ④

SDI video in/out (bidirectional) ⑤

SDI video outputs ⑥

POWER

❶ **Power button:** Press and hold to turn on or off. Koko always starts in record mode.

❷ **DC power connector:** Connect the DC power supply to the DC jack for mains power.

❸ **Battery slot:** Attach V, Gold or B Mount type batteries (depending on your Koko's battery mount).

VIDEO

❹ **12G SDI 1&2 inputs:** SDI video input

❺ **12G SDI 3&4 in/out:** Bidirectional 12G SDI connections, you can assign those as input or output

❻ **12G SDI 5&6 outputs:** SDI video output.

AUDIO

❼ **Audio in/out:** Multipin analog audio input/output.

❽ **Headphones:** 3.5mm jack output connector

MEDIA

❾ **SSD slot:** Insert your SSD with the branding facing outwards, disk should align just below the arrows, push it until you hear a click sound. To remove it, just pull it out.

DATA

❿ **USB:** Connect your USB keyboard here.

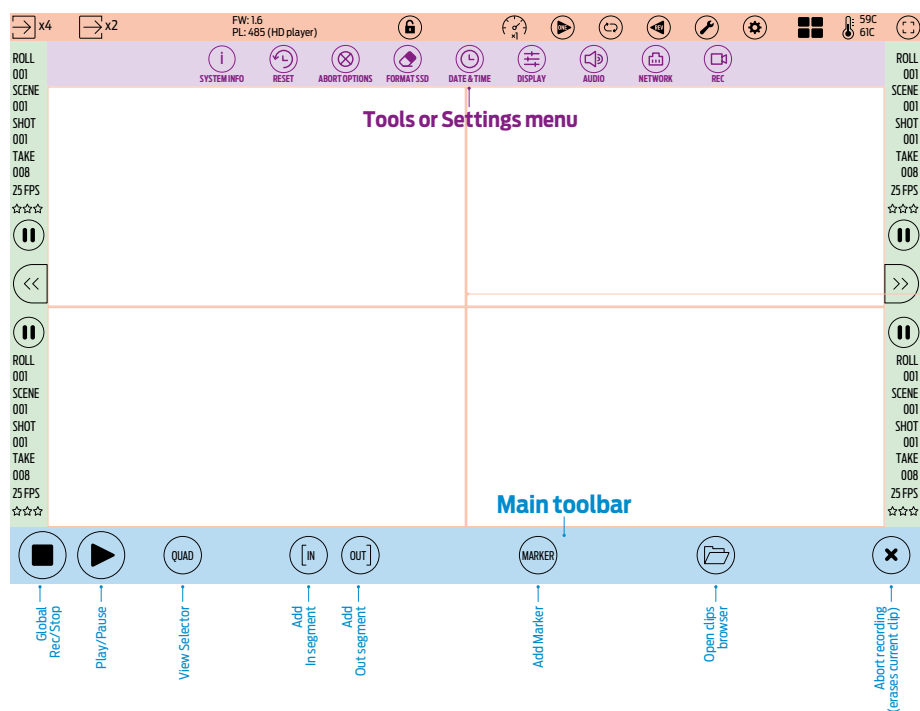⓫ **Ethernet port:** Connect your Skaarhoj remote control here.

PLACEMENT AND FUNCTION OF PARTS

OVIDE

MAIN SCREEN

Ovide Koko main screen (play mode)

Inputs & Outputs

Firmware version

Screenlock

Play Mode

Speed
Subclips
Loop / Pong
Back/Foreward
Tools Menu
Settings Menu
Rec Selector
Temperature indicator
Fullscreen

x4   x2

FW: ##
PL: 485 (HD player)

59C
61C

LUT   FOCUS   FALSE COLOR   ZEBRA   WAVEFORM   HISTOGRAM   VECTOR   SPOTMETER   SETTINGS

Metadata

ROLL 001
SCENE 001
SHOT 001
TAKE 008
25 FPS

Topbar

Tools or Settings menu

ROLL 001
SCENE 001
SHOT 001
TAKE 008
25 FPS

Views:
Watch one view (full screen), 2 views (dual) or 4 views (quad).

Hide/Show sidebar

Sidebar

Sidebar

Selected views:
When a view is selected it will be framed in white.

When it's not selected it won't be framed.

When a view is playing it will be framed in green.

Pause/Play/Rec/Pause this clip

ROLL 001
SCENE 001
SHOT 001
TAKE 008
25 FPS

ROLL 001
SCENE 001
SHOT 001
TAKE 008
25 FPS

Main toolbar

QUAD   PLAY MODE   IN   OUT   MARKER   PREV CLIP   NEXT CLIP

Switch to Rec Mode
Global Play/Pause
View Selector
Play Mode
Add/Delete In segment
Add/Delete Out segment
Go to prev
Go to next
Add/Delete Marker
Go to prev
Go to next
Open clips browser
Go to prev
Go to next

Segments   Markers   Clips

GESTURES

Tap: Main gesture for all buttons

Swipe right/left: Used to scroll on the playback slider, hide lateral bars, settings like zebra...

Ovide Koko main screen (rec mode)

x4   x2

FW: 1.6
PL: 485 (HD player)

59C
61C

SYSTEM INFO   RESET   ABORT OPTIONS   FORMAT SSD   DATE & TIME   DISPLAY   AUDIO   NETWORK   REC

ROLL 001
SCENE 001
SHOT 001
TAKE 008
25 FPS

Tools or Settings menu

ROLL 001
SCENE 001
SHOT 001
TAKE 008
25 FPS

Views:
Watch one view (full screen), 2 views (dual) or 4 views (quad).

Selected views:
When a view is selected it will be framed in white.

When it's not selected it won't be framed.

When a view is recording it will be framed in red.

ROLL 001
SCENE 001
SHOT 001
TAKE 008
25 FPS

ROLL 001
SCENE 001
SHOT 001
TAKE 008
25 FPS

Main toolbar

QUAD   IN   OUT   MARKER

Global Rec/Stop
Play/Pause
View Selector
Add In segment
Add Out segment
Add Marker
Open clips browser
Abort recording (erases current clip)

FIRST USE & BEST PRACTICES

These are the first steps you should follow for an optimal performance of your Ovide Koko.

You will need a SSD (not included) to use in Koko.

We only recommend Samsung EVO units due to low performance issues on other brands.

