



Quick Start Guide - Coyote Flex v3.0

revised 07-15-2022

Connecting Devices

Coyote Flex is designed to allow video and audio to be played out of a variety of hardware devices as well as the onboard GPU (HDMI/DP). You can connect your computer to several BMD Decklink PCIe cards, BMD Ultra Studio thunderbolt 3, AJA Kona and Corvid PCIe, and T-Tap TB3 devices.

- All Resolutions and outputs follow the SMPTE protocol including DCI.
- For multiple output playback, you will need an external hardware device.

Flex will push audio out of the system audio preference, including external sound cards or IP protocols when using the onboard GPU or external devices. When using SDI devices, 16 channels per output are available. Audio is also available out of the HDMI connection.

Make sure to connect any external video, audio, or control device, including Streamdecks, before opening the software application. This will ensure that Flex will see the device prior to opening the main UI.

Windows PC for Flex Lite (Single Player)

- Microsoft Windows 10 or 11, 64bit x86
- 4gb Ram
- 250gb Hard Drive Space
- i5 Intel Processor, AMD Ryzen 3 or higher
- 1000 GPU with 2G Vram

Windows PC for Flex HD (Quad Player)

- Microsoft Windows 10 or 11, 64bit x86
- 8gb Ram
- 250gb Hard Drive Space
- i7 Intel Processor, AMD Ryzen 5 or higher
- 2000 GPU with 4G Vram

Windows PC for Flex Ultra (Quad Player)

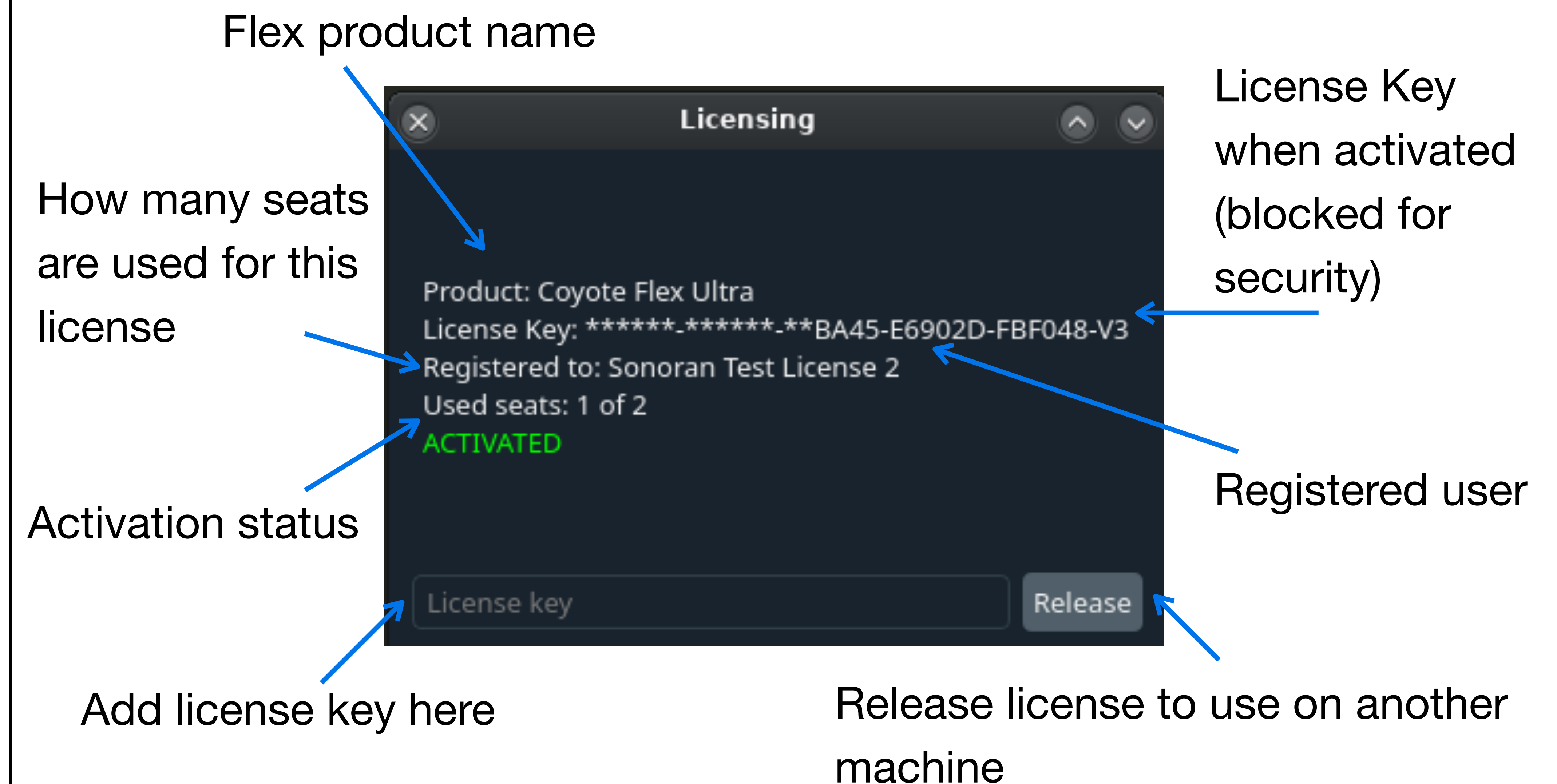
- Microsoft Windows 10 or 11, 64bit x86
- 32gb Ram
- 500gb Hard Drive Space
- i9 Intel Processor, AMD Ryzen 7 or higher
- 7000 GPU with 8G Vram

