

EDIUS & T2 Elite/Pro/Express

Transferring Media Between an EDIUS NLE and the T2 iDDR Running Service Pack 1.3A

Fred van Galen — September 2014

APPLICATION NOTE

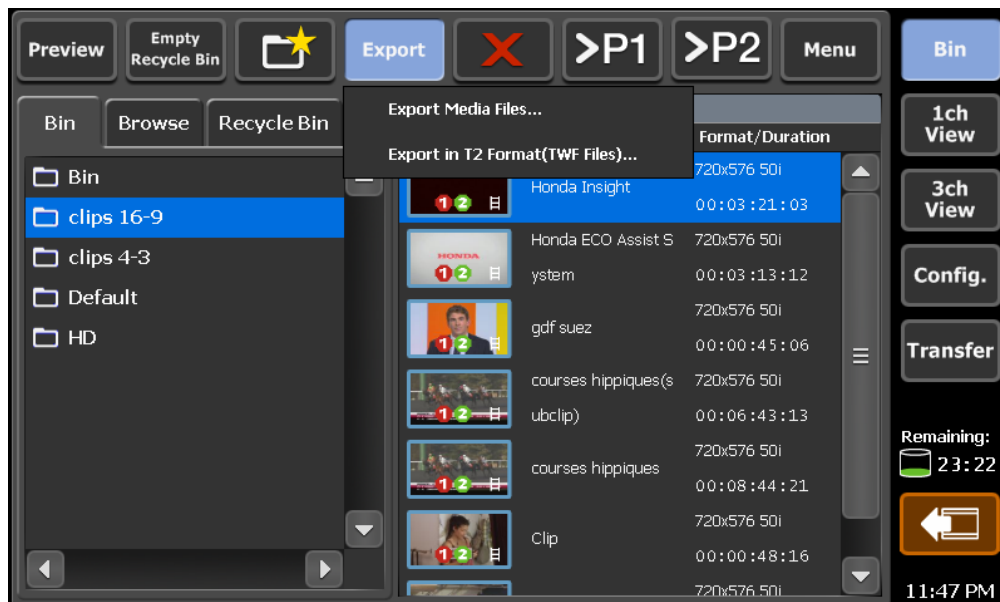


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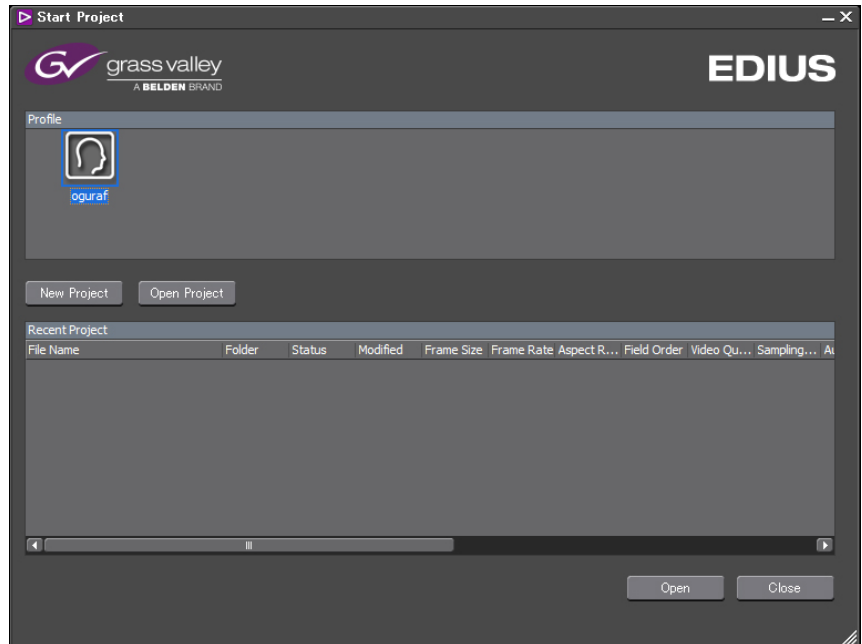
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Starting EDIUS

On your EDIUS PC, double click the EDIUS icon and the EDIUS start-up screen will appear.

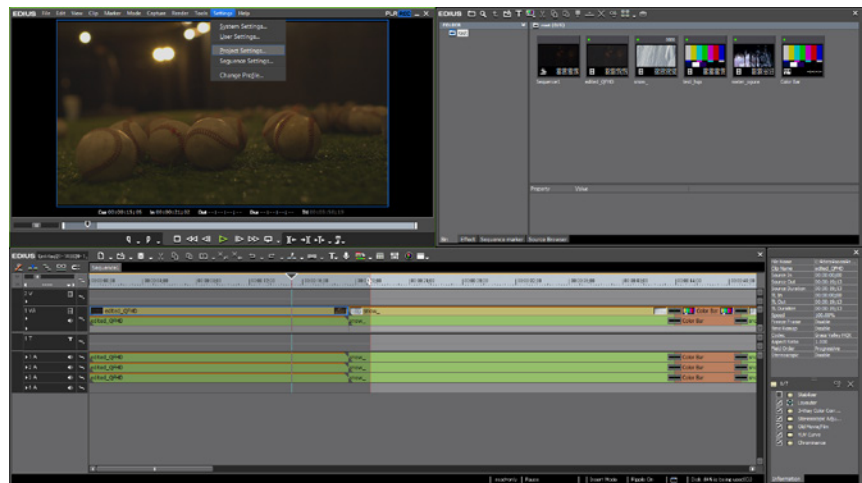
You can open an existing project or create a new project.



A note about the timeline video format:

EDIUS is able to incorporate any video format (SD/HD), frame rate (24p/25p/30p/50i/60i), or codec (MPEG-2, H.264, WM9, QuickTime, AVI, XDCAM, P2, Infinity, and more) in the same timeline. However, an EDIUS timeline has a base format. You should create a timeline in the same format that you wish to export to the T2.

Select in the top task bar “Settings” and select then “Project Settings.”