⚠ FORMAT THE SSD

Advice: To ensure top SSD performance, format the SSD drive in Koko (not in a computer). It will make sure all blocks are consistently erased for sustained performance while recording. Formating in a computer is usually only fast erase which leads to a slower drive while recording. If the SSD it's not in exFAT, Koko will ask you to format it with the folder structure needed for a reliable performance.

1. When introducing the SSD, a pop-up will be shown to format in exFAT (only when the SSD introduced is not exFAT fomatted)

2. Tap on "Format" button.

3. Write "FORMAT" to confirm. **Caution: all of the disk contents will be lost.**

After formatting the SSD Koko will prompt you to reset the metadata, in case you're starting a project for scratch.

FIRMWARE UPDATE

1. Visit **www.ovidesmart.com/ovide-koko/firmware-user-guide/** and download the .omfw (or its zipped version)

2. Copy the OMFW file (unzip if necessary) to the folder DCIM/FIRMWARE/ of the SSD.
   Please remember to have only one firmware file in the SSD.
   When Koko is on FW 1.4 or earlier, firmware file will have to be copied in the SSD root.

3. Turn Ovide Koko on.

4. Insert the SSD into Koko.

5. Wait for the progess bar to finish and restart the device.

6. Do a factory reset after installing this firmware (Settings/Factory reset)

FIRST USE & BEST PRACTICES

INPUTS & OUTPUTS SETTINGS

1. Connect the camera/s to inputs 1 to 4 (remember, inputs 3 and 4 are bidirectional)

2. Connect the monitors to outputs 3 to 6 (remember, inputs 3 and 4 are bidirectional)
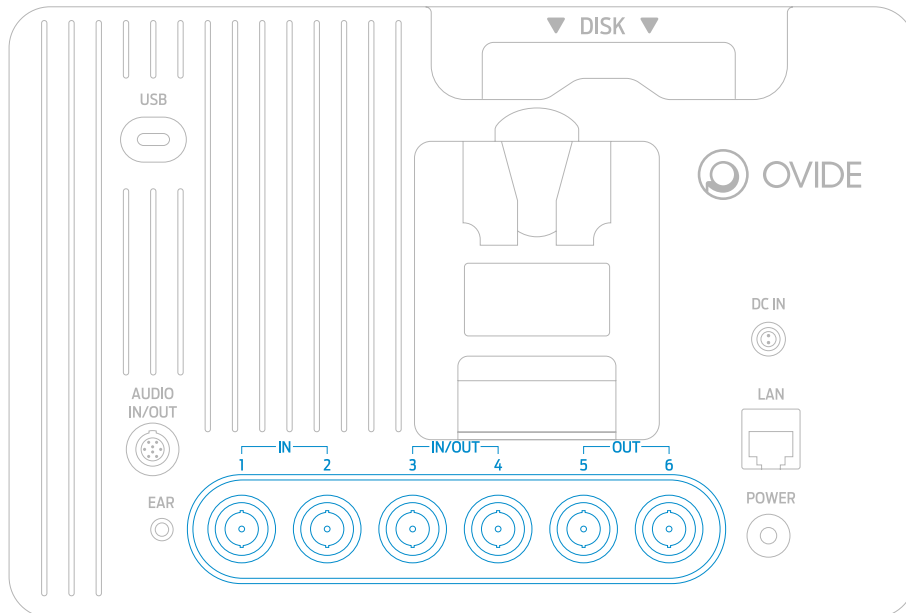
3. Tap ⤷ or ⤶ on the top left corner to open the pop-up and designate all inputs and outputs

4. To enable PsF inputs, enable the PsF settings. If PsF support is not needed, disable it.

Pulldown removal is used for legacy cameras that use 24p over 30p.
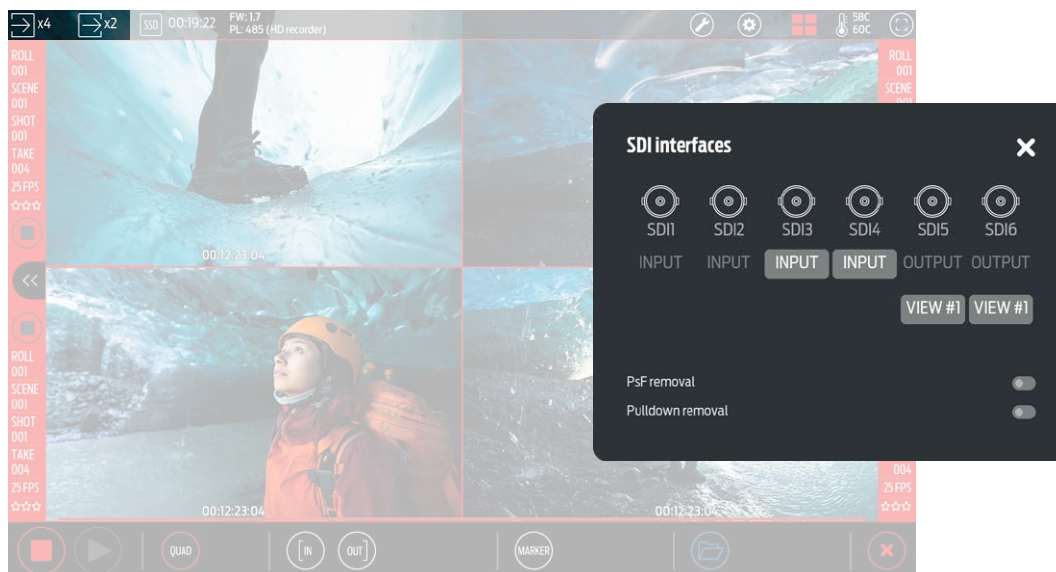
Understanding Koko's video genlock and frequency

