Mira Connect Integration

AVPro Edge Video Switchers

Video Switcher

AVPro Edge Video Switchers, including the MXNet video over IP products, can be controlled with Mira Connect™, Aveo Systems' smart control appliance. This document includes the information required to integrate AVPro Edge Video Switchers with Mira Connect.

Control Interface

AVPro Edge Video Switchers are controlled over Ethernet (port 23) or over RS-232 (using a Global Cache IP2SL on port 4999). Mira Connect must have a network route to the device to control it.

Regardless of which control interface option is used, set a static IP address on the equipment or Global Cache IP2SL, or use a 'reserved' lease on a DHCP server to ensure the IP address of the equipment does not change over time.

To view the IP address of an AVPro Edge AC-MX series switcher, press the Input 3 and Input 4 buttons on the front panel together for 3 seconds. The AVPro MXNet system shows the IP address on the front panel LCD.

Functionality Supported

Mira Connect supports video switching audio and video together (audio follows video) when changing video inputs to outputs.

Models Supported

AC-MX family of products and AC-MXNET-CBOX with transmitters and receivers for video over IP.

Software Versions

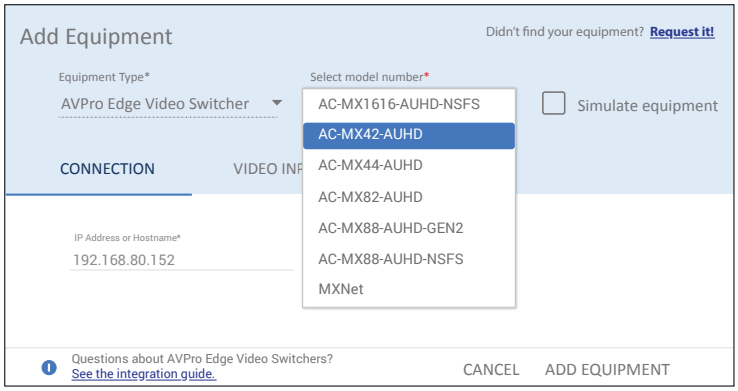
Tested with AVPro Edge AC-MX88-AUHD-NSFS version 1.10 and AC-MXNET-CBOX version 1.5

Integration Steps

To integrate the AVPro Edge Video Switchers with Mira Connect, follow these steps:

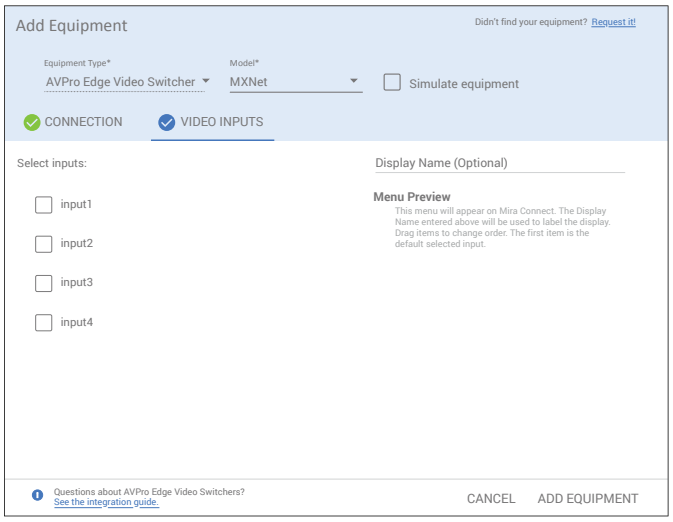
Step 1

Add an AVPro Edge Video Switcher to the room in Mira Portal (https://mira.aveosystems.com), select a model number, and enter the IP address of the device.