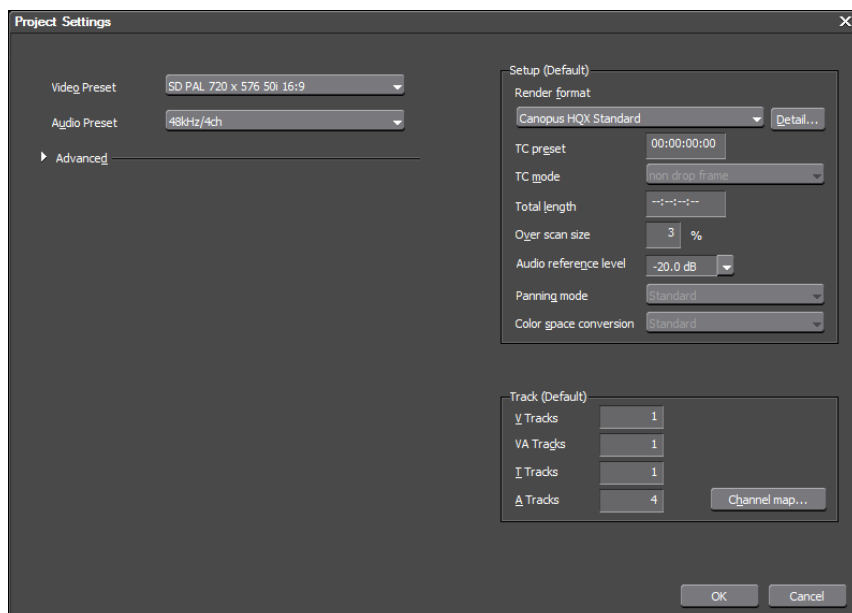


Starting EDIUS (Cont.)

After the project setting screen shown, select “Change current setting.”

In this screen you can change the timeline format.

Note: T2 only supports 50i SD, 50i HD, 60i SD, 60i HD, and 24p HD.

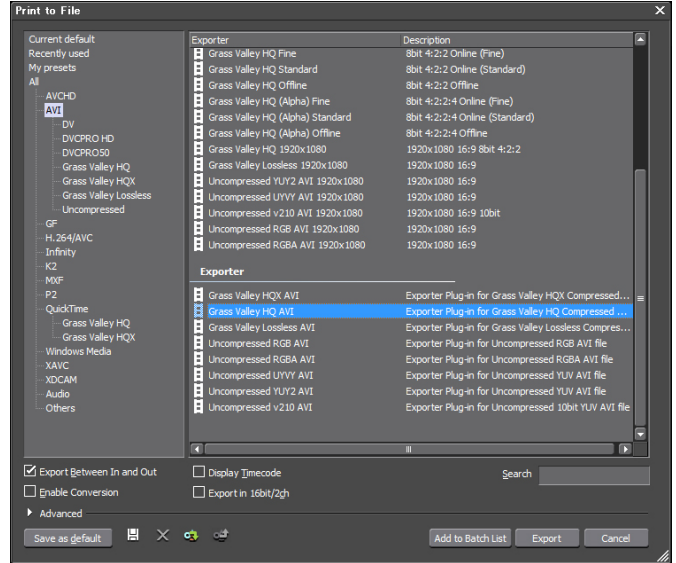


Transferring Media from the EDIUS NLE to the T2 iDDR

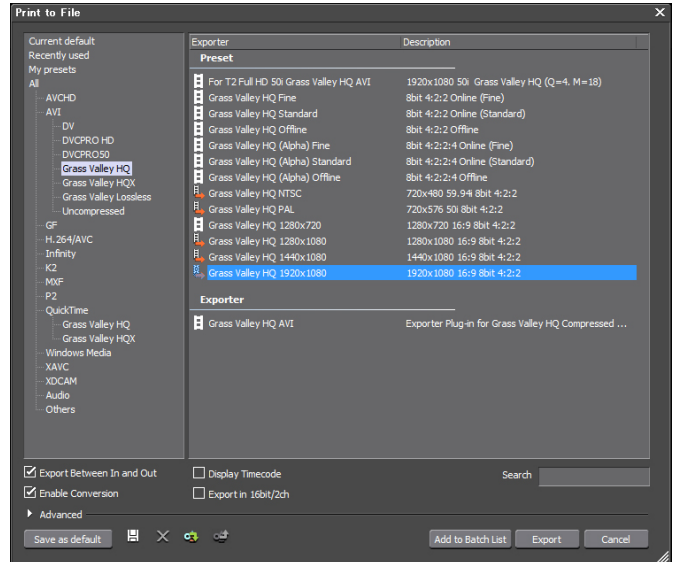
Transferring media from EDIUS to T2 is a two-step process:

STEP 1: Transcode your project to the HQ codec from the EDIUS timeline.

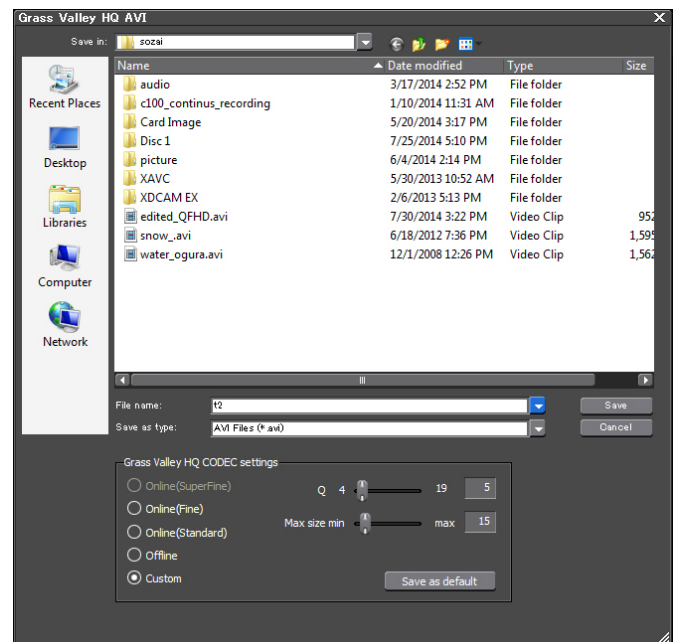
- When your edit is finished, press F11 to open the “Print to File” tool
- In the left pane, select “All / AVI / Grass Valley HQ”
- By selecting “Grass Valley HQ AVI” in the right pane you will create a file with the same video format (SD/HD, 50/60 Hz, interlace/progressive) as your timeline



- If your timeline is not in the video format you want to export, you should select the “Enable Conversion” check box. Then select from one of the formats in the Preset list
- By default, EDIUS exports between the in and out points. To be sure that you are exporting the entire timeline, uncheck the corresponding check box