When in rec mode, one of the inputs will be used as genlock for both Koko's display and all SDI outputs. Koko will try to genlock to the lowest available SDI number, eg SDI1, if it isn't it will try SDI2 and so on. Once genlocked, Koko's display and all SDI outputs will sync to it; hence loosing the input used for genlock will cause a drop both in the display and in all SDI outputs. **This will not affect the recording.** All SDI outputs will run at the same frequency as the genlock input. Therefore any video that is in a different format, will be converted when sent to an SDI output. As there is no temporal interpolation, there will be a slight video stuttering when mixing formats being 25p the most apparent. Again, recording matches the original format and this only affects SDI outputs.
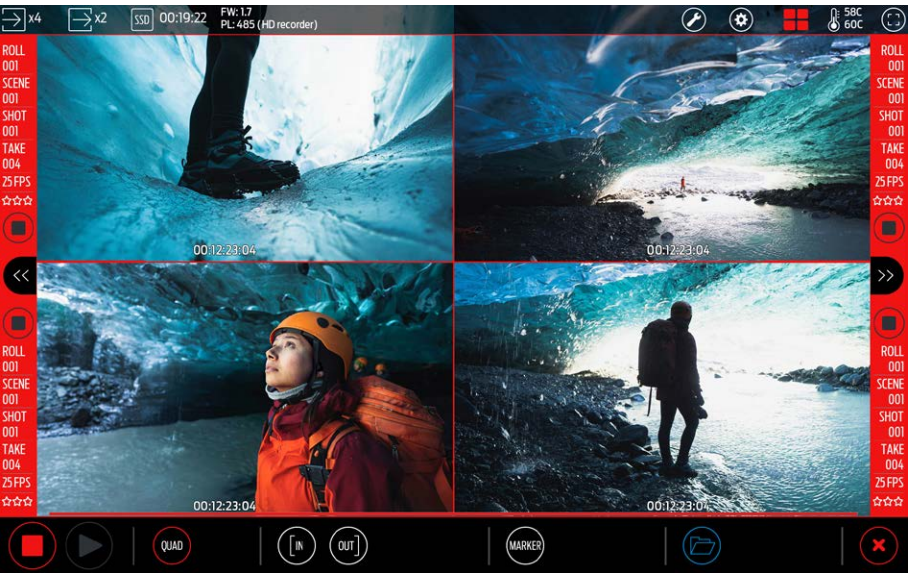
WORKING MODE

REC MODE & PLAY MODE

Koko has 2 working modes: Play & Rec. When Koko turns on, it's set in Rec Mode.

REC Mode example

PLAY Mode example

WORKING MODE

CLIP OR SESSIONS RECORDING

Koko can record single camera clips or synced multiple camera clips (Sessions). Sessions allow you to playback up to 4 synced cameras.

1. Select the views you want to be recorded from the Rec Selector icon.

2. Tap ⦿ on the Main Menu (lower left corner) or use the SDI Rec Trigger Flag many cinema cameras use

SDI Rec trigger feature can be switched in Koko's settings topbar by tapping on 📹

NOTE:
Koko will record a Session with a synced recording only if frame rates between views match. Otherwise Koko will record separate clips and won't be able to sync them, however you will be able to play them individually.

In/Out segments and markers in Sessions will be common for all the clips included in that session and will be edited as a Session, not for individual clips in playback mode. In/out segments and markers in individual clips can be edited in playback mode.

SESSIONS PLAYBACK

As a default, Koko will play all the clips in a session, being it 2-3-or up to 4 views but playback cameras can be selected in the browser by tapping on them.

After a synced recording (Session) you can just tap on ▶ for a playback of the last recording or select the views from the browser.

Koko is able to playback up to 4 views created as a Session.

1. Tap on 🗀 to open the "Clip Browser" window

2. Select "Sessions" tab

3. Each recorded sync session will be composed of at least 2 views. Select the views you want to play.

4. Tap on ▶ next to each session

NOTE:
Thumbnails appearing might take some time, as the Koko needs to create them. A fresh-formatted SSD will create thumbnails quickly but a SSD already populated with clips will take some time for the Koko to create those thumbnails.

Sync playback only applies to multi camera Sessions. Independent clips can't be played in sync with other single recordings.
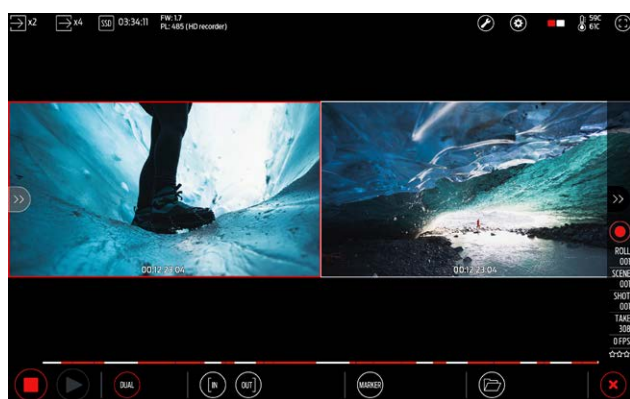
WORKING MODE

NUMBER OF VIEWS

Koko can display 1 (fullscreen), 2 (dual) o 4 (quad) video layouts.

REMEMBER: When a view is selected in standby the clip will be framed in white. When it's not selected it won't be framed. When in rec, the view will be framed in red.
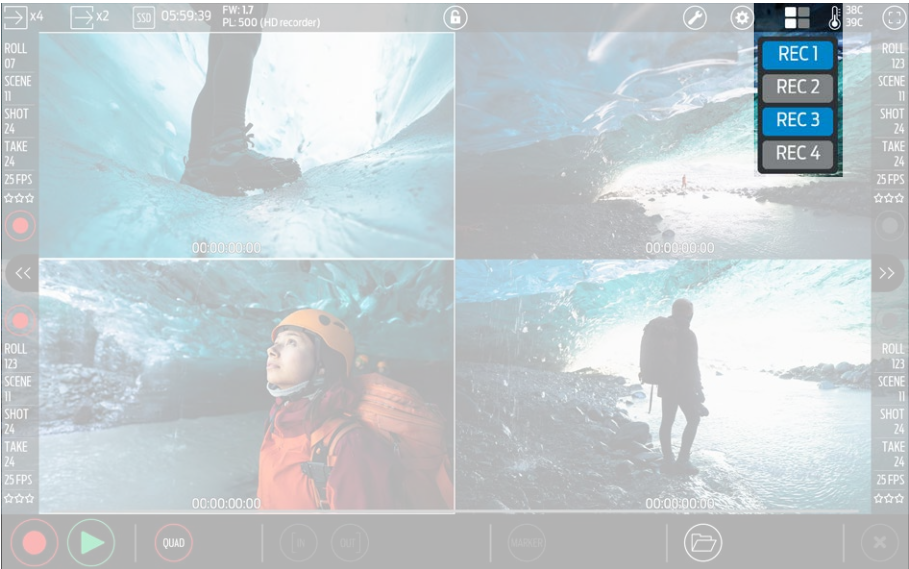

Fullscreen mode

Dual mode

Quad mode

WORKING MODE

OVIDE

REC SELECTOR

Selects the views you wish to record and shows which state is each one (play, rec or standby)

Quad view: When 3 or more SDIs inputs are set to input

Dual view: When 2 or less SDIs inputs are set to input

Each rectangle will be coloured according its state.

