



**4K Apple ProRes**  
4096x2160 / 24p  
3840x2160 / 23.98,25,29.97

**HD Apple ProRes 422(HQ)**  
1080p23.98,24,25,29.97,50\*,60\*  
720p50/60  
\*only supported on 7Q+

**convergent  
design**

Updated January 28, 2015 | Firmware Release v4.10.100

**ProRes**

**4K**



## NOTES ABOUT USING THE ODYSSEY WITH THE GH4

4K or 1080p50/60 over HDMI is only supported on the Odyssey7Q+, to record 1080p50/60 on an Odyssey7 or Odyssey7Q you must use an HDMI to SDI converter. Odyssey7/Odyssey7Q are limited to 1080p30 over HDMI due to a hardware constraint.

## RECORD TIME

	FRAMES PER SECOND				
	24	25	30	50	60
<b>4K to HD ProRes</b>	194	186	155		
<b>HD ProRes</b>	670	643	536	322	268

*Note: Odyssey7 has a single SSD slot. Odyssey7Q and Odyssey7Q+ have dual SSD slots.*

## FORMAT DETAILS

<b>4K Apple ProRes 422 (HQ)</b>	4096x2160 or 3840x2160 10-bit log video, originated from HD 8-bit or 10-bit camera signal, recorded as Apple ProRes 422 (HQ) compressed 4K video .MOV
<b>HD Apple ProRes 422 (HQ)</b>	1920x1080, 1280x720 10-bit log video, originated from HD 8-bit or 10-bit camera signal, recorded as Apple ProRes 422 (HQ) compressed HD video .MOV

## FRAME RATE SUPPORT

The following frame rates are supported on the Odyssey from the GH4

- **4K 23.98-30**  
Odyssey7: Not supported.  
Odyssey7Q: YAGH SDI Outputs 1-4  
Odyssey7Q+: YAGH SDI Outputs 1-4 or HDMI
- **1080p59.94/50**  
Odyssey7: Not supported.  
Odyssey7Q: YAGH SDI or HDMI to SDI converter  
Odyssey7Q+: YAGH SDI or HDMI
- **1080i50/59.94** : HDMI or SDI
- **1080p25/29.97** : HDMI or SDI
- **1080p23.98 (24p output and 3:2 pulldown)** : HDMI or SDI
- **720p50/59.94** : HDMI or SDI

## TYPICAL DOWNLOAD TIME IN MINUTES

Media	USB3.0	Thunderbolt
256G SSD	20	10
512G SSD	40	20
1TB SSD	80	40

*Actual transfer rates are dependent on computer system and capture media.*

*USB 3.0 or Thunderbolt connections are recommended by Convergent Design for efficient data rates.*



## CAMERA SETTINGS (SECTION 1 - HDMI OUTPUT)

### 1. SWITCH CAMERA TO VIDEO MODE

ROTATE THE MODE DIAL TO THE  M POSITION.




### 2. SET INTERNAL RECORDING

MENU »  (5) » SYSTEM FREQUENCY » (59.94/50/24)

MENU »  (1) » REC QUALITY » (4K 100MB\*\*/FHD 60/\*\* FHD 30/FHD 24)

*Note: 4096x2160 (C4K) can only be selected with 24p.*

### 3. SET HDMI OUTPUT

MENU »  (4) » HDMI REC OUTPUT » BIT MODE » (4:2:2 10-BIT\*/4:2:2 8-BIT)


*\* Note when set to 4:2:2 10 bit, the camera will not record internally*

*\*\*When wish to record 4K you must first plug a 4K rated HDMI cable into the odyssey to get the 4K output menu, and ensure 4K Down Convert is OFF.*

MENU »  (4) » HDMI REC OUTPUT » 4K DOWN CONVERT » (AUTO/OFF)

### 4. SET HDMI TIMECODE/CAMERA TRIGGER

*Note: HDMI Timecode/Camera Trigger requires GH4 firmware version 2.1 or higher.*

MENU »  (4) » TIMECODE (2) » HDMI TIME CODE OUTPUT » ON

*This will output timecode to the Odyssey, which will be recorded with your video signal.*

MENU »  (4) » HDMI REC OUTPUT » HDMI RECORDING CONTROL » ON

*This allows you to start/stop recording on the Odyssey with the record button on the GH4.*



## 5. SET CLEAN HDMI OUTPUT

MENU »  (4) » HDMI REC OUTPUT » INFO DISPLAY » OFF

*\*\* Note that 4K and 1080p50/60p over HDMI is only supported on the Odyssey7Q+. 1080p50/60 is supported on any Odyssey with the use of a HDMI to SDI converter.*

## CAMERA SETTINGS (YAGH OUTPUT)

This section covers the use of the GH4 with the YAGH Interface ([Panasonic DMW-YAGH](http://Panasonic.DMW-YAGH)).