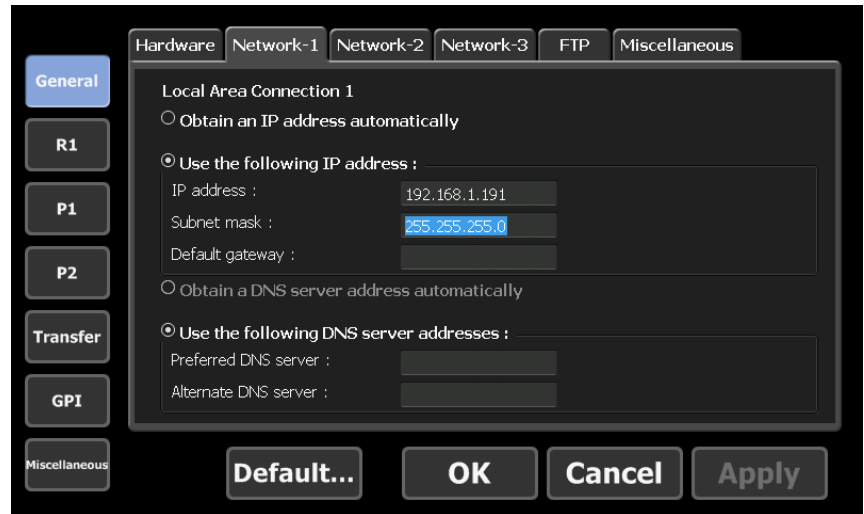
- Press “Export”
 - Choose a name
 - Select the location where you want to create the file
 - Select Grass Valley HQ CODEC settings. We want to use 150 Mb/s Grass Valley HQ in T2. 150 Mb/s Grass Valley HQ settings are: select “Custom” and fill in the Q and Max value as following;
 - 1920x1080 59.94i : Q=5 Max=15
 - 1920x1080 50i : Q=4 Max=18
 - 1920x1080 24p : Q=4 Max=19
 - See Appendix for other format Q and Max values.
 - Press “Save”
 - The file will be transcoded and saved in Grass Valley HQ format
- See Appendix for file formats supported during import and for supported resolutions.



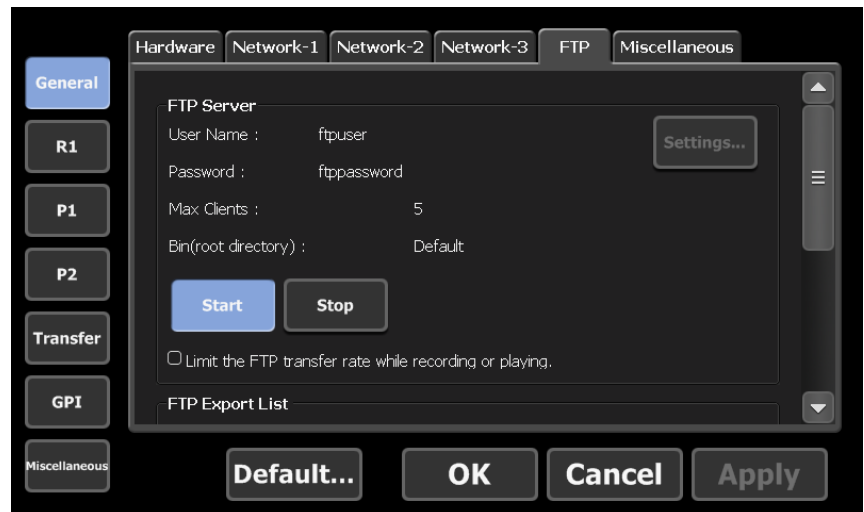
Transferring Media from the EDIUS NLE to the T2 iDDR (Cont.)

STEP 2-A: Transferring the file to T2 via FTP

- To configure the network on T2 select “Config”
- Then select the network card you want to work with (Network-1 – to the left on the back of T2 – or Network-2)
- Select “Use the following IP address” and fill in the details for your network and select “Apply”

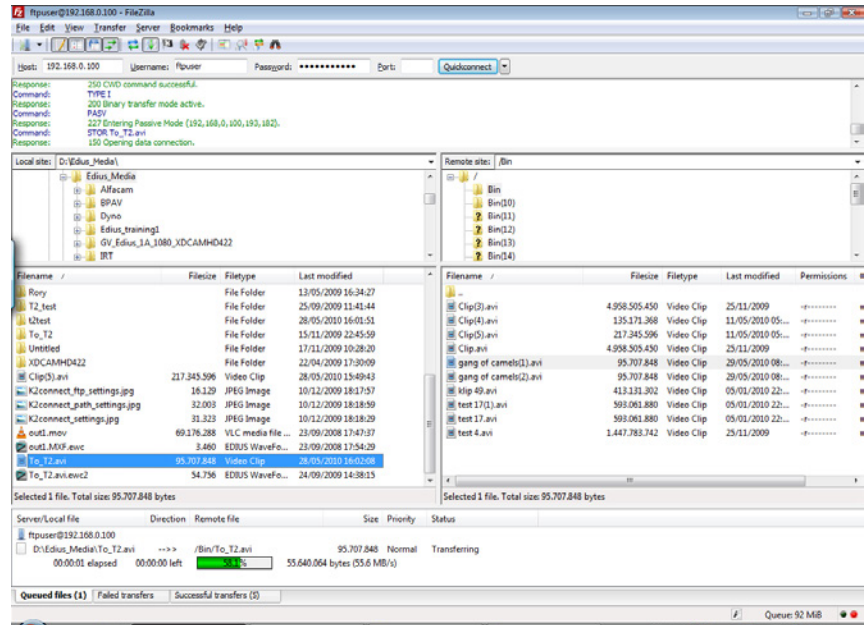


- To enable the FTP functionality on the T2 select “Config” and then the FTP tab
- With “Settings,” you can change the default settings (User name (default: ftpuser) and password (default: ftppassword))
- Press “Start”



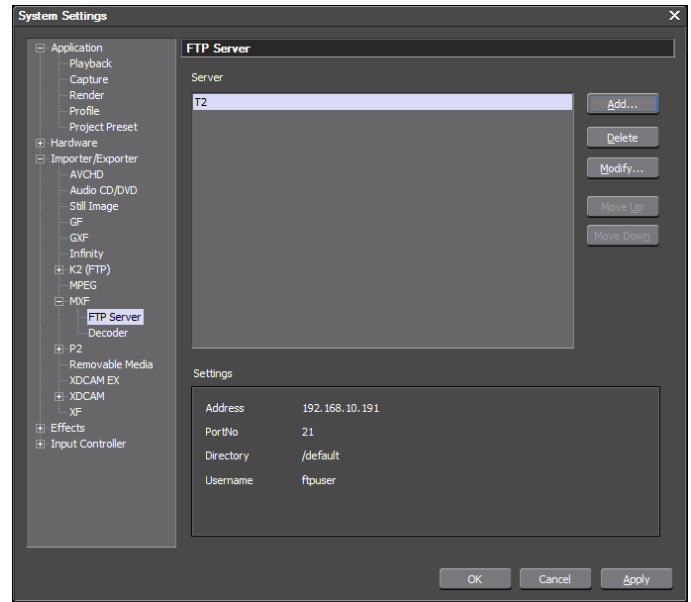
Transferring Media from the EDIUS NLE to the T2 iDDR (Cont.)