Mac and Linux Specs (Coming Soon)

- The UI screen requires a minimum resolution of 1440 x 900 @100% scaling. Recommended screen size is 1920 x 1080 @100% scaling
- See our website and dropdown menu in system creator for the latest supported devices
- Note: onboard GPU is for a single output only. If you need multiple outputs please use a supported external SDI hardware device.

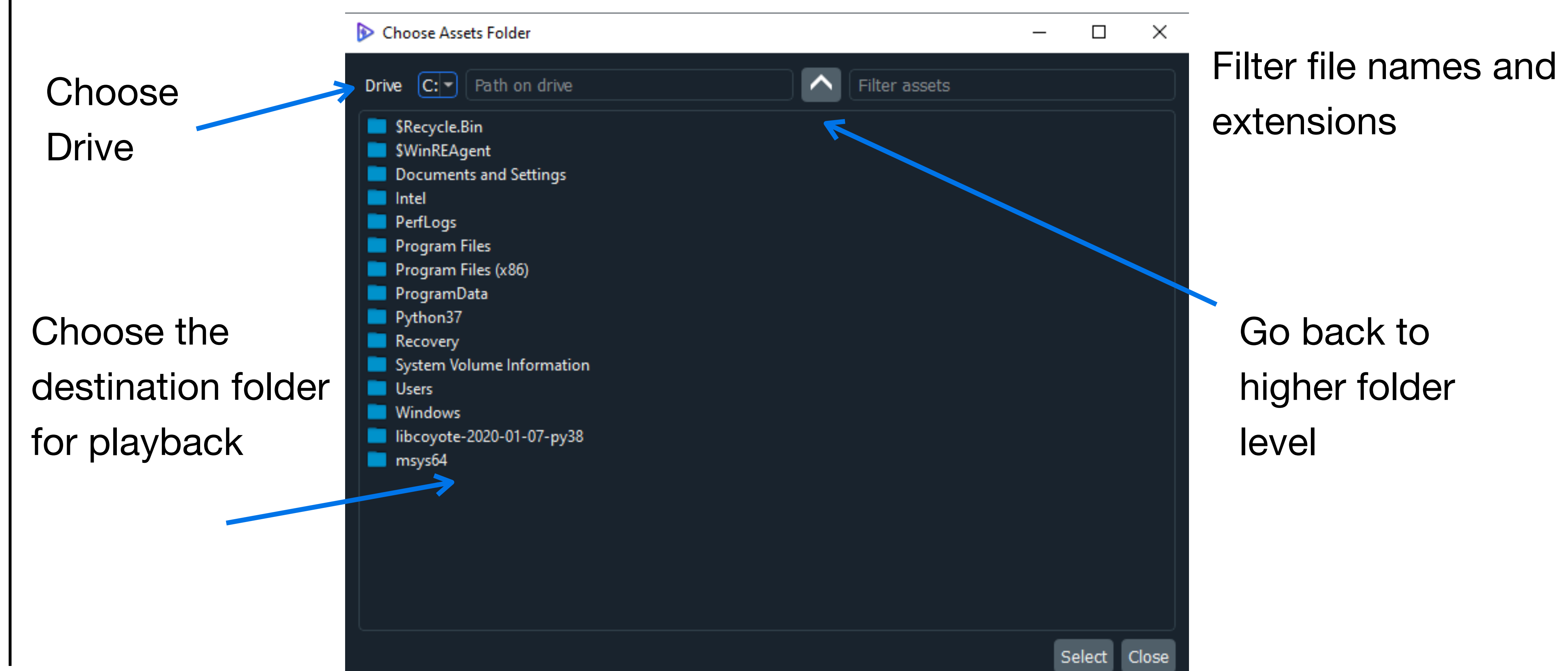
Licensing

The first modal you will see after installation will be the licensing activation popup. You can run the application without a license for demo purposes however, there is a Coyote Flex logo on all outputs. To remove, please purchase a license from our website www.sonoranvideosystems.com



Asset Folder

Choose the folder you want to play your videos from. Please note this should be on a fast drive capable of multiple video playback if using Flex HD or Flex Ultra.