### 1. CONNECT THE YAGH TO THE CAMERA

### 2. CONNECT THE ODYSSEY TO THE YAGH

#### VIA HDMI

Connect the HDMI output from the YAGH to the HDMI input of the Odyssey.

#### VIA SDI

Connect each of the four BNC outputs on the YAGH to the SDI ports on the Odyssey

SDI OUT 1 » SDI A IN  
SDI OUT 2 » SDI B IN  
SDI OUT 3 » SDI A IO  
SDI OUT 4 » SDI B IO

### 3. SETUP THE YAGH FOR TRIGGERING VIA SDI

MENU then Motion Picture then Interface unit and set SDI Remote Recording to ON

MENU »  (1) » INTERFACE UNIT » SDI REMOTE RECORDING » ON

### 4. SET 4K DOWN CONVERT (IF YOU ARE RECORDING HD)

When using the YAGH for HD Recording you must set the 4K down convert to 1080p.

MENU »  (4) » HDMI REC OUTPUT » 4K DOWN CONVERT » 1080P




## 5. SWITCH CAMERA TO VIDEO MODE

ROTATE THE MODE DIAL TO THE  POSITION.


*(See diagram in Section 1)*

## 6. SET INTERNAL RECORDING

MENU »  (5) » SYSTEM FREQUENCY » (59.94/50/24)

MENU »  (1) » REC QUALITY » (4K 100MB\*\*/FHD 60/\*\* FHD 30/FHD 24)

## 7. SET HDMI OUTPUT

MENU »  (4) » HDMI REC OUTPUT » BIT MODE » (4:2:2 10-BIT\*/4:2:2 8-BIT)


*\* Note when set to 4:2:2 10 bit, the camera will not record internally*

*\*\*When wish to record 4K you must first plug into the odyssey to get the 4K output menu, and ensure 4K Down Convert is OFF.*


MENU »  (4) » HDMI REC OUTPUT » 4K DOWN CONVERT » OFF

## 8. SET HDMI TIMECODE/CAMERA TRIGGER

*Note: HDMI Timecode/Camera Trigger requires GH4 firmware version 2.1 or higher.*

MENU »  (4) » TIMECODE (2) » HDMI TIME CODE OUTPUT » ON

*This will output timecode to the Odyssey, which will be recorded with your video signal.*

MENU »  (4) » HDMI REC OUTPUT » HDMI RECORDING CONTROL » ON

*This allows you to start/stop recording on the Odyssey with the record button on the GH4.*

## 9. SET CLEAN HDMI OUTPUT

MENU »  (4) » HDMI REC OUTPUT » INFO DISPLAY » OFF

*\*\* Note that 4K and 1080p50/60p over HDMI is only supported on the 7Q+ 1080p50/60 is supported on 7Q/7 with the use of a HDMI to SDI converter.*



## ODYSSEY CONFIGURATION

### 1. SET ODYSSEY TO HD->HD APPLE PRORES 422 MODE

#### HD RECORDING

⚙️ » SETUP » CAMERA » PANASONIC » HD->HD PRORES(.MOV)

#### 4K RECORDING (ODYSSEY7Q+)

⚙️ » SETUP » CAMERA » PANASONIC » 4K/UHD PRORES(.MOV)

### 2. MAKE GH4 THE RECORD TRIGGER

*Note: Camera Record Trigger requires GH4 firmware version 2.1 or higher.*

⚙️ » SETUP » RECORD TRIGGER » CAMERA

### 3. SET TIMECODE SOURCE

*Note: HDMI/SDI Timecode requires GH4 firmware version 2.1 or higher.*

⚙️ » SETUP » TIMECODE SOURCE » SDI/HDMI

The HDMI input is automatically detected when connected to the Odyssey.

*\*\* Note the HDMI input is on the right side of the unit, on the Odyssey7Q+ but is at the bottom of the unit for Odyssey7 and 7Q.*

### 4. FORMAT SSDs

⚙️ » ODYSSEY » SSD'S » FORMAT BOTH

*(or FORMAT SSD1 if you do not have a second SSD drive installed.)*

### 5. CONNECT TO CAMERA AND VERIFY STATUS INPUT

CONNECT GH4 HDMI OUTPUT TO ODYSSEY HDMI INPUT

The status on your Odyssey will display your camera's output.

*Example:*

UHD 23P 4:2:2  
PANASONIC  
3840 x 2160

PRORES  
4K/UHD



## 6. SET HDMI CADENCE

Connect HDMI input, and verify the camera internal record rate matches the input indicator on the Odyssey. If it does not a Cadence may be needed to correctly reflect the format in which you wish to record.