- On the EDIUS PC, configure the network card with an IP address in the same range as on the T2's network card
- You now have two possibilities: export directly out of EDIUS using FTP to the T2, or
- You can use any FTP client program. In this example, we will use FileZilla. FileZilla can be downloaded from <http://filezilla-project.org>
- Start FileZilla
- For "Host" fill in the IP address you configured on the T2
- For "Username" fill in the User Name you have set on the T2 (default: ftpuser)
- For "Password" fill in the Password you have set on the T2 (default: ftppassword)
- Click "Quick Connect"
- On the left side of the dialog box you can browse through your EDIUS PC's folders to find the location of the clips that you want to transfer. In our example To_T2.avi
- On the right side of the dialog box you will see the T2 directory
- Just drag and drop the file from the left side to the right side
- In the bottom section of the dialog box you will see the transfer progress
- When the transfer is complete, you will find your clip in the directory on the T2



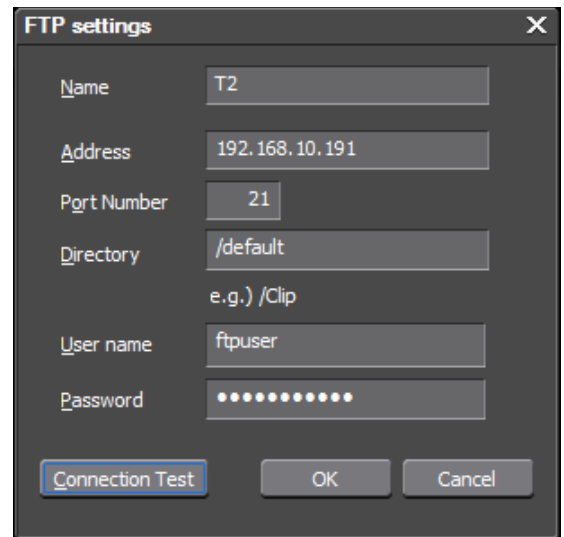
Transferring Media from the EDIUS NLE to the T2 iDDR (Cont.)

Before you can send content directly to the T2 from EDIUS, the T2 destination needs to be configured in EDIUS. Go into the top taskbar to “Settings” and then select “System Settings.” In the next screen, expand in the left column “Importer/Exporter” and then “MXF.” Select “FTP Server” and click on “Add” on the right side.



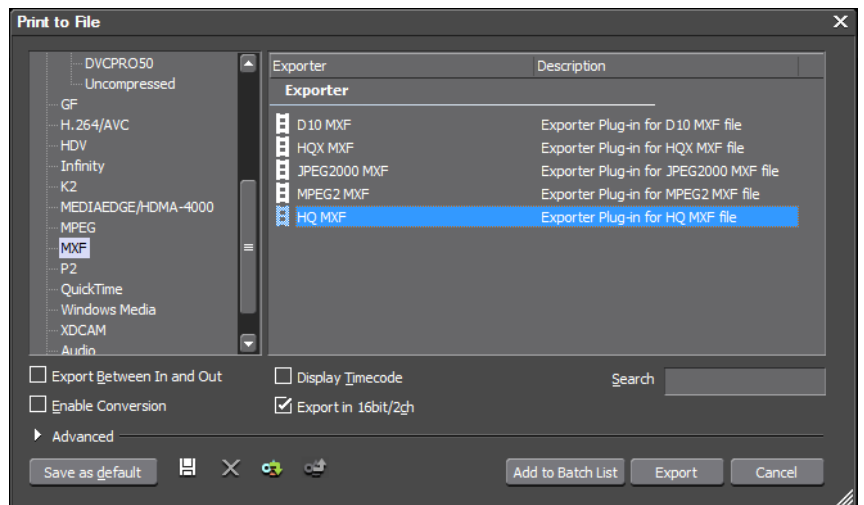
In this screen fill in the details you have set on the T2. With “Connection Test” you can verify that everything works correctly. By failure correct the settings till it passes. Save the configuration by selecting “OK.”

Note: You can add more than one T2 as an FTP destination.



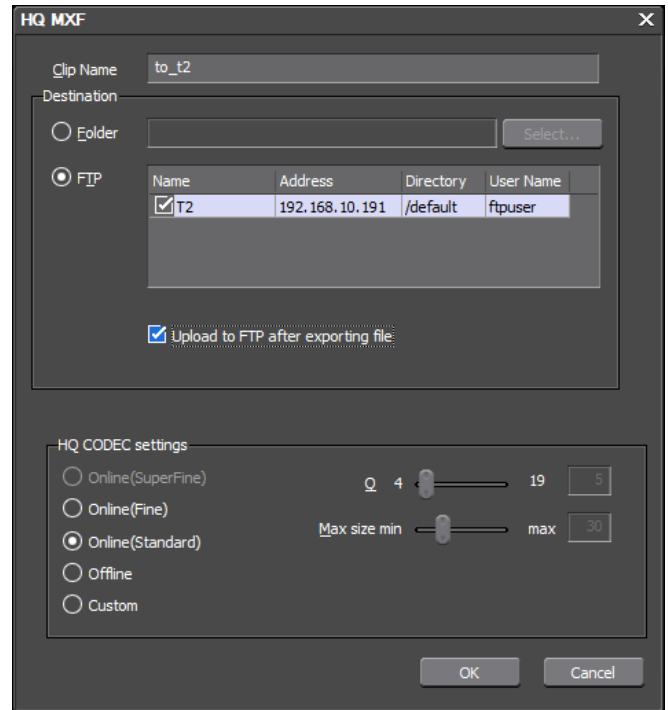
When your edit is finished, press F11 to open the “Print to File” tool.