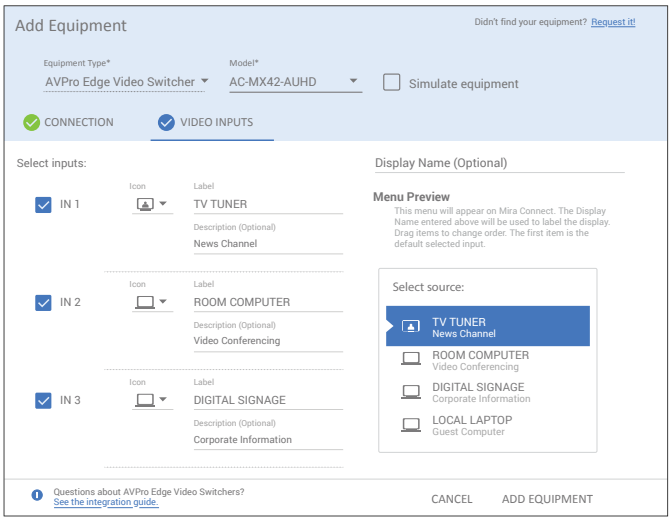


If you are configuring the control system before you have an AVPro Edge video switcher, select 'Simulate equipment' to continue. For more information on creating rooms and adding equipment in Mira Portal, see our training videos.

When using MXNet products, add the product and click 'Add Equipment' so Mira Connect can discover the video transmitters (inputs) and receivers (outputs). After about 5 seconds after the firmware version appears, Mira Connect will discover the transmitters and receivers connected to the AC-MXNET-CBOX. Edit the device by clicking the ⋮ icon to the right on the device name. If simulating MXNet products, the simulator creates a 4 input x 10 output video switcher matrix automatically.



MXNet system showing 4 discovered transmitters (inputs) labeled Input1, Input2, Input3, and Input4.



AC-MX42-AUHD system showing four inputs.

Step 2

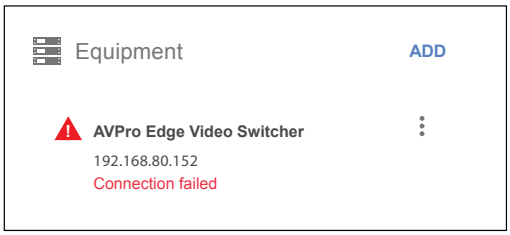
Using the Video Inputs tab, enable the desired video inputs by checking the enable box for each desired input to be used.

Next, select an icon, and enter a label and a description. The labels and descriptions will appear on the display menu within Mira Connect for users to see.

If, on the Video Inputs tab, you see the text *Connect to this equipment to detect available inputs*, then click 'Add Equipment' to add the MXNet device and allow Mira Connect to discover the inputs and outputs. Edit the equipment again to enable the desired inputs and continue.

For MXNet systems, the video input names that are discovered are the names entered using the MXNet configuration software by browsing into the AC-MXNET-CBOX. By default the input names correspond to the MAC addresses of the transmitters. When simulating the MXNet product, the transmitter names are called Input1, Input2, ..., and Input4 as shown above.

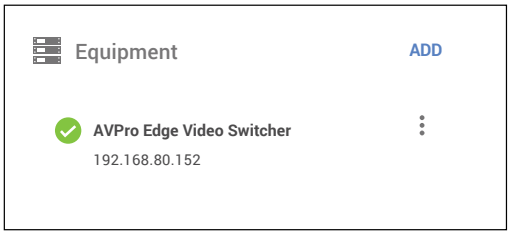
In this example, we've enabled video inputs IN 1, IN 2, IN 3, and IN4 and added TV Tuner, Room Computer, Digital Signage, and Local Laptop inputs. Scroll, as necessary to configure all the inputs.



Step 3

Click 'Add Equipment' or 'Update Equipment' to add, or update, the device.

If Mira Connect cannot connect to the AVPro Edge Video Switcher on the network, a red triangle will appear as shown in the figure on the right with a Connection failed message.



To resolve a connection issue, edit the device (by clicking the ⋮ icon to the right on the device name) and confirm the IP address and the video switcher model. Ensure that the Mira Connect device is on the same network or has a network route to the equipment to be controlled.

