

Kaleidescape Co-Star for Crestron

Crestron Configuration Notes

The Co-Star solution allows a Strato movie player to present a unified onscreen library that includes all of a Kaleidescape customer's movies – from DVD discs to downloaded 4K HDR movies – in one seamless interface. Co-Star allows the movies on both a Strato system and a Premiere system to be played from a single user interface.

With the Co-Star for Crestron feature, Strato players are paired with Kaleidescape M-Class players using Crestron DM-NVX encoder/decoder devices, which can switch between video sources and transport 2160p60 4:4:4 video over standard Gigabit Ethernet. NVX devices are controlled using a Crestron control processor, and the Kaleidescape module for these processors has been extended to allow Strato to direct the NVX devices to switch between players, enabling playback of movies from both systems.

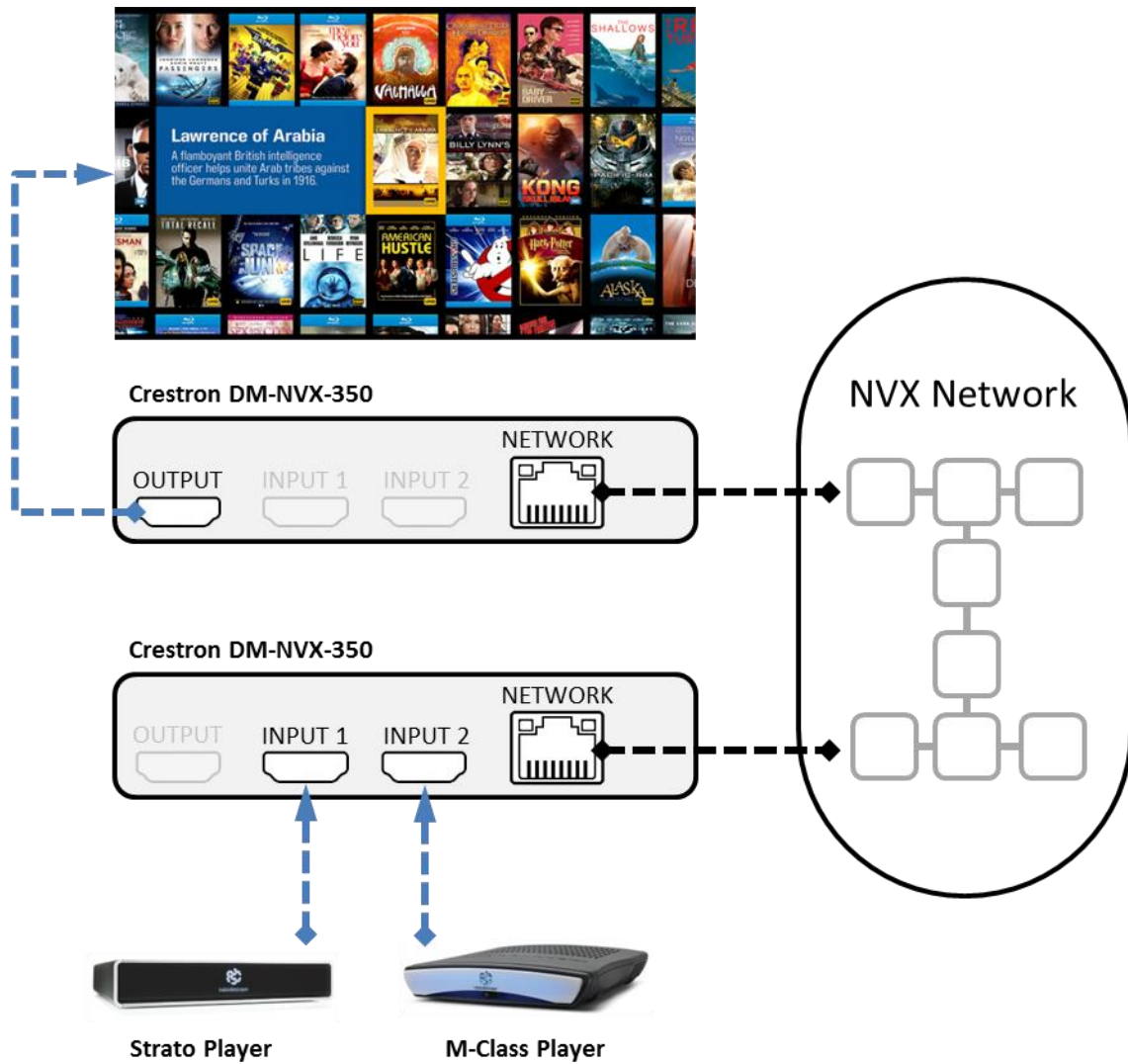
The Kaleidescape module for Crestron processors implements two signals, one which is high when Strato is active (Strato_Active), and one which is high when the Premiere player is active (Premiere_Active). With Co-Star, Strato presents the user interface and handles playback of all movies downloaded to the Strato system, including 4K content. When the customer plays a movie that is stored on the Premiere system, the module uses the Premiere signal to indicate that the control processor must switch to the paired M-Class player, and the module uses the Strato signal when the movie playback is stopped, to indicate that the processor must switch back to the Strato player. During playback on the Premiere player, Strato relays control commands to the paired player, so as far as the control system is concerned playback appears as if the movie were playing on the Strato.