In the left pane select “MXF” and in the right pane “HQ MXF.” If needed, select the box “Enable Conversion.” Select “Export.”



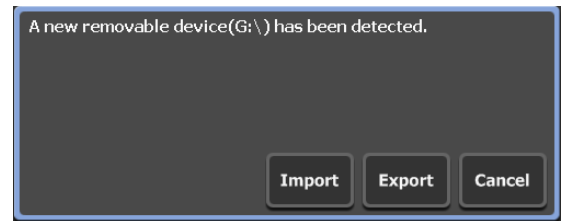
Transferring Media from the EDIUS NLE to the T2 iDDR (Cont.)

In the next screen, select FTP and the destination T2. Make sure "Upload to FTP after exporting file" is selected. Select "OK" and the clip will be sent to the T2.

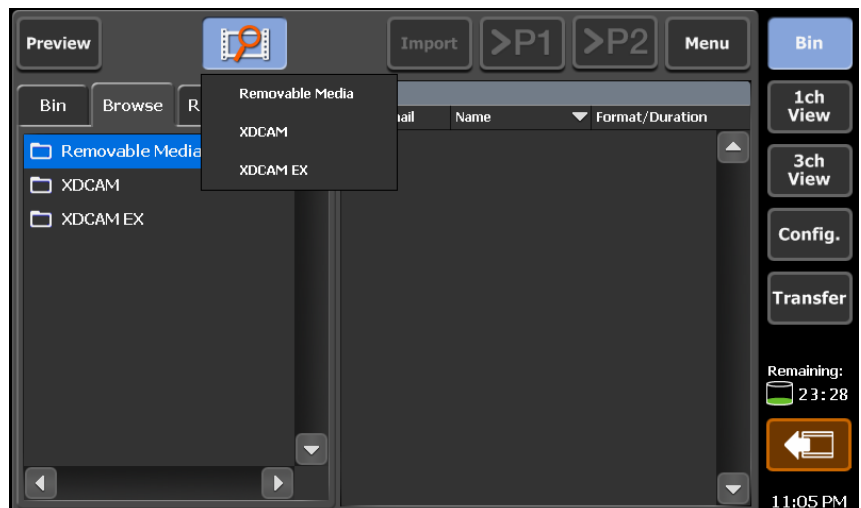


STEP 2-B (alternative): Transferring the file to T2 by external drive (USB)

- Copy the file from your EDIUS PC to the external drive
- Connect the external drive to the T2
- The external drive will be automatically detected by the T2 and a pop up window will ask you, what you want to do. Select "Import"

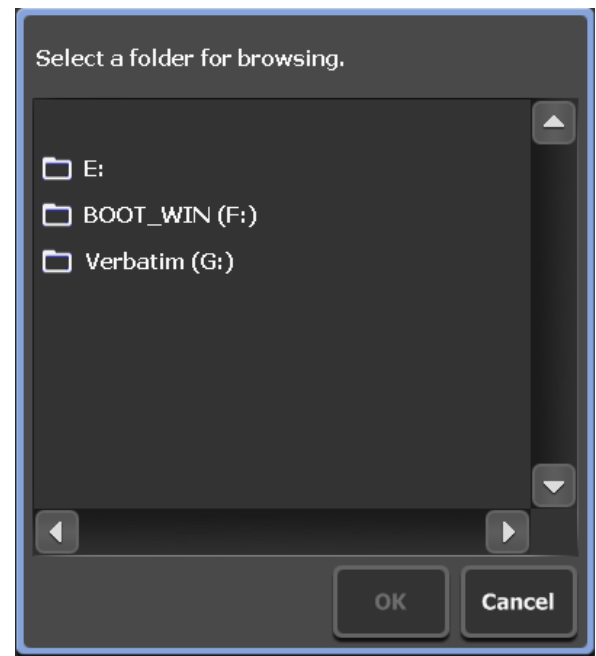


- Alternatively, to view the media on your external drive, select "BIN" and then "Browse"
- By selecting the search icon at the top and then "Removable Media" another window will pop up

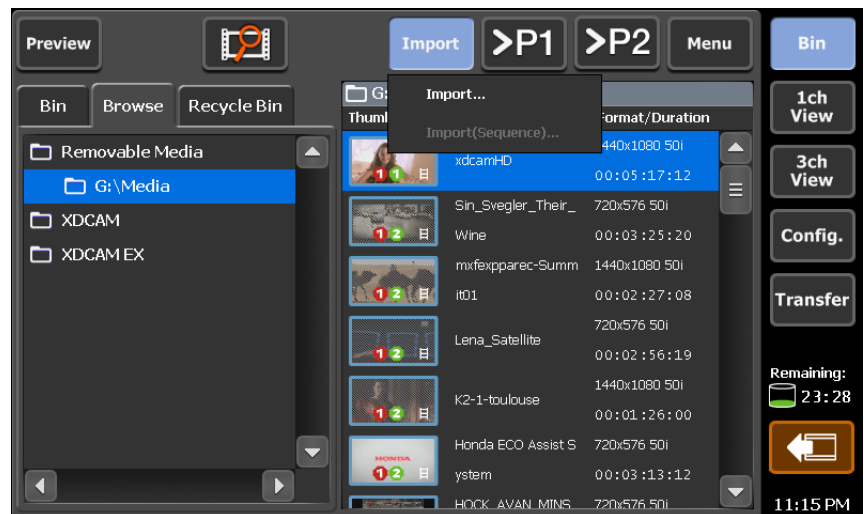


Transferring Media from the EDIUS NLE to the T2 iDDR (Cont.)