When a view is selected it will be framed in:

White: Selected

Grey: Not selected or no signal

Red: Recoding

Green: Playing
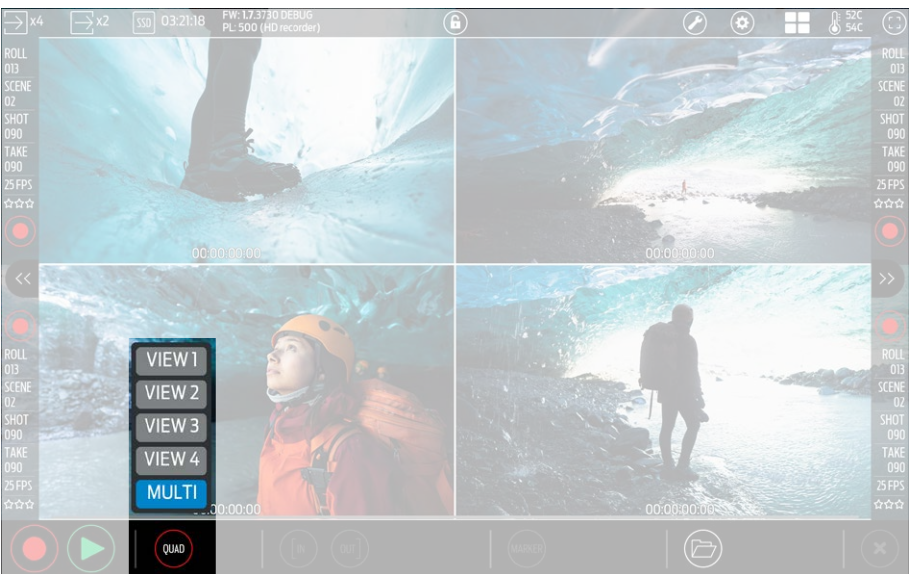
Some multiview icon examples

VIEW SELECTOR

View button: Tap on the view button to select the LCD layout from quad (or dual if 2 inputs are selected), or single fullscreen views.

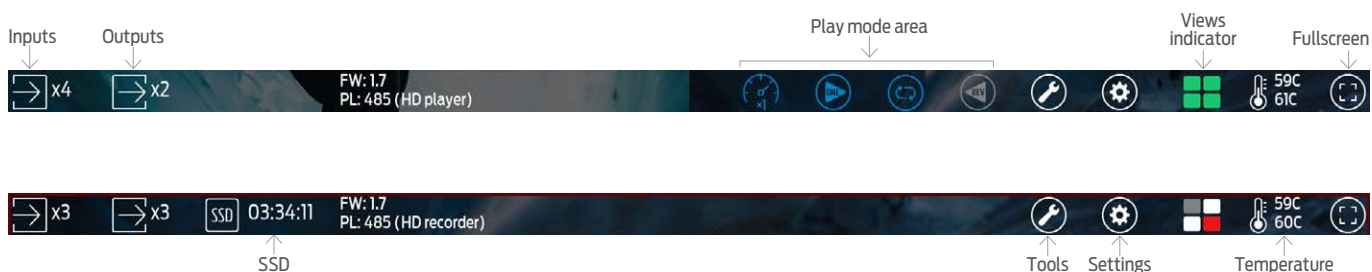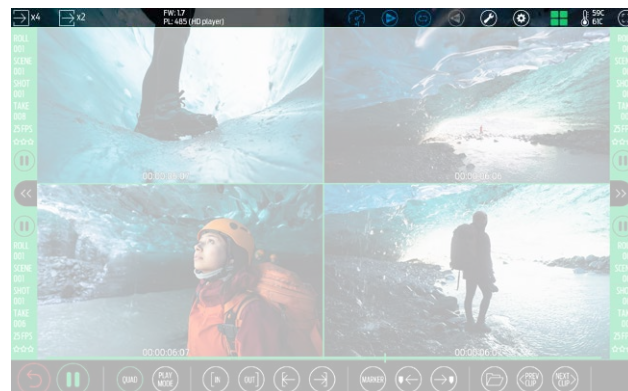Circle colour will be coloured in red (recording) or green (playing) according which mode we are on.

Some "View" button examples

INTERFACE OVERVIEW

TOPBAR

Shows information such as connected inputs & outputs, text messages, play mode and includes a few buttons.

Inputs & Outputs: Indicates how many SDI inputs and outputs are set up. On tap, opens inputs/outputs settings window.

SSD: Displays SSD remaining rec time according to selected inputs.

Play Mode area: Indicates active play modes. On tap, opens Play Mode options window.

Speed: Sets play speed (×1 / ×2 / ×4)

Loop / Pong: Plays clip on loop or pong mode

Play all (grey): Plays entire clip without considering segments (in/out)

Play all: Plays all segments in the clip (multiple in/out in a clip)

Play reverse: Sets playback in reverse (audio will be muted)

Play one: Plays just the selected segment

Toolbar button: Focus, false colour, zebra, waveform, histogram, vectorscope, LUT's.

Settings button: System info, reset settings, abort button, format SSD, date and time, import, audio and network.

Fullscreen button: Hides top and side bars, main toolbar is the only one remaining. On fullscreen, tap on ⊕ to show all menus.