The Kaleidescape Co-Star for Crestron feature supports three NVX network configurations:

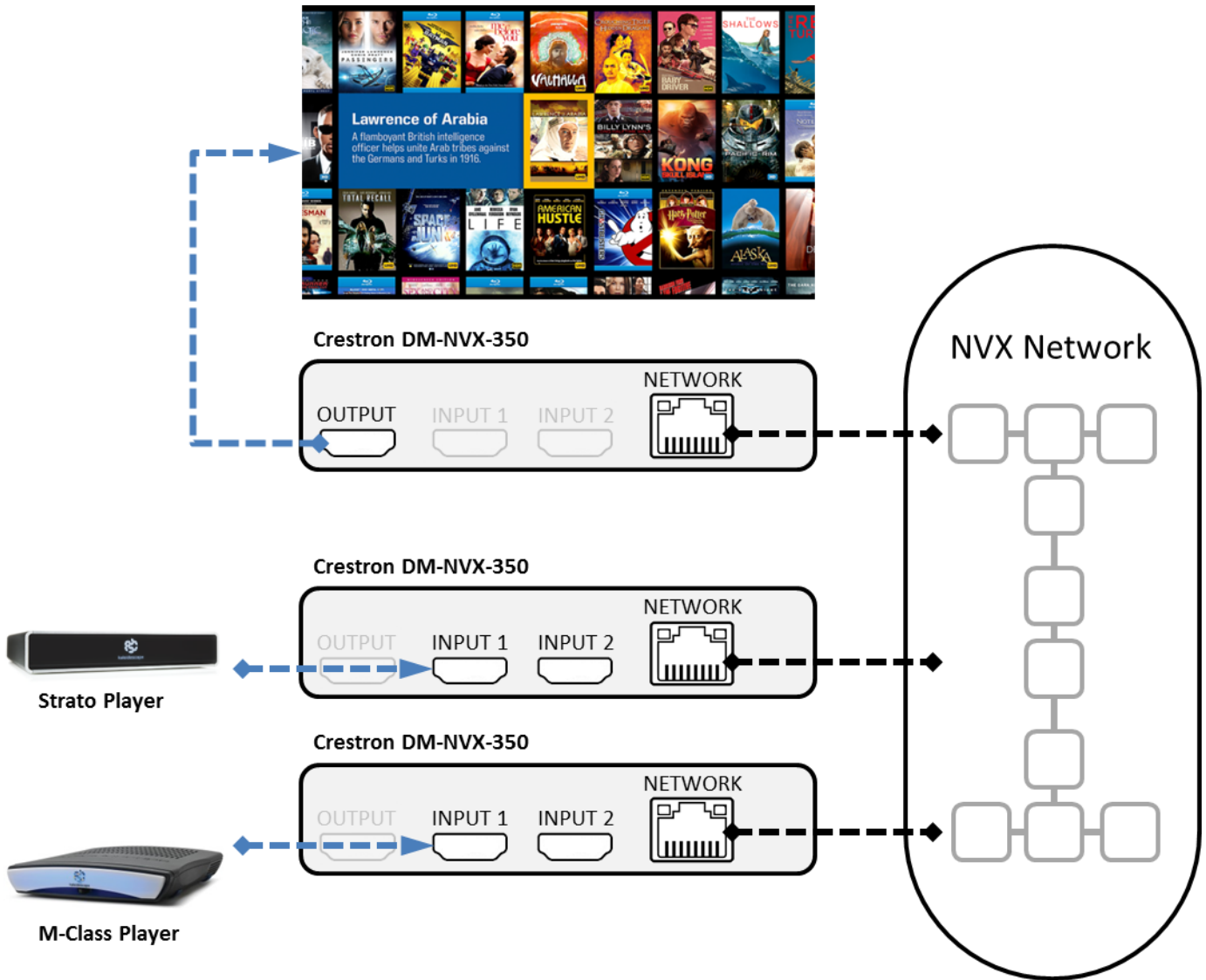
- Scenario 1: The Strato and M-Class players are connected to HDMI inputs 1 and 2 of the same NVX encoder.
- Scenario 2: The Strato and M-Class players are connected to HDMI inputs on different NVX encoders on the same NVX network.
- Scenario 3: The Strato is connected to an HDMI input on an NVX encoder, and the M-Class player is connected to an HDMI input on an NVX decoder.