Select the drive you want to use. For example “Verbatim (G:)”

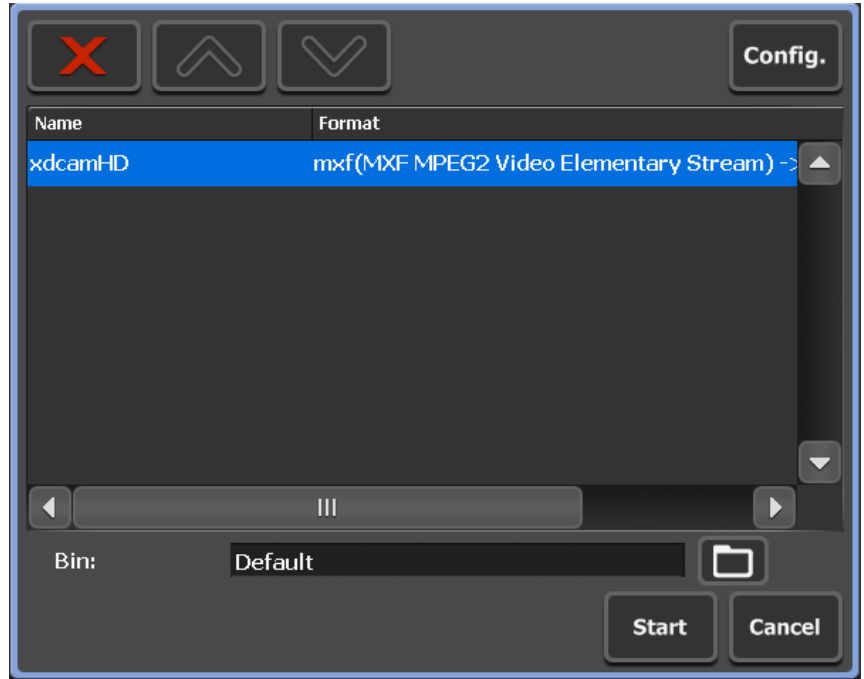


- Select the clip you want to transfer in the right pane. You can select more than one clip
- Select “Import” and again “Import”
- Note: You can also load the clip directly into the play channels “P1” or “P2” for direct playback

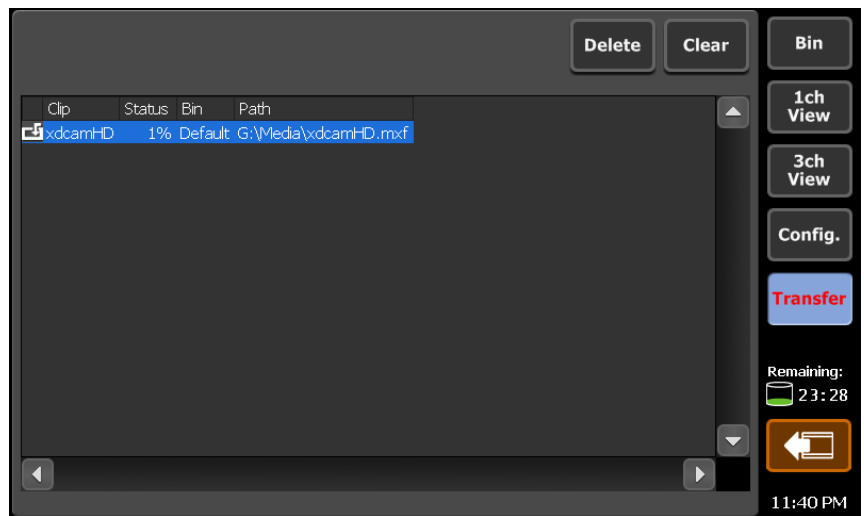


Transferring Media from the EDIUS NLE to the T2 iDDR (Cont.)

- In the next pop-up window with the folder icon, you can select to which BIN the clip will be imported
- By selecting “Config” you can set the behavior of the import
- Select “START” to start importing the clip

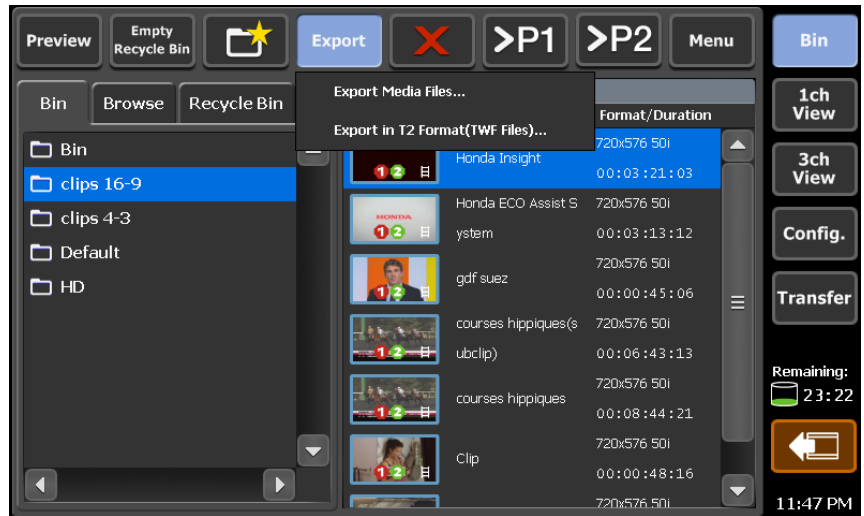


By selecting “Transfer” you can follow the importing process

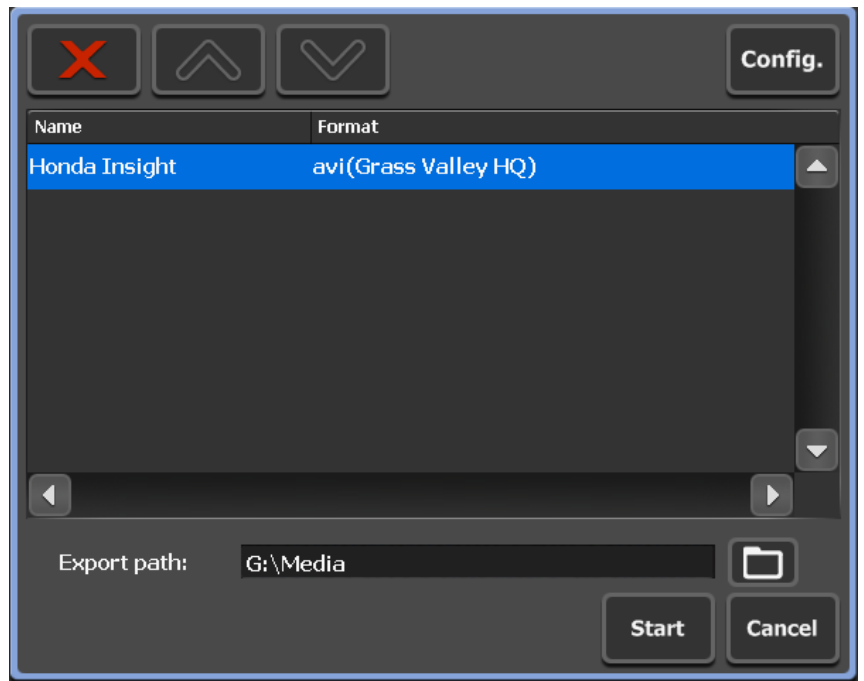


Transferring Media from the T2 iDDR to the EDIUS NLE

- Connect the external drive to the T2
- The external drive will be automatically detected by the T2 and a pop up window will ask you, what you want to do. Select in this case “Export”
- Select “BIN”
- Select the clip or multiple clips you want to export
- Select “Export” and than “Export Media Files”