INTERFACE OVERVIEW

TOOLS MENU

Tap on 🔧 button to open "Tools menu"
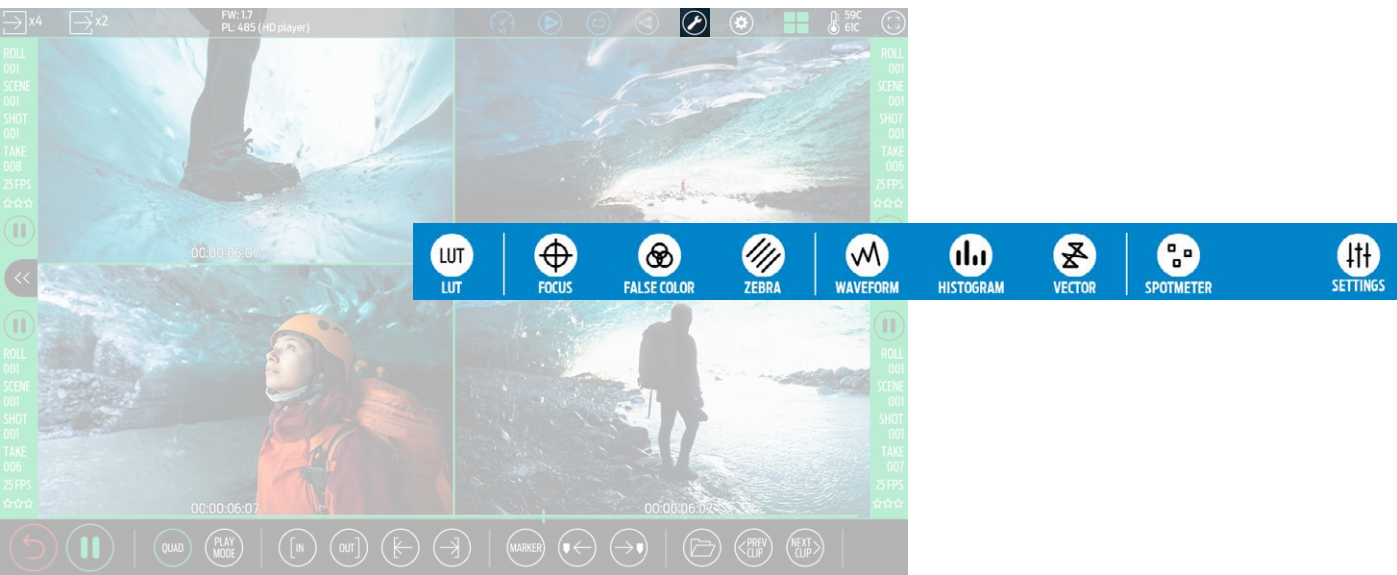
🔲 **LUT:** Koko can apply a LUT to each input and for the LCD. Load the desired LUT files in a folder named LUTs (root DCIM/LUTs/) in the Koko's SSD; once inserting it in the Koko, LUTs will be loaded into the device and you will be able to select them in the LUT menu. LUTs will stay in the Koko even if you eject the SSD. See fig. 1

⊕ **Focus**

⊗ **False colour**

⬭ **Zebra**

〽 **Waveform**

📊 **Histogram**

⊠ **Vectorscope**

🔳 **Spotmeter:** Shows 8 spots that can be moved around the display. In the bottom toolbar you will see the RGB and luminance values of these pixels. Spot meter shows RGB values and also IRE % (legal and full range selectable by the user). Alternatively you can select Sensor Mapping on video tools settings to read Arri Alexa Log C4 values from the camera sensor (more options in the future).

☰ **Settings:** Open settings pop-up to configure each one of the image tools. See fig. 2

Fig.1

Fig.2

INTERFACE OVERVIEW

SETTINGS MENU

Tap on ⚙ button to open "Settings menu"

SYSTEM INFO

Shows Koko's information such as serial number, firmware version, temperature sensor, USB version, etc.
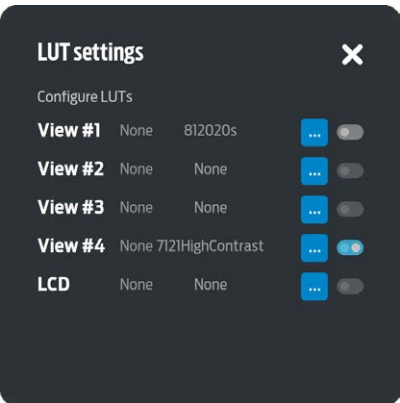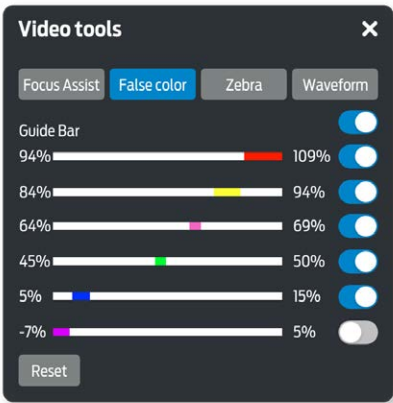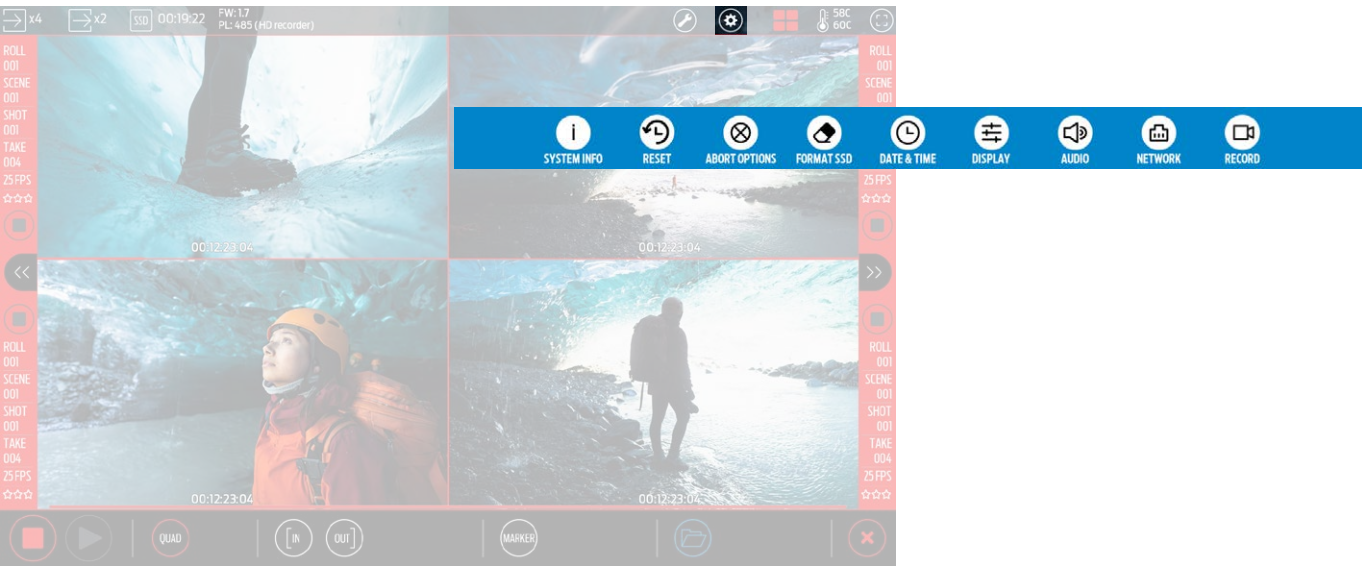
System info ✕