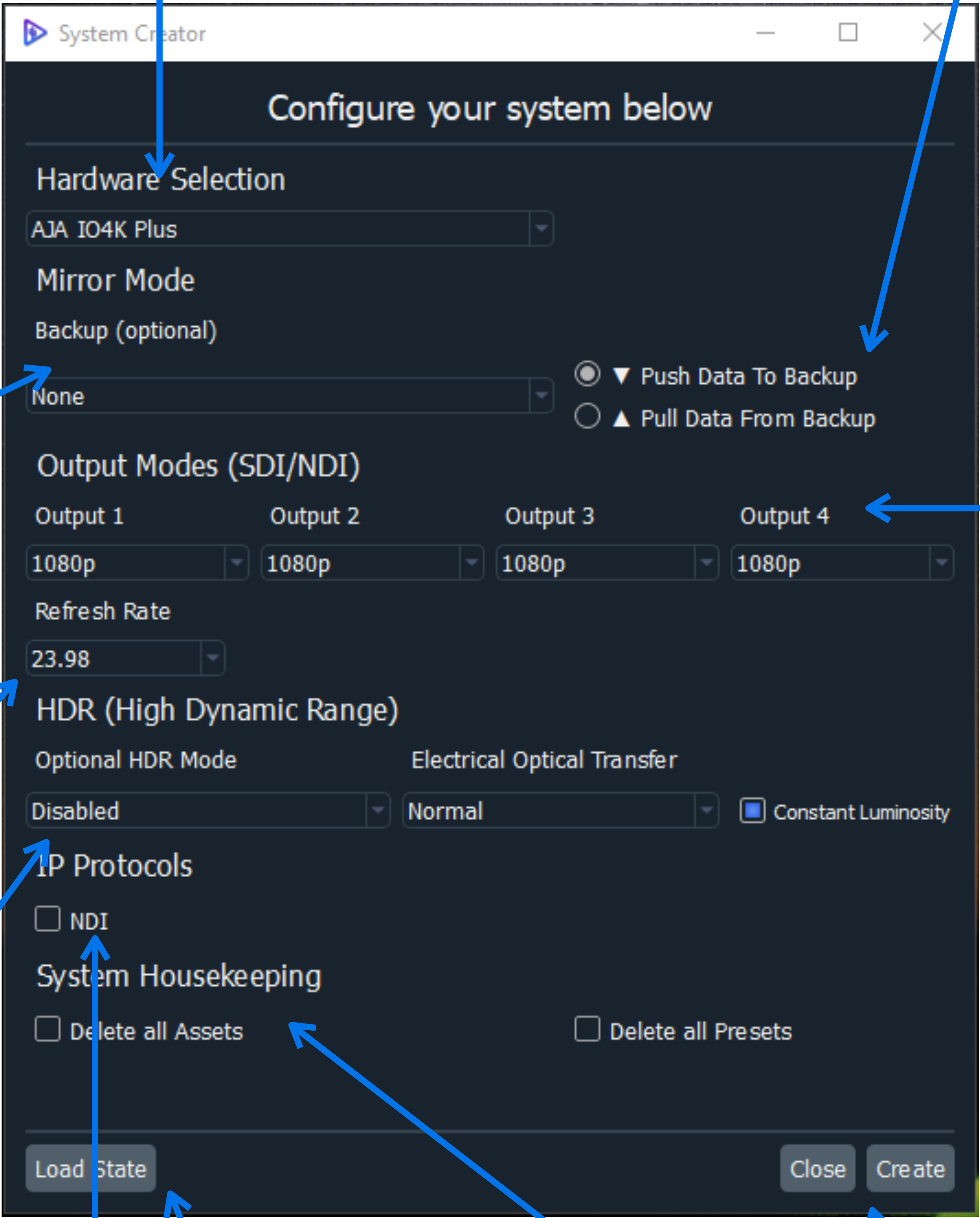


System Builder

The system builder is how you initially set up your machine's parameters and video resolutions per output. Each system has a global refresh rate.