The diagrams on the following pages describe each of these scenarios.

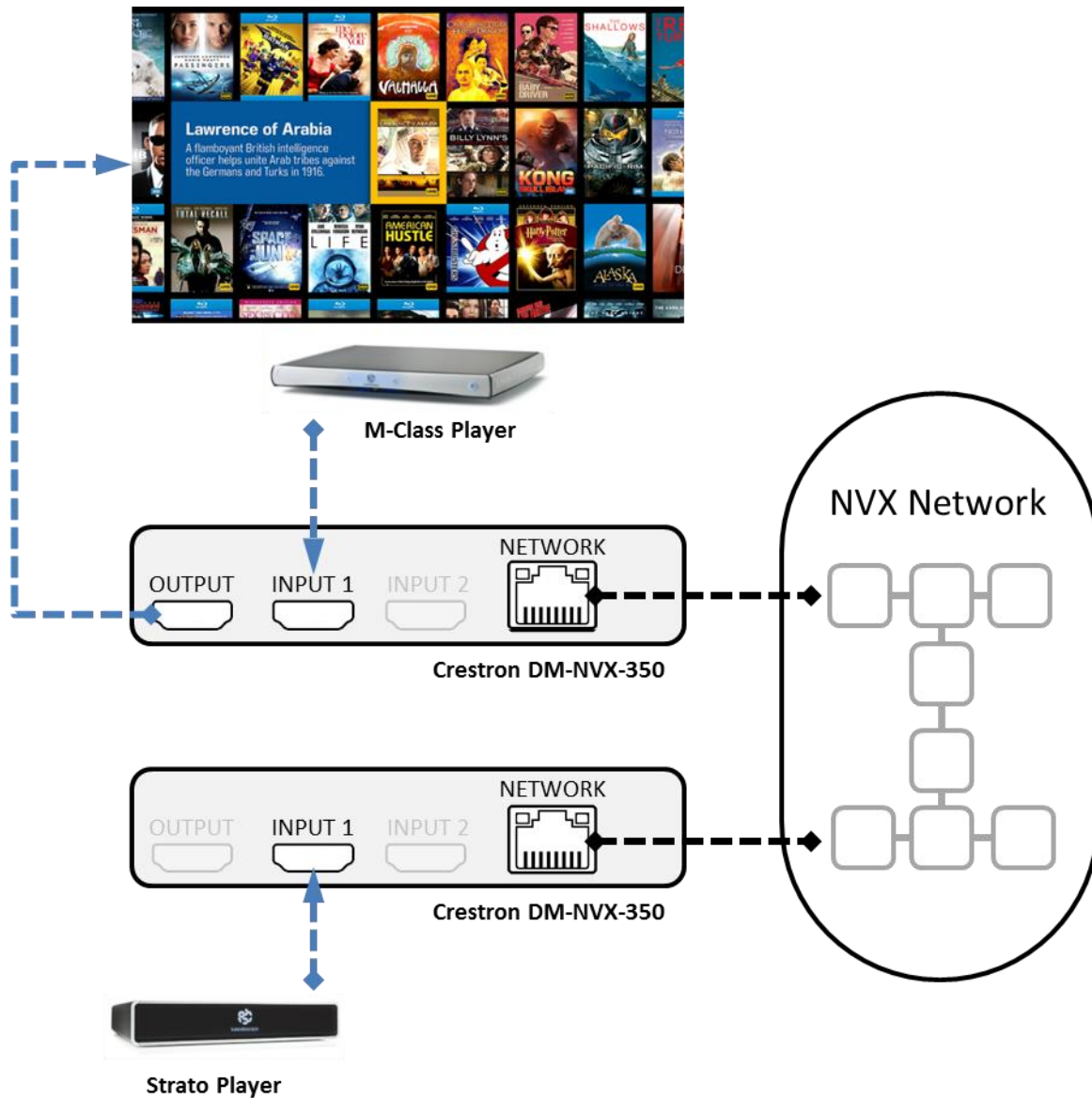
Scenario 1: Strato and M-Class players on same NVX encoder