Model name: Ovide Koko V1
Serial number: H12GHHWAQHY3
Firmware version: 41.10
Production year: 2023

OVIDE

Ovide Maudet S.L. all rights reserved

INTERFACE OVERVIEW

OVIDE

SYSTEM INFO | RESET | ABORT OPTIONS | FORMAT SSD | DATE & TIME | DISPLAY | AUDIO | NETWORK | RECORD
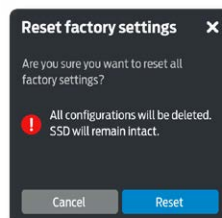
RESET

Allows to reset your Koko to factory settings. However, SSD won't be erased.

LUT files will remain in the Koko unless you manually delete them.

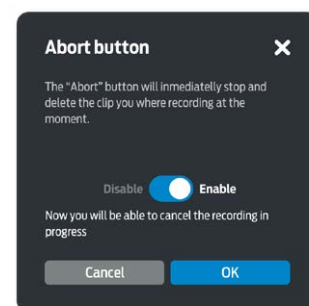A first pop-up will be shown on taping the option, after, a second one will be shown to double-check the action.

Reset factory settings ✕

Are you sure you want to reset all factory settings?

⚠ All configurations will be deleted. SSD will remain intact.

Cancel | Reset

Reset factory settings ✕

To reset all factory settings, please write "RESET"

RES |

1 2 3 4 5 6 7 8 9 0
Q W E R T Y U I O P
A S D F G H J K L
- . J X C V B N M ⌫
Cancel | Space | OK

SYSTEM INFO | RESET | ABORT OPTIONS | FORMAT SSD | DATE & TIME | DISPLAY | AUDIO | NETWORK | RECORD

ABORT BUTTON OPTIONS

Enables or disables the "Abort rec" button on the Main Toolbar.

When enabled, "Abort Rec" button will delete the current recording.

Take counter will not consider this aborted recording.

IN | OUT | MARKER | 📁 | ❌

Abort button ✕

The "Abort" button will immediately stop and delete the clip you where recording at the moment.

Disable ◉ Enable

Now you will be able to cancel the recording in progress

Cancel | OK

SYSTEM INFO | RESET | ABORT OPTIONS | FORMAT SSD | DATE & TIME | DISPLAY | AUDIO | NETWORK | RECORD

FORMAT SSD

"Format SSD" first opens a pop-up to format the SSD, after, a second pop-up is shown to double-check the action.

IMPORTANT: Ovide Koko only supports SSD drives in exFAT format.

Format SSD ✕

Are you sure you want to format the SSD disk? Only exFAT formatted drives are supported.

⚠ All clips and data will be deleted.

Cancel | Format

Format SSD ✕

To format the SSD disk, please write "FORMAT"

FORM |

Q W E R T Y U I O P
A S D F G H J K L
J X C V B N M ⌫
Cancel | OK

Metadata clear ✕

Yes will reset metadata and unlink fields

No | Yes

INTERFACE OVERVIEW

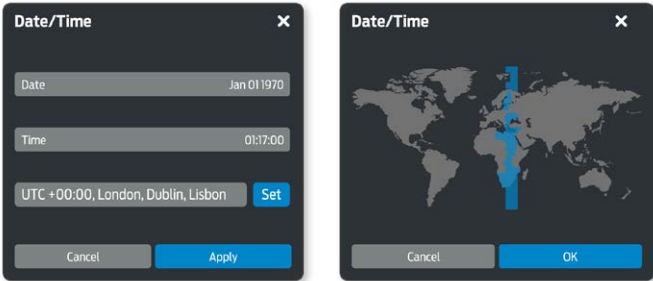|								
ⓘ SYSTEM INFO	↺ RESET	⊗ ABORT OPTIONS	◇ FORMAT SSD	🕐 DATE & TIME	⎚ DISPLAY	🔊 AUDIO	🏛 NETWORK	🎥 RECORD

DATE & TIME

Shows and changes Koko's date, time and time zone.

To set time/date tap on a number and drag your finger up/down the touchscreen or tap on Set to open the timezones map.

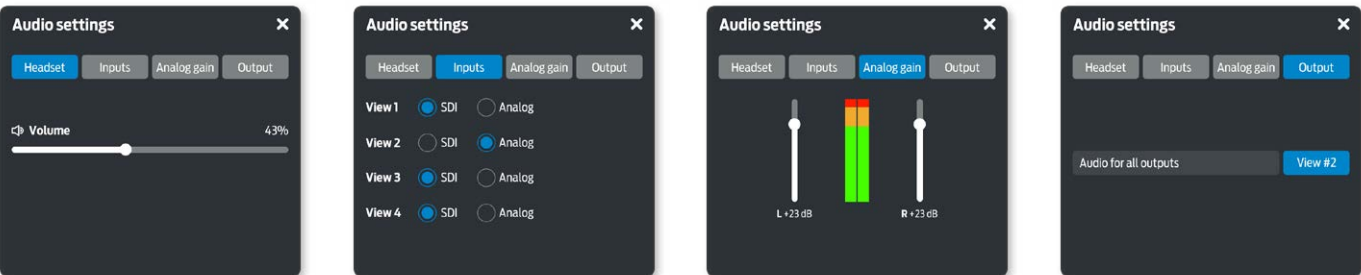|								
ⓘ SYSTEM INFO	↺ RESET	⊗ ABORT OPTIONS	◇ FORMAT SSD	🕐 DATE & TIME	⎚ DISPLAY	🔊 AUDIO	🏛 NETWORK	🎥 RECORD

DISPLAY

Adjusts Koko's brightness, contrast and backlight.