⚙ » SETUP » VIDEO CADENCE » PROGRESSIVE

### PROGRESSIVE

Use this setting for 720p50/60, 1080p24\*\*, 25\*,30\*

*\*Note typically the camera will need to be set to record 1080p25/30 internally, and the output is set to 1080i.*

*\*\*Note that when wishing to record 1080p24, HDMI output can be set to "Auto" or 1080i, therefore Progressive should be used when auto is selected.*

### INTERLACED

Use this setting for 1080i50, 1080i59.94 recording

### 3:2 PULLDOWN\*/\*\*

Use this setting for 1080p24 recording when the camera only has a output setting of 1080i, also note the camera must be set to record 1080p24 or 1080p23.98 internally,

*\*\*Note that when wishing to record 1080p24, HDMI output can be set to "Auto" or 1080i, therefore 3:2 pulldown should be used when 1080i is selected.*



## COPYING FILES TO YOUR COMPUTER

### 1. CONNECT SSD DRIVE TO ADAPTER

Connect the Convergent Design 2.5" Premium SSD Media to any off-the-shelf 2.5" SATA adaptor (example: Seagate GoFlex Thunderbolt Adaptor or USB 3.0 Adaptor)

### 2. CONNECT ADAPTER TO COMPUTER

The SSD will mount within 10-20 Seconds. (You will see this mount on the desktop or within finder on MAC, or within My Computer on Windows machines).

### 3. COPY FILES FOR PLAYBACK/EDITING

All Clips or Takes are located within the "Clips" directory, navigate to this and copy all of your files to a local or external drive or RAID for playback and/or editing.

## SOFTWARE UTILITIES (FREE DOWNLOAD FROM WEBSITE)

### CD CLIP MERGER (RAW/DPX)

Use the Clip Merger for any Raided Record (ie if your recorded clip required more than one SSD).

### CD APPLE PRORESS TRANSFER TOOL V1.5 (FREE DOWNLOAD FROM WEBSITE)

Use to combine clips into a single file  
Use to copy all files to a single directory without folder structure.  
Required in order to transfer markers to your NLE.

### CD DATA UNPACKER (DPX)

Use CD Data Unpacker to convert "packed" files to "unpacked" data.

ALL UTILITIES CAN BE DOWNLOADED FROM THE FIRMWARE/DOWNLOADS AREA OF OUR WEBSITE: [Convergent-Design.com/support/firmware-downloads.html](http://Convergent-Design.com/support/firmware-downloads.html)

## ATTENTION MAC OSX USERS

Before installing Convergent Design Software on Mac OSX You must first change the following settings.

- 1) Navigate to **Applications » Utilities » System Preferences**
- 2) Select **Security and privacy**
- 3) Under **General »** Allow applications downloaded from: Select **Anywhere**.





## Apple ProRes 422 (HQ)

The Odyssey 7 and 7Q records in Apple ProRes HQ which is a 10 bit 4:2:2 220Mb compressed codec. This will allow for high quality recording while avoiding high data rates of working with uncompressed video. (DPX)

### NATIVE APPLE PRORES 422 SUPPORT

Adobe CC 2014  
Apple FCP X, Aperture  
Cineform Studio

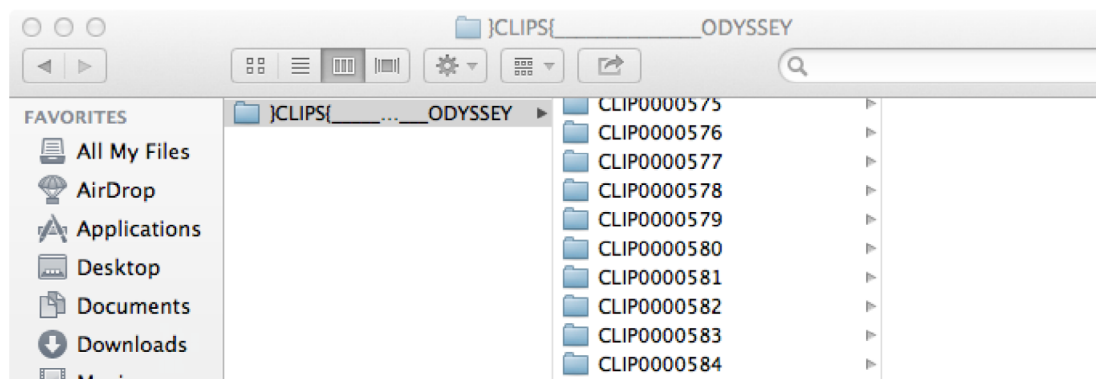
Final Cut Pro 7  
Black Magic DaVinci Resolve  
The Foundry Nuke

Autodesk Smoke  
Sony Vegas

## WORKING WITH RECORDED FILES

There are numerous post systems and NLEs that can read natively the various file formats recorded by the Odyssey. Some NLEs may require plug-ins in order to read certain file formats. Blackmagic Design Resolve software is available for free and can read all formats recorded by the Odyssey.

## FILE STRUCTURE



**Note:** To combine files into a single directory use our ProRes Utility.