Scenario 2: Strato and M-Class players on different NVX encoders



Scenario 3: Strato player on NVX encoder and M-Class player on NVX decoder



Setting up Co-Star support on Crestron's DM-NVX

Basic Setup

Parameters

- Using Co-Star: Enables and disables Co-Star support.
- Input Matrix Strato: The HDMI input on the NVX encoder that the Strato is connected to.
- Input Matrix Premiere: The HDMI input on the NVX encoder that the M-Class player is connected to.

Signals

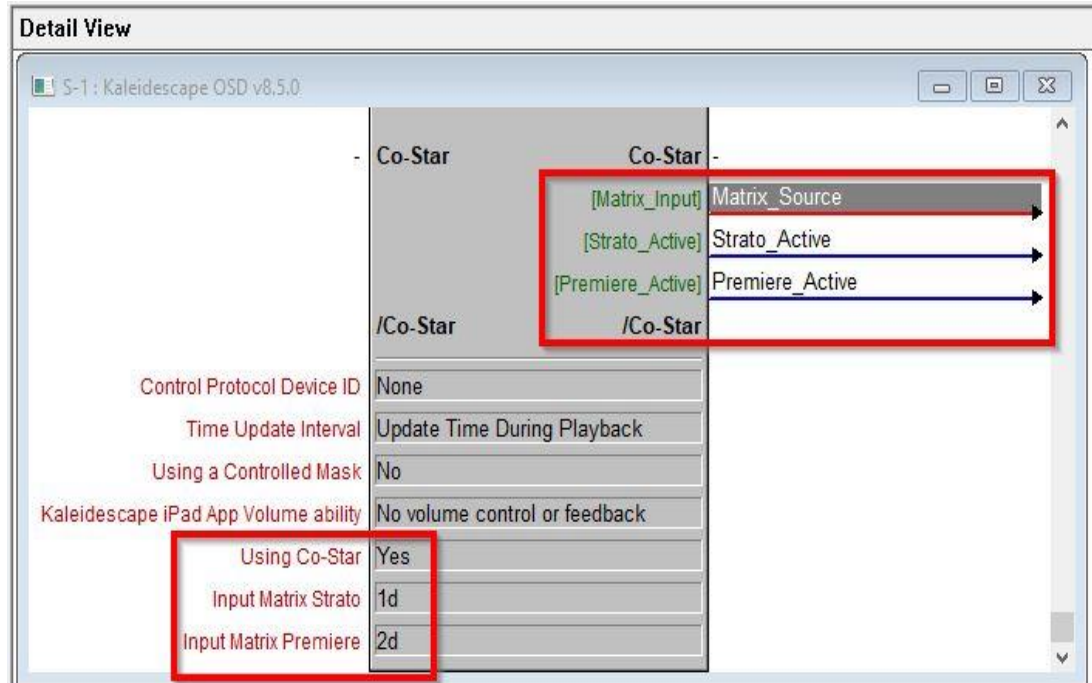
- Matrix_Input: Contains the value entered in Input Matrix Strato/Premiere based on which player is active. When **Strato_Active** is high **Matrix_Input** will report the value of the **Input Matrix Strato** parameter and when **Premiere_Active** is high **Matrix_Input** will report the value of the **Input Matrix Premiere** parameter.
- Strato_Active: High when the Strato is active. Low when the Premiere player is active.
- Premiere_Active: High when the M-Class player is active. Low when the Strato is active.