Choose the Hardware or local GPU for output

Push data from primary to back up. (Default) or pull data from backup if replacing a primary.



If using a backup server choose the I.P address. This will force the B.U. to follow all commands and copy assets from the primary

Global refresh

HDR and SDR Mode. (No HDR for onboard GPU)

I.P. Protocol. Select box for NDI. This will follow all players from the SDI outputs.

Load a saved .cyt state file.

Clear all existing presets and assets

Close or Create the system

Resolution select per output. If spanning or running quad, resolutions must be the same and consecutive.

User Interface

The user interface consists of 5 distinct panels.

1. **Files and Functions.** This panel is for uploading assets, creating GoTo and Countdown markers
2. **Layout.** This panel is for the current selected presets, player, and output layout.
3. **Properties.** This panel is for proc amp adjustments for video. Added soon, audio and sizing.
4. **Preset panel.** This is where you create your presets/ playlist. Select + to add a new preset
5. **Transport.** This area is designed for current preset status, transport buttons, and video editing.

1. Files and functions panel
2. Layout Panel
3. Properties (Audio and Geometry coming soon)

4. Preset / playlist panel

5. Transport

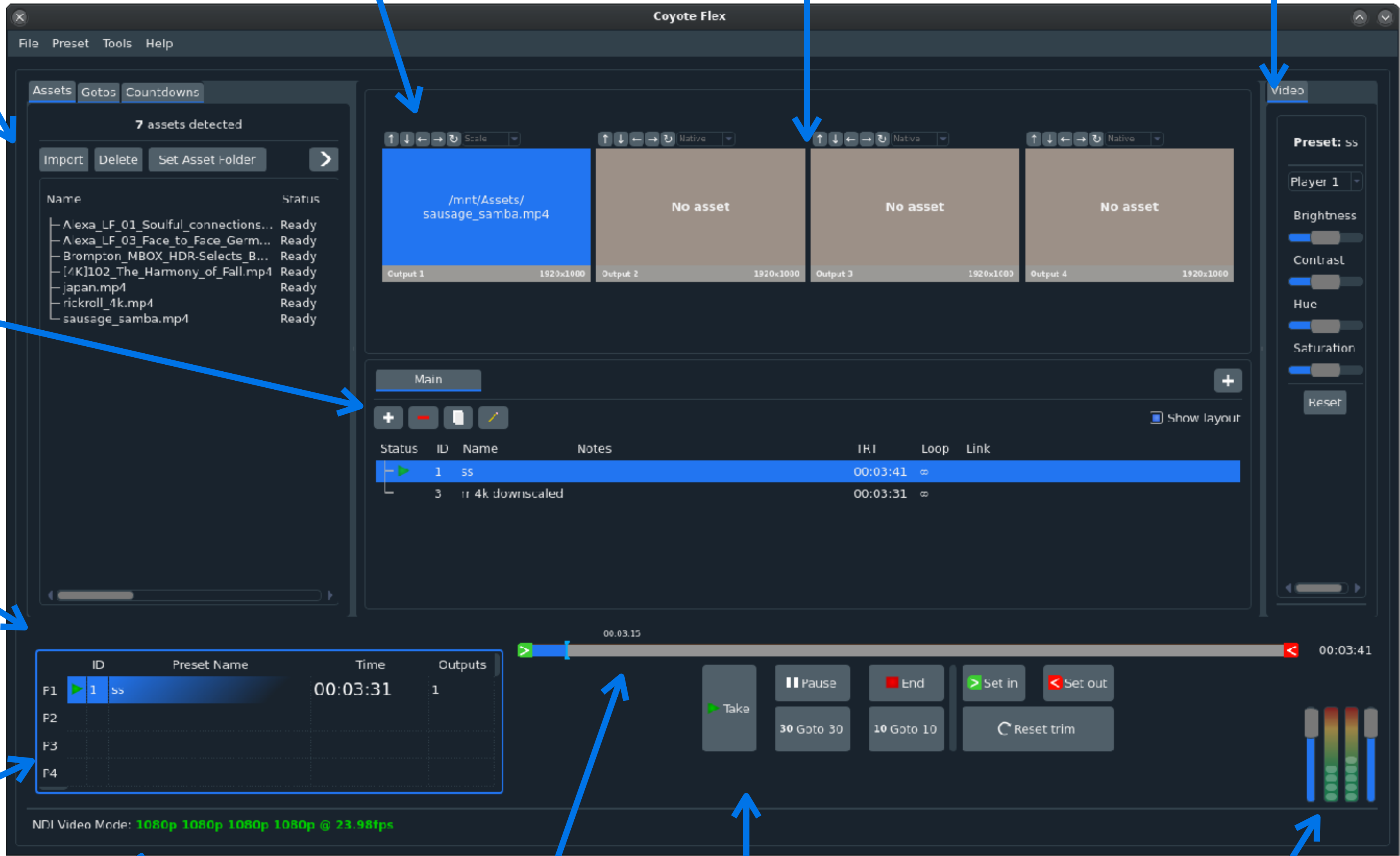
Player(s) status & countdown

Current video mode and connection status

Timeline & scrub. Green = In-point Red = Out-point

Transport, Jump to and trim set

Main volume channel 1-2 VU meters



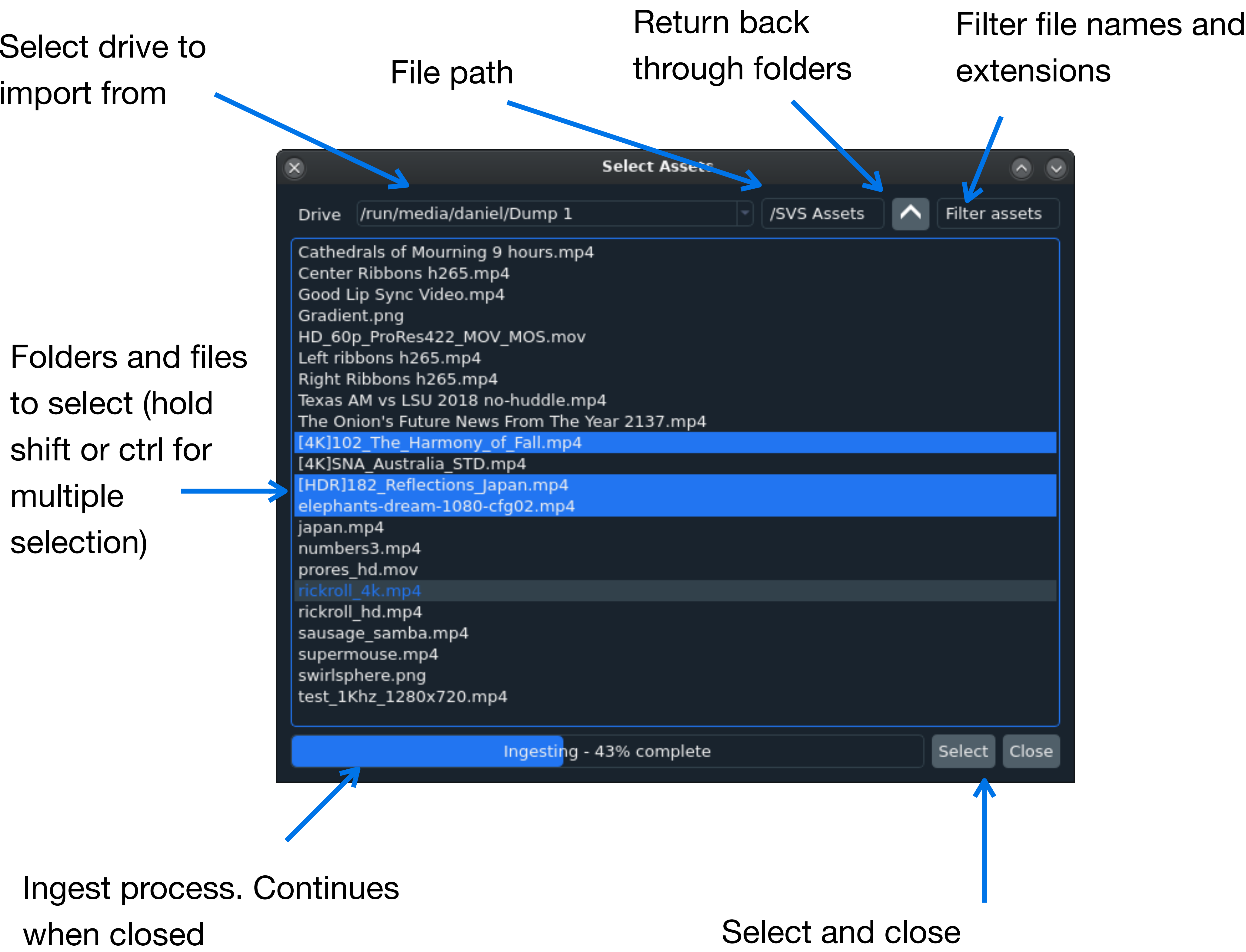
* There is a native **Stream Deck app** built into the Coyote UI. Close any apps using Stream Deck, plug in either a 15 or 32 button SD. Open Coyote Control for auto-populate. Preferences for the SD are under tools.