Display settings have a basic and an advanced tab. Under Basic you can adjust Brightness, Contrast and Backlight and under Advanced you can adjust the RGB Gain and Bias.

ⓘ SYSTEM INFO	↺ RESET	⊗ ABORT OPTIONS	◇ FORMAT SSD	🕐 DATE & TIME	⎚ DISPLAY	🔊 AUDIO	🏛 NETWORK	🎥 RECORD
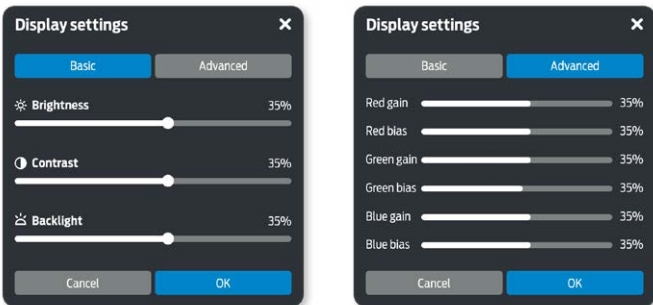
AUDIO

On the first tab, you can adjust connected headset volume, the second tab configures audio inputs via SDI or analog, in this case, you can also define the analog gain (third tab). On the fourth tab you can select the audio source for all outputs (all SDIs, analog out and headphones).

INTERFACE OVERVIEW

| SYSTEM INFO | RESET | ABORT OPTIONS | FORMAT SSD | DATE & TIME | DISPLAY | AUDIO | **NETWORK** | RECORD |

NETWORK

IP Network configuration settings.

RECORD SETTINGS

| SYSTEM INFO | RESET | ABORT OPTIONS | FORMAT SSD | DATE & TIME | DISPLAY | AUDIO | NETWORK | **RECORD** |

Mode: UHD or HD mode allows selecting the resolution the Koko will record in. Select UHD for 2160p or HD for 1080p footage. UHD accepts just 1 video input on SDI1 and outputs 4 UHD signals on SDI 3-4-5-6.

Trigger: When on, Koko will start/stop the recording of the selected views when the camera sends the SDI Flag. Then all selected views will be in sync. Keep in mind the first rec trigger from a camera of an enabled view will start the recording for all selected views to create a sync session. The last stop from the selected cameras will stop the session so all the clips are the same duration and can be synced. A rec trigger of a non selected view won't take any effect.
Rec trigger on play mode enabling will give priority to the SDI flag coming from a camera so the Koko will exit playback mode and start a recording rightaway when a camera starts a take.

Codec: Choose the desired ProRes format. Koko estimates available SSD time according to selected format and number of active views.
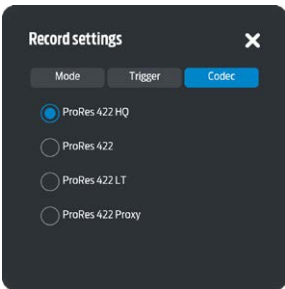
INTERFACE OVERVIEW

MAIN TOOLBAR

REC MODE

⦿ ⬛ **Global Rec / Global Stop:** In "Rec mode" will record selected views. When in play mode, will switch to "Rec Mode".

(QUAD) (DUAL) (VIEW 1) **Displayed view/s:** Shows which view/s you are currently seeing.

(IN) (OUT) **In/Out:** Adds in/out markers in the clips. Multiple in/out markers can be added, moved or deleted.

(MARKER) **Marker:** Allows adding markers for an easier navigation.

📂 **Browser:** Opens/Closes the clip browser.

✖ **Abort:** Cancels recording and erases the current clip (only on Rec Mode). "Abort" is an option you can enable in the "Settings menu".

PLAY MODE

↩ **Back to rec:** Tap to go to Rec Mode.
▶ ⏸ **Play/Pause:** If you are in "Rec mode" and tap ▶, Koko will play the last clip for the selected view. In case you were on quad view, it will play last recorded clip on View 1.

(QUAD) (DUAL) (VIEW 1) **Displayed view/s:** Shows which view/s you are actually seeing in the display.
(PLAY MODE) **Play Mode:** On tap, opens Play Mode options window (speed, loop/pong, reverse or single/all). See Fig.1

(IN) (OUT) **In/Out:** Adds and removes in/out indicators to make segments in the clips. Set an outpoint at the same position as an inpoint to remove an in/out marker or a segment. (←) (→) Jump between in/out segments using arrows.
In/out segments in clips that are part of a session can be edited in playback and will affect all the clips of the session. You won't be able to edit segments just in one clip if it was created in a synced recording.

(MARKER) **Markers:** Adds and removes markers in the clips. (←) (→) Jump between markers using arrows.

📂 **Browser:** Opens/Closes the clip browser in the SSD. You can filter out clips by Roll/Scene/Shot/Take/Rating.
🗑 **Delete clips/sessions** (in browser's pop up): Deleting a clip can be done in the browser by tapping on on "Select", selecting the clips you wish to delete, and then tapping on 🗑. This will prompt a confirmation message before deleting the clip. See Fig.3.
✎ **Rename** (in browser's pop up): You can rename clips in case you need to (one at a time). Clip renaming won't affect their session details or metadata, so if it was recorded in sync with other views, it'll still be part of that session and will play in sync with it's partners. See Fig.2
(PREV CLIP) (NEXT CLIP) **Prev/Next clip:** Play prev/next clip/session.