NOTE: For proper operation of the Kaleidescape OSD module, automatic input switching should be turned off on the NVX encoders and decoders.

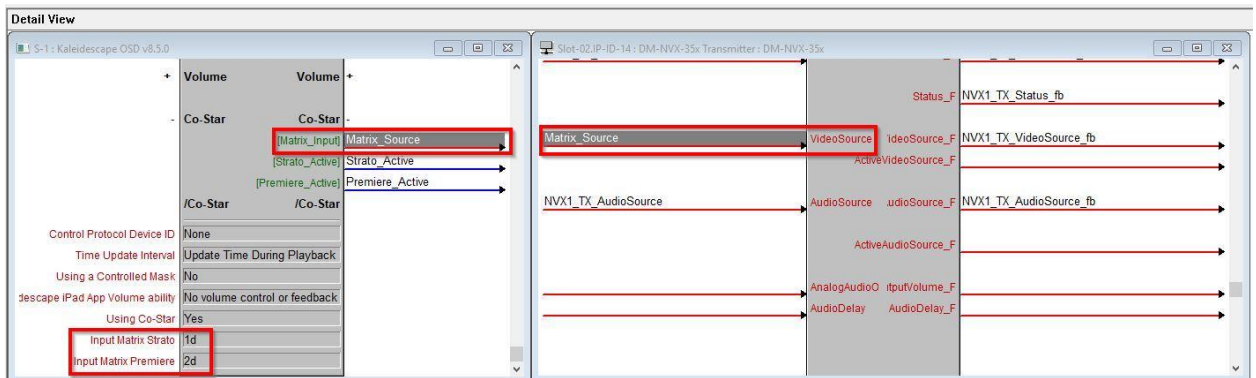
Scenario 1: Strato and M-Class players on same NVX encoder

1. Enable Co-Star support in the Kaleidescape OSD Module:
 - a. Set the **Using Co-Star** parameter field to "Yes".
 - b. Set the **Input Matrix Strato** parameter field to "1d".
 - c. Set the **Input Matrix Premiere** parameter field to "2d".

- d. Name the **Matrix_Input**, **Strato_Active**, and **Premiere_Active** signals appropriately.