Click 'Update Equipment' when done and Mira Connect will continue to connect to the device with the new settings.

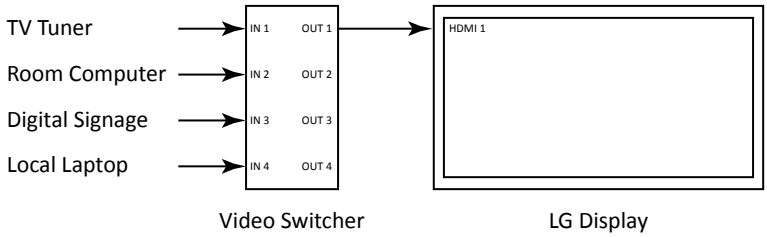
Mira Portal will show the equipment status as a green circle with a check mark once the AVPro Edge Video Switcher has been confirmed at the specified IP address.

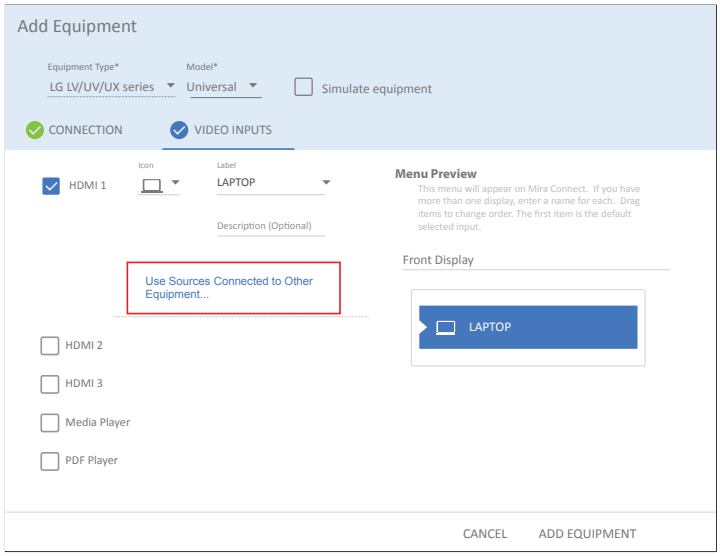
Step 4

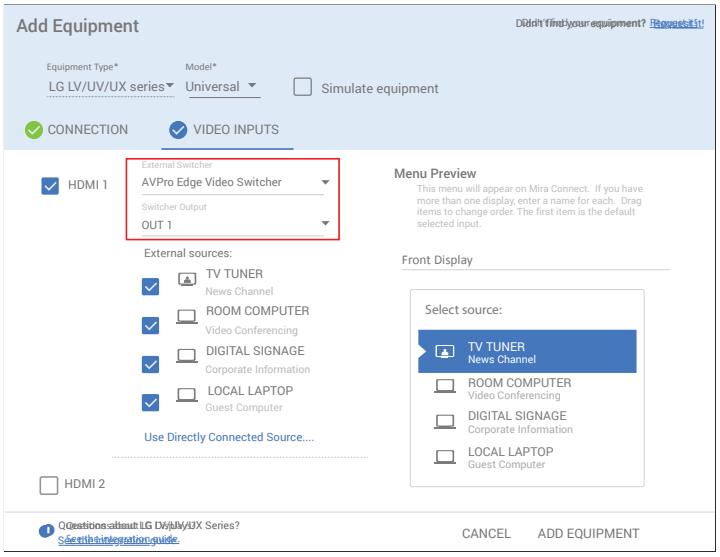
When connecting an output from a video switcher to a display or other device, add the display to your room (in this case, an LG LV/UV/UX series display), and edit the display's video inputs.

For the desired input on the display, select 'Use Sources Connected to Other Equipment', as shown in the following figures.