Fig.1

Fig.2

INTERFACE OVERVIEW

OVIDE
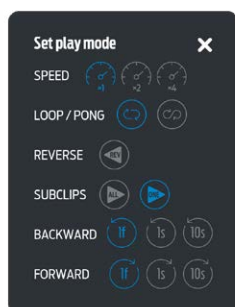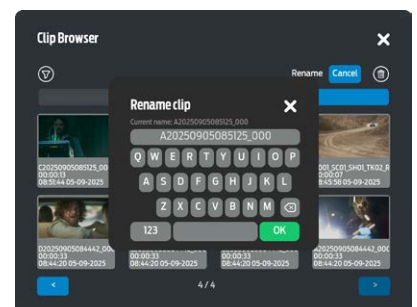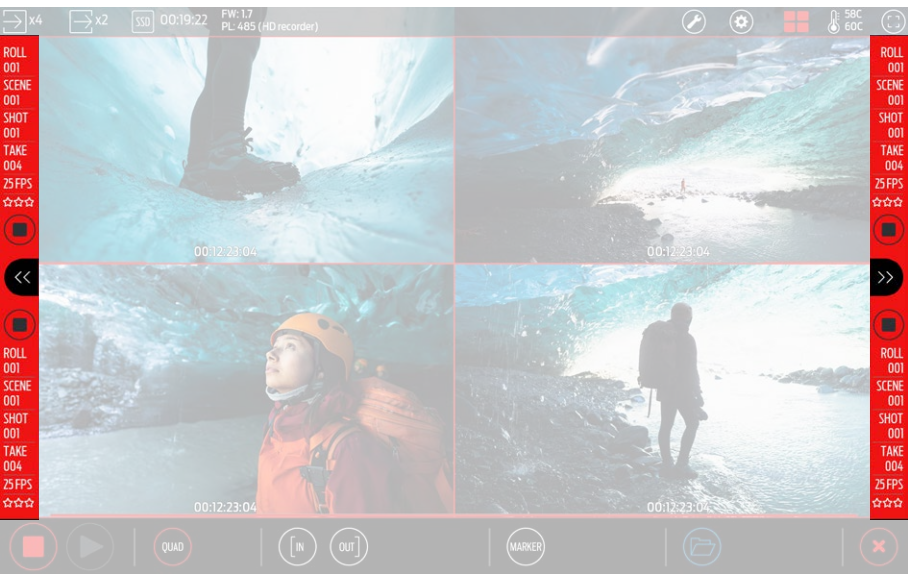
SIDEBARS

Each sidebar controls and informs about the clip on its side
Background colour shows if its clip is recording (red), playing (green) or in standby (black)

Controls the clip on its side (rec, stop, play, pause)

Hides/Shows sidebar

Metadata:
Shows and edits roll, scene, shot, take and rating

EDIT METADATA

Some metadata fields can be linked with other views so editing metadata for different cameras that share information is much quicker. Moreover metadata in the Koko is now read in QTAKE.

NOTE: Metadata can't be edited while the Koko is recording.

INTERFACE OVERVIEW

OVIDE
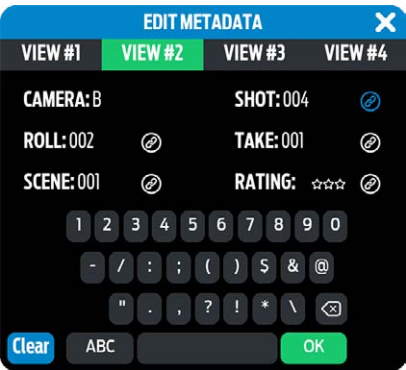
USB KEYBOARD

Plug a USB keyboard* to trigger some functions or write confirmation words such as "RESET" or "FORMAT". The available functions are:

Keyboard key	Function	Keyboard key	Function
1	Rec view 1	F1	Focus Assist
2	Rec view 2	F2	False Color
3	Rec view 3	F3	Zebra
4	Rec view 4	F4	Waveform
R	Global Rec	F5	Histogram
Ctrl+L	Toggle rec selector menu	F6	Vectorscope
Spacebar	Play/Pause/Play last	F7	Spot Meter
Side arrow	Frame by frame playback	Up arrow	First page of browser
Ctrl + Side arrow	10 frame skip playback	Down arrow	Last page of browser
Alt+1	Playback speed ×1	Ctrl+1	LUT View 1 Enable/Disable
Alt+2	Playback speed ×2	Ctrl+2	LUT View 2 Enable/Disable
Alt+4	Playback speed ×4	Ctrl+3	LUT View 3 Enable/Disable
Ctrl+Spacebar	Changes playback direction	Ctrl+4	LUT View 4 Enable/Disable
I	Segment In	Enter	Confirms textbox
O	Segment Out	Esc	Closes current panel
J	Add Marker		
S	Shows SDI Interfaces		

NOTE:

In case your Koko's USB is not enabled** you can activate it following the next steps:

1. Make sure your Koko is on Firmware version 1.5 or later before going through this process
(or download and install the latest release **www.ovidesmart.com/ovide-koko/firmware-user-guide/**).

2. Download the 'Koko_USB_1.0.omfw' firmware and copy it to Koko's SSD formatted drive. Copy the firmware to the /DCIM/FIRMWARE folder.

3. Insert the SSD into Koko, wait for the firmware update to complete and reboot. If you successfully enabled the USB capabilities in the "Info menu" will state USB 1.00 or later.

4. You can now connect a USB keyboard.

*Keyboards with built-in hubs (multiple USB ports) or Apple keyboards are not supported.
**Serial numbers between 23C0133 and 23D0452 may need a minor hardware update

SKAARHOJ REMOTE CONTROL

Download the Skaarhoj Quick Guide if you want to use this remote control.

www.ovidesmart.com/ovide-koko/firmware-user-guide/

OVIDE KOKO SPECIFICATIONS

OVIDE

Display	
LCD type	TFT LCD
Touchscreen	Capacitive
Size	10.1"
Resolution	1920×1200 px 8 bits 16.7M colours
Brightness	1000 nits
Contrast	900:1
Recording	
Recording encoding	Apple ProRes
Recording media	Removable SSD disk (7mm thick)
Video inputs	4× 12G-SDI*
Video outputs	4× 12G-SDI*
	*2× bidirectional BNC
TC	SDI embedded
Audio	
Audio in/out	SDI or analog XLR via the break-out cable
Data	
USB	USB-C
LAN	Ethernet
Functions	Rec-Stop-Play in/out Histogram Waveform Focus assist Zebra False colour Vectorscope 7-Spot Spotmeter Metadata
Physical specifications	
Dimensions	250×169×33mm
Weight	1,3 Kg
Battery mount	V-Lock / Gold / B
Temperature range	TBA
DC IN	12-17 vdc
Consumption	25W

Compatible SSDs
Samsung 870 EVO 2TB (MZ-77E2T0)
Samsung 840 EVO 1TB (MZ-7TE1T0)
Samsung 850 EVO 1TB (MZ-75E1T0)

These SSDs have been tested and confirmed to reliably work with Koko.
Other drives may or may not work.
Please avoid using QVO Samsung drives, they cannot keep up the sustained bitrate Koko needs.