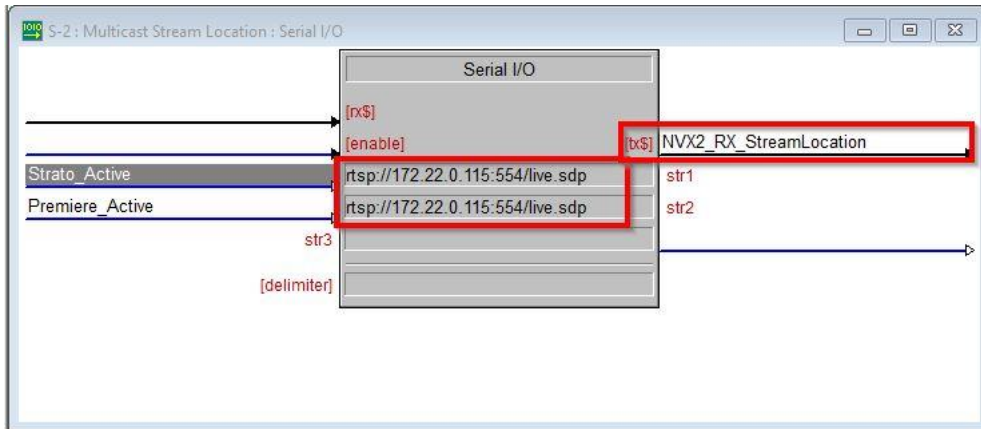


2. Set the active input on the NVX encoder by connecting the **Matrix_Input** output signal to the **VideoSource** input signal of the NVX encoder.



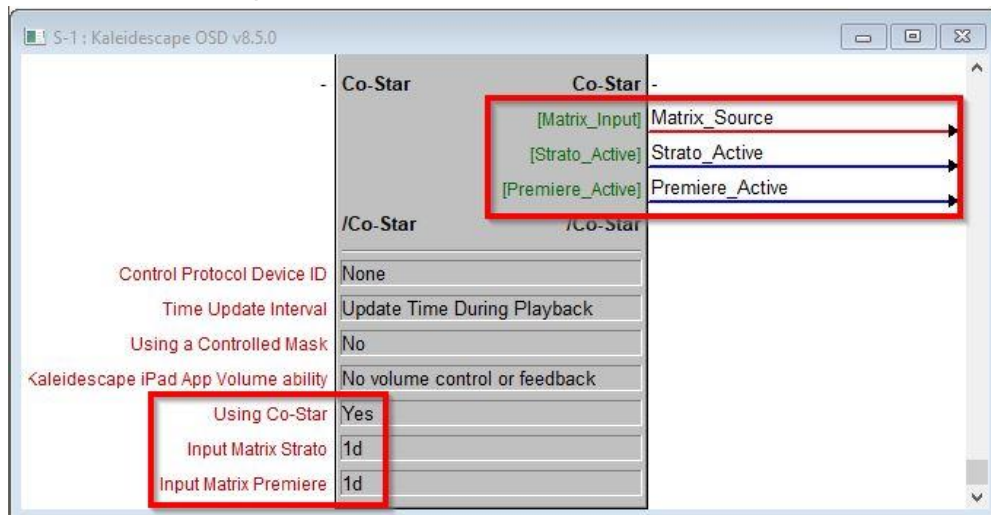
3. Connect the **Strato_Active** and **Premiere_Active** output signals to a Serial I/O logic symbol.
 4. Specify the full multicast address of the NVX encoder's stream in the parameters. Use the same multicast address for both inputs.

- Connect the **[tx\$]** output signal of the Serial I/O logic symbol to the StreamLocation input on the NVX decoder.