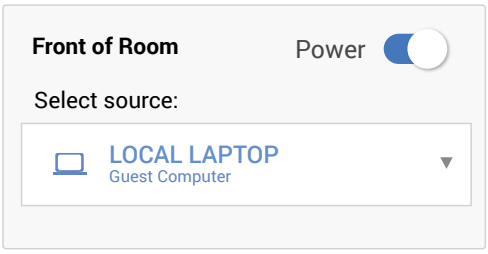
Next, select the video switcher and the desired output (OUT 1 in this example) from the video switcher that is connected to that input on the display as shown in the following figures.







For MXNet products, the switcher output (receiver) names are the discovered names that were configured using the MXNet software. By default the names correspond to the MAC addresses of the receivers. In the simulated system, the outputs are labeled output1, output2, ..., output10.



The display menu on Mira Connect will show the list of inputs from the video switcher automatically. The order of the menu items may be changed by clicking and dragging the menu items in the Menu Preview.

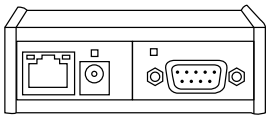
The display menu for the LG display will appear on Mira Connect as in the figure on the right. Selecting an input will automatically cause the AVPro Edge video switcher to switch inputs to the selected output and also ensure the display is powered on and set to HDMI 1 (in this example) since input HDMI 1 on the LG display was selected.

RS-232 Interface

When using the Global Cache IP2SL interface for serial control, see our Global Cache integration guide. Ensure the baud rate on the Global Cache IP2SL matches the baud rate configured on the switcher. Default RS-232 settings for AVPro Edge Video Switchers are 57,600 baud, no parity, 8 data bits, one stop bit, and no flow control. Use a

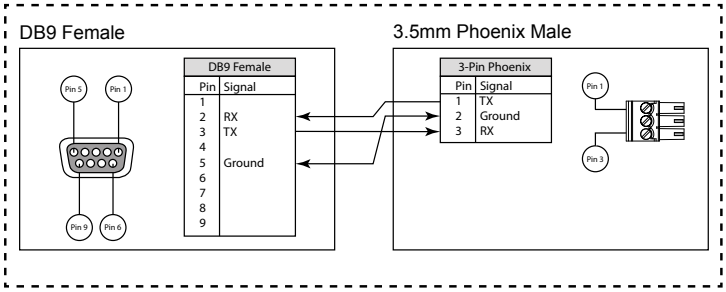
straight-through mini-phoenix to DB-9F RS-232 cable as shown later in this document.

Global Cache IP2SL

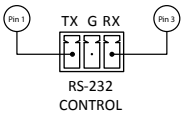


RS-232 Connector is DB9 Male

Straight-Through RS-232 Control Cable DB9F - 3.5mm Phoenix



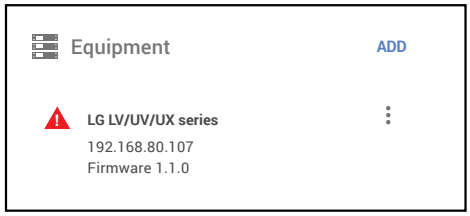
Equipment to be Controlled



RS-232 connector is Phoenix socket

Changing the Number of Outputs / Receivers

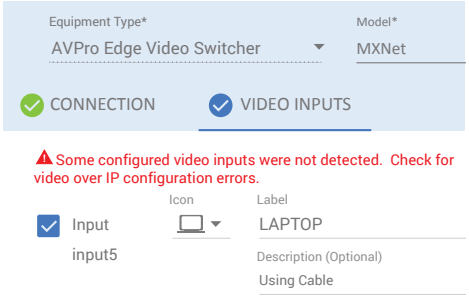
After a system has been set up, if the number of receivers or transmitters change due to adding or removing equipment from the system, Mira Connect will provide a visual warning when inputs or outputs that were once used are no longer available.



Outputs that were once mapped to a display, but are no longer available, will be highlighted by a warning icon, ⚠, next to the display as shown in the figure to the right. To resolve this issue, edit the display and select a valid output channel for *Switcher Output