Import Assets

Importing assets is done from the front or rear USB ports on the server or the front SSD slot.

Added to the v3.0 release is the ability to access folders from the network. Please make sure your folders are shared using SMB protocol. All files are then imported to the main NVME SSD hard drives. The Coyote servers use Raid 0 across 2 - M.2 SSDs for high-performance playback.

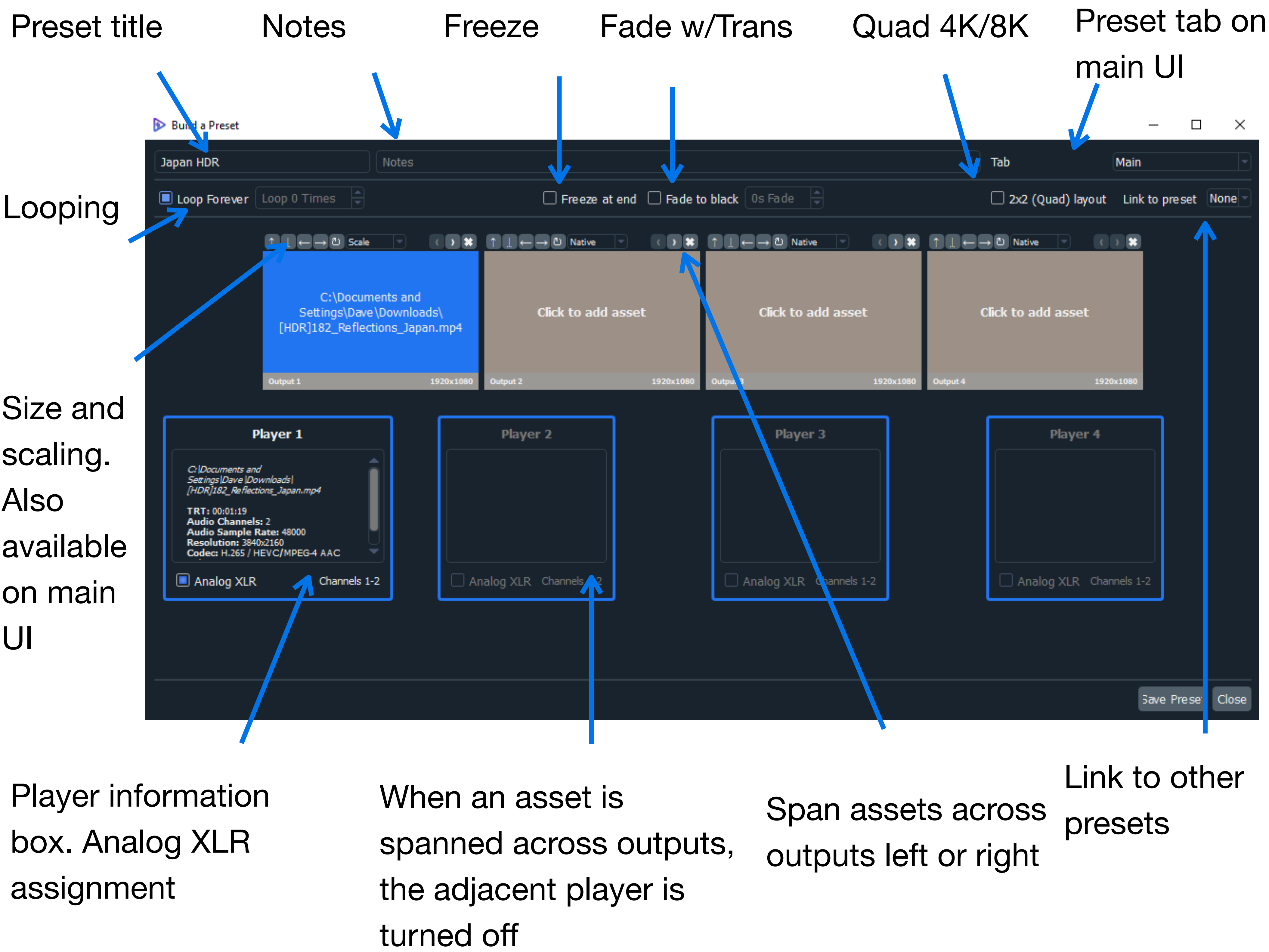


Preset Design

The Coyote is **not** timeline-based therefore giving you greater control over live changes for playback. The preset panel is where you design your asset playback and assign them to the 4 SDI outputs. There are 4 players used to playback files across all 4 outputs. (Single output for Lite or using onboard GPU)