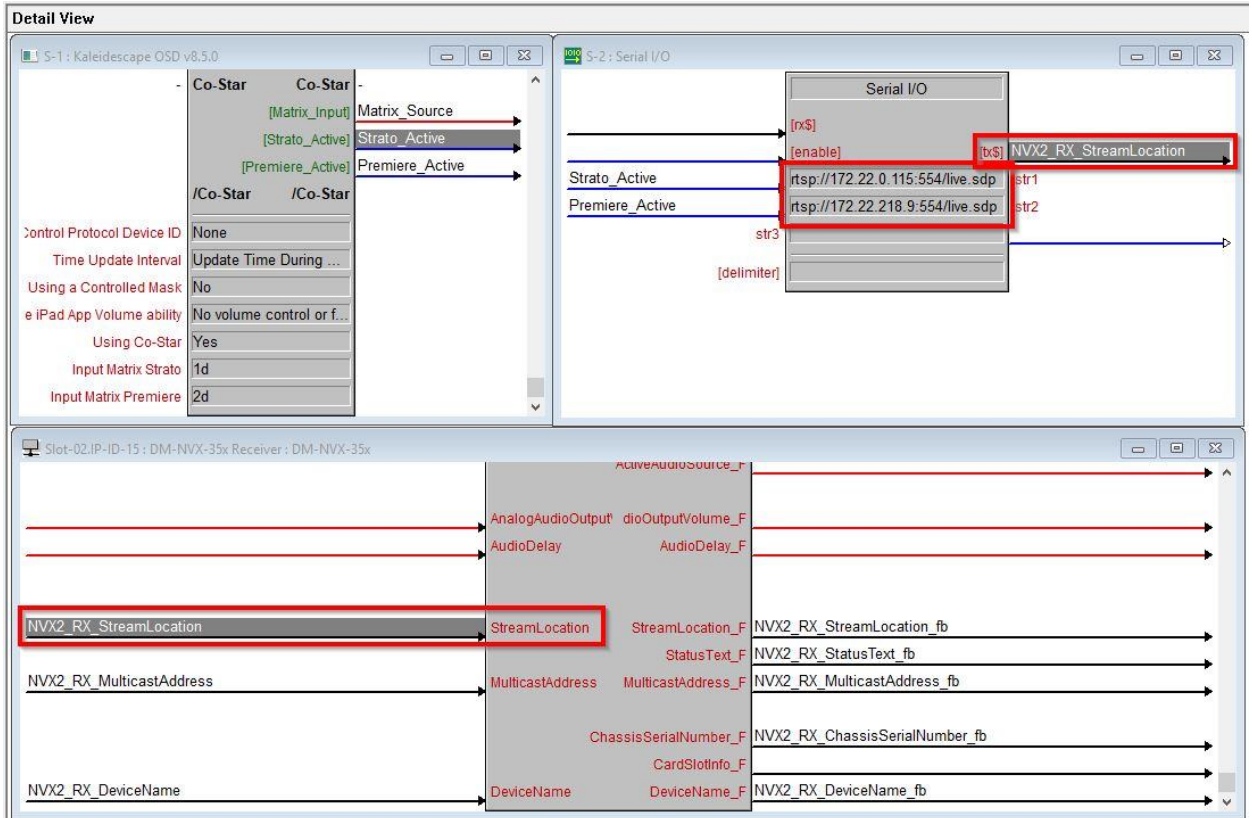
Scenario 2: Strato and M-Class players on different NVX encoders

- Enable Co-Star support in the Kaleidescape OSD Module:
 - Set the **Using Co-Star** parameter field to "Yes".
 - Set the **Input Matrix Strato** parameter field to "1d".
 - Set the **Input Matrix Premiere** parameter field to "1d".
 - Name the **Matrix_Input**, **Strato_Active**, and **Premiere_Active** signals appropriately.



- Set the active input on the NVX encoders by connecting the **Matrix_Input** output signal to the **VideoSource** input signal on each of the NVX encoders.
- Connect the **Strato_Active** and **Premiere_Active** output signals to a Serial I/O logic symbol.
- Specify the full multicast address for the Strato's NVX encoder's stream in the **Strato_Active** parameter.
- Specify the full multicast address for the M-Class player's NVX encoder's stream in the **Premiere_Active** parameter.