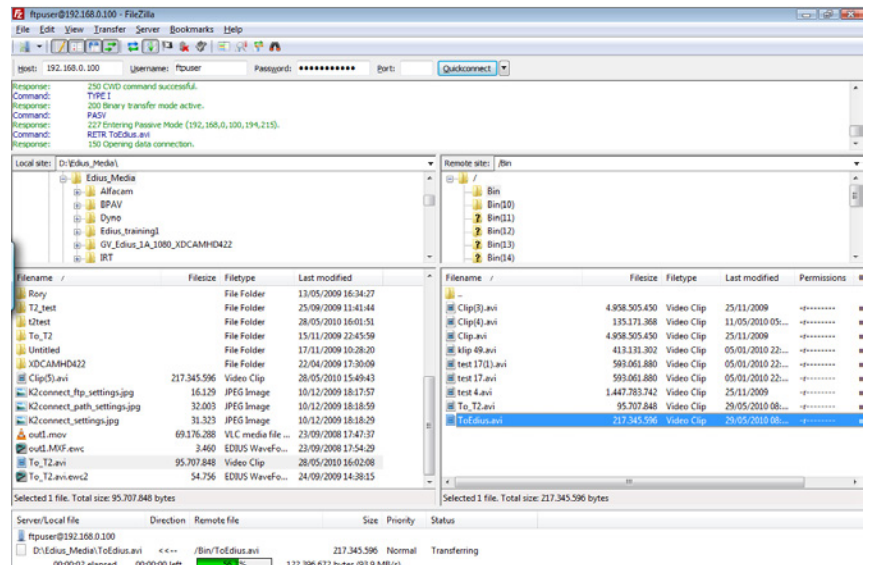


- With the folder icon, you can select the destination where you want to export your clip to
- By selecting “Config,,” you can set the behavior of the export
- Press “Start” to initiate the export



Transferring Media from the T2 iDDR to the EDIUS NLE (Cont.)

- You can export media out of the T2 by FTP as well. For setup of the FTP connection, see STEP 2-A. Select the clip(s) you want to export in the right pane and drag them to the destination where you want to copy them to



Transferring Media from the T2 iDDR to the EDIUS NLE (Cont.)

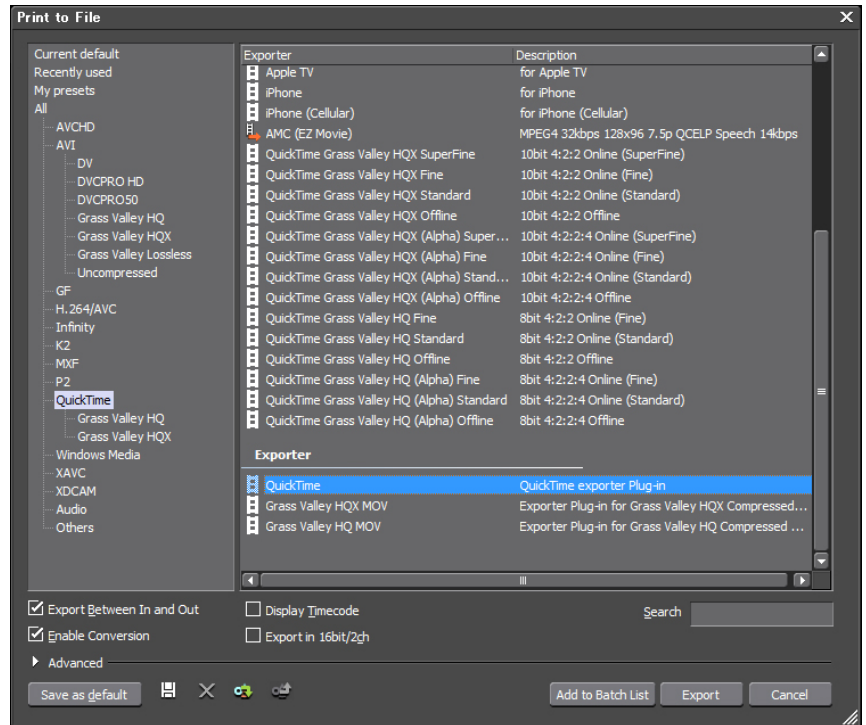
- Connect your external drive to your EDIUS PC

- Transfer the clip to your internal hard disk

In EDIUS, you can edit the file just as you would any other media file. Please refer to the EDIUS manual to learn how to edit with EDIUS.

If you only want to convert this file into another codec/wrapper:

- Add file to Bin
- Drag it to the timeline (1VA track)
- Press F11
- Choose the codec/wrapper family you want to use in the left column



- Check that the “Enable conversion” check box is selected

- If a preset corresponding to your desired format exists in the right column, select it. If not, select the generic exporter under “Exporter”

- By default EDIUS exports between the in and out points. To be sure to export the entire timeline, uncheck the corresponding check box

- Press “Export”