The design logic is this:

- Player 1** can be individual, span across outputs 1-4. Player 1 is also for quad 8k/4k mode.
- Player 2** can be individual, span across outputs 2-4
- Player 3** can be individual, span across outputs 3-4

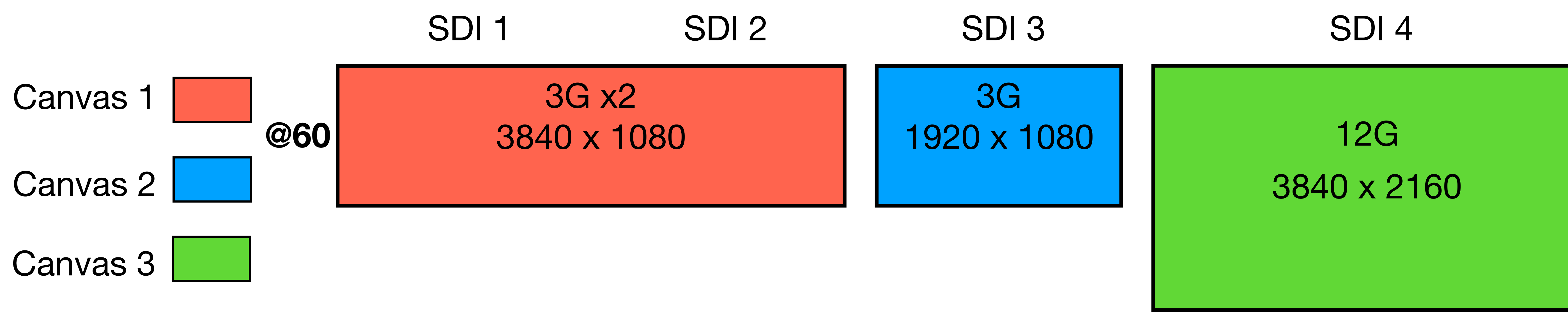




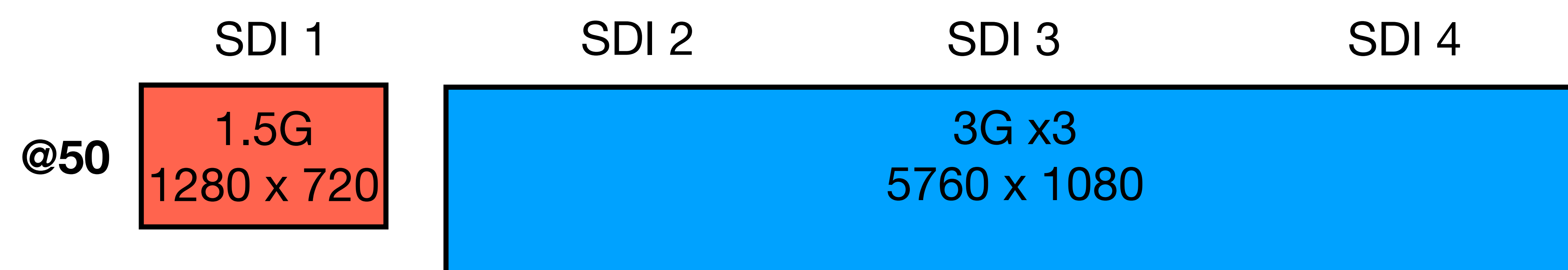
Coyote Output Architecture

The Coyote architecture is based on the SMPTE protocol. We have designed a video canvas structure that allows for versatile output options including 16:9, 32:9, 48:9, and 64:9 aspect ratios. Depending on how you set up your outputs, you can use multiple canvases running at the same time. For **frame-accurate output, design content files to playback on the same canvas**. Multiple canvases are in sync but not frame accurate in this version. (Future version will have synced canvases) A single canvas includes outputs with the same resolution and adjacent to each other. All Outputs need to be the same refresh rate system-wide.