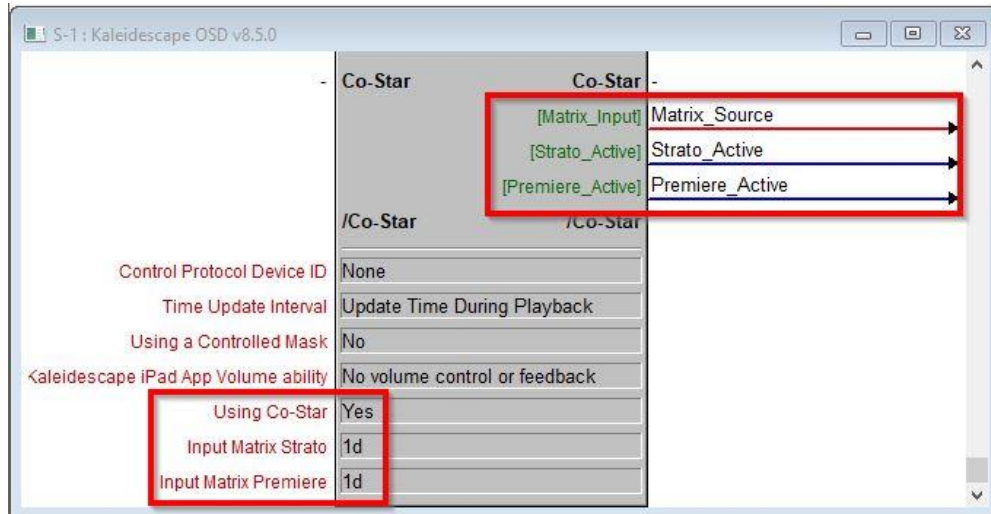
- Connect the **[tx\$]** output signal of the Serial I/O logic symbol to the StreamLocation input on the NVX decoder.



Scenario 3: Strato player on NVX encoder and M-Class player on NVX decoder

- Enable Co-Star support in the Kaleidescape OSD Module:
 - Set the **Using Co-Star** parameter field to "Yes".
 - Set the **Input Matrix Strato** parameter field to "1d".
 - Set the **Input Matrix Premiere** parameter field to "1d".

- d. Name the **Matrix_Input**, **Strato_Active**, and **Premiere_Active** signals appropriately.



2. Set the active input on the NVX encoders by connecting the **Matrix_Input** output signal to the **VideoSource** input signal on each of the NVX encoders.
3. Connect the **Strato_Active** and **Premiere_Active** output signals to a Serial I/O logic symbol.
4. Specify the full multicast address of the NVX encoder's stream in the parameters. Use the same multicast address for both inputs.
5. Connect the **[tx\$]** output signal of the Serial I/O logic symbol to the StreamLocation input on the NVX decoder.
6. Connect the **Strato_Active** and **Premiere_Active** output signals to an Analog Initialize symbol with two or more inputs.
7. Set up the Analog Initialize parameters as follows:
 - a. Strato_Active: "3d"
 - b. Premiere_Active: "1d"
8. Connect the output signal of the Analog Initialize symbol to the **VideoSource** input signal on the NVX decoder. When Strato_Active is high, the decoder's video source will be the

multicast and when Premiere_Active is high the decoder's video source will be HDMI 1.

The image displays three windows from the Kaleidescape OSD v8.5.0 interface:

- Top Left Window (S-1):** Shows control panels for 'Volume', 'Co-Star', and 'Premiere'. It includes a 'Command_To_Player\$' field and various control options like 'Control Protocol Device ID' (None), 'Time Update Interval', 'Using a Controlled Mask' (No), 'Using Co-Star' (Yes), and 'Input Matrix' settings (Strato: 1d, Premiere: 1d).
- Top Right Window (S-3):** Titled 'NVX Receiver Input Chooser: Analog Initialize', it shows a table of active signals and their corresponding video sources. Red boxes highlight 'Strato_Active' (3d), 'Premiere_Active' (1d), and 'NVX2_RX_VideoSource'.

Signal	Value	Video Source
Strato_Active	3d	NVX2_RX_VideoSource
Premiere_Active	1d	value2
Non-K_Player1_Active	3d	value3
Non-K_Player2_Active	2d	value4

Bottom Window (Slot-02.IP-ID-15): A signal flow diagram for the 'DM-NVX-35x Receiver'. It shows the following connections:

- NVX2_RX_DeviceMode → DeviceMode → DeviceMode_F → NVX2_RX_DeviceMode_fb
- Status → Status_F → NVX2_RX_Status_fb
- NVX2_RX_VideoSource → VideoSource → VideoSource_F → NVX2_RX_VideoSource_fb
- ActiveVideoSource → ActiveVideoSource_F → NVX2_RX_ActiveVideoSource_fb
- AudioSource → AudioSource_F
- ActiveAudioSource → ActiveAudioSource_F
- AnalogAudioOutput → AnalogAudioOutput_F



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