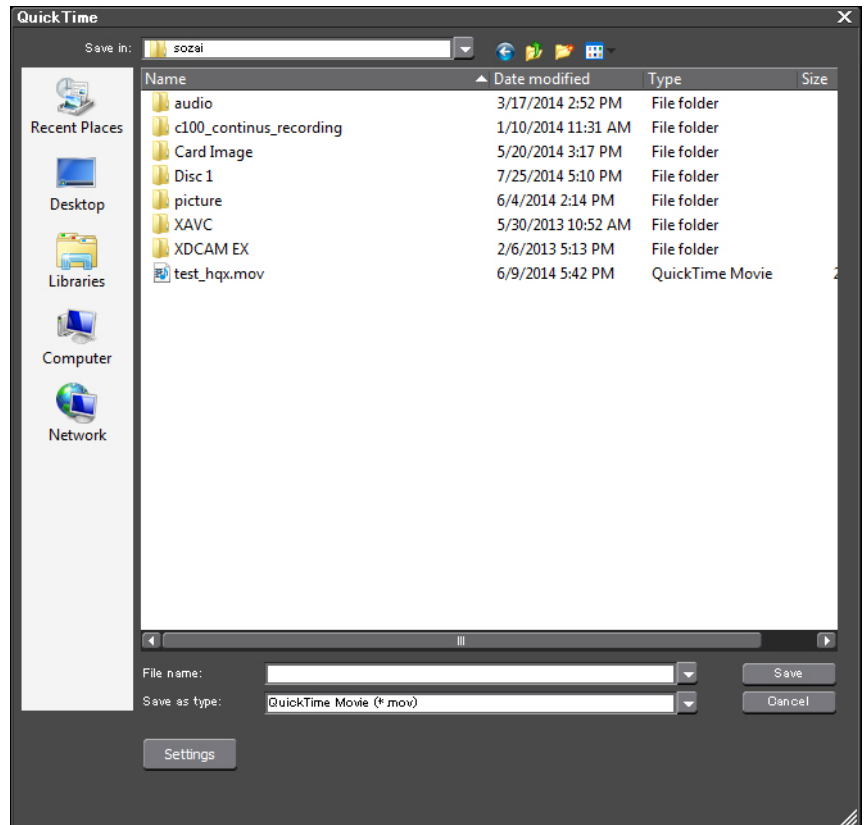
- Adjust the settings corresponding to the format you have selected

- Enter a name

- Select the location you want create the file in

- Press “Save”

- The file will be transcoded in the format you have selected and saved



Appendix One: Grass Valley HQ-Q and Max values for T2

	Q	Max
1920x1080 59.94i	5	15
1920x1080 50i	4	18
1440x1080 59.94i	4	20
1440x1080 50i	4	24
1280x1080 59.94i	4	22
1920x1080 24PsF	4	19
1440x1080 24PsF	4	25
1920x1080 23.98PsF	4	19
1440x1080 23.98PsF	4	25
1920x1080 24p	4	19
1440x1080 24p	4	25
1920x1080 23.98p	4	19
1440x1080 23.98p	4	25
1280x1080 23.98p	4	28
1280x720 59.94p	4	17
1280x720 50p	4	20
960x720 59.94p	4	22
960x720 50p	4	27
960x720 24p	4	30
1280x720 23.98p	4	30
960x720 23.98p	4	30
720x486 59.94i	4	30
720x576 50i	4	30
1024x768 60p	4	20
800x600 60p	4	30
640x480 60p	4	30

Appendix Two: File Formats Supported During Import

Import File Compatibility – Transcode Import

Container	Video Codec	Audio Codec	Native Import/ Playback	Transcoding (AVI (HQ))	Rewrap MXF (OP-1a)
AVCHD	H.264/AVC	Dolby Digital (AC-3), Linear PCM	Yes	Yes	—
AVI	Grass Valley HQ, DV, DVCPRO 25, DVCPRO 50, DVCPRO HD	Linear PCM	Yes	—	—
AVI	Grass Valley Lossless, Grass Valley HQX, uncompressed	Linear PCM	—	Yes	—
GF	DV, DVCPRO 25, DVCPRO 50, MPEG-2	Linear PCM (48 kHz, 16-bit/24-bit)	Yes	—	—
GXF	AVC-Intra 100, AVC-Intra 50, D10, DVCPRO HD, DVCPRO 50, DVCPRO 25, DV, MPEG-2	Linear PCM, A-law	—	—	Yes
MPEG-2	MPEG-2	MPEG-1 Audio Layer-2, Dolby Digital (AC-3), Linear PCM	—	Yes	—
MXF	AVC-Intra 50, AVC-Intra 100, D10, DV, DVCPRO 25, DVCPRO 50, DVCPRO HD, MPEG- 2	Linear PCM, A-law	Yes	Yes	—
MXF	JPEG 2000	Linear PCM, A-law	—	Yes	—
MXF	Grass Valley HQ	Linear PCM	Yes	Yes	—
MXF	Grass Valley HQX	Linear PCM	—	Yes	—
P2	DV, DVCPRO 25, DVCPRO 50, DVCPRO HD, AVC- Intra 50, AVC-Intra 100	Linear PCM (48 kHz, 16-bit/24-bit)	Yes	Yes	Yes
QuickTime	Grass Valley HQ, Grass Valley HQX, DV, DVCPRO HD, H.264, ProRes 422, ProRes 4444, JPEG 2000, Animation, MPEG-4, Photo JPEG, PNG, uncompressed	AAC, Apple Lossless, MP3, ADPCM, A-law, U-law, Linear PCM	—	Yes	—
Windows Media	Windows Media Video	Windows Media Audio	—	Yes	—
XDCAM	DV, IMX, MPEG-2	8 channels AES3, Linear PCM, A-law	Yes	Yes	—
XDCAM EX	MPEG-2	Linear PCM (48 kHz, 16-bit)	Yes	Yes	—

Appendix Two: File Formats Supported During Import (cont.)

The T2 iDDR includes software to facilitate the import and export of program material. T2 stores content for playback using the Grass Valley HQ video codec, an intermediate codec similar in many respects to Apple's ProRes or Avid's DNxHD. Intermediate codes are used to preserve original picture quality without the massive storage requirements of uncompressed digital video.

Grass Valley HQ Performance

The Grass Valley HQ Codec adjusts its compression rate dynamically depending on the image to deliver a high image quality comparable to, or better than, HDCAM or DVCPRO HD.

A variable bit rate codec prevents the loss of detail in particularly complex images that can occur when using storage methods, such as tape, where the bit rate is fixed, or in very high compression software codecs like MPEG-2 or MPEG-4.

The Grass Valley HQ Codec preserves 4:2:2 color space and maintains full 1920 (or 1440) luminance sampling delivering quality comparable to Sony's HDCAM-SR (SMPTE 409M-2005), but at less than half the data rate.*

Format Support

The T2 iDDR transcoding capabilities allow direct import of a wide range of file types and formats. T2 will convert those formats to the Grass Valley HQ Codec for internal storage and playback. The table on the previous page summarizes the import formats presently supported.

* The typical HDCAM-SR data rate is 440 Mb/s, where the Grass Valley HQ Codec averages between 150-200 Mb/s delivering about 55% bandwidth reduction over HDCAM-SR. Uncompressed high-definition digital video runs at nearly 1 Gb/s. The Grass Valley HQ Codec delivers an astonishing 85% bandwidth reduction compared to uncompressed digital video.



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