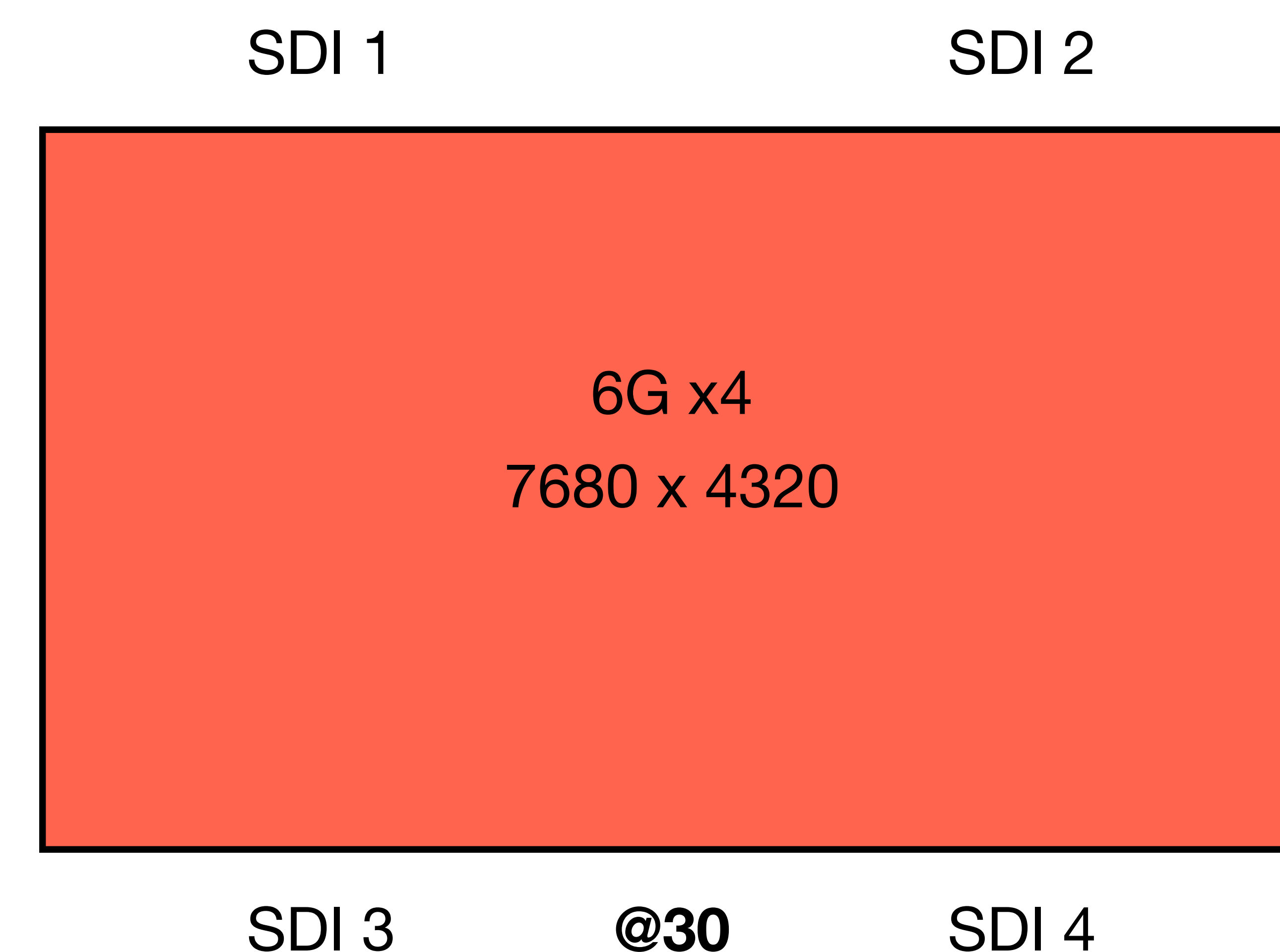
Example 1 (Using an AJA Kona 5)



Example 2



Example 3



Best Practices for Video Playback

When designing playback files for display you should keep a few helpful tips in mind. The Coyote Server is designed to playback video codecs that are **non-image sequences**. The Coyote supports the following file formats in order of quality and usability. We will be adding more codecs as the development continues and we are always optimizing performance.

In this early stage of v3.0, we recommend large **8K and multiple 4K files be rendered @30 frames**

1. **HEVC - H.265**. Best for multiple playback, 8K (@30), 4K, 2K, Ultra wide-screen ratios such as 32:9, 48:9, 64:9. HDR Format, HDR10 both HLG, and PQ transfers
2. **Apple ProRes Proxy, Lite, Standard, and HQ. 4:2:2** (4:4:4 can play but is not officially supported) Can be used for a single output. We caution decoding more than 2 files, live at one time. Use ProRes for backgrounds and single 4K playback. HDR Format, HDR10 both HLG and PQ transfers
3. **VP-9** Used primarily for single high-resolution. HDR Format, HDR10 both HLG and PQ transfers
4. **VP-8** Used primarily for single high-resolution content.
5. **AVC - H.264**. Used for single output low-quality, informational playback.
6. **WMV** Used in case of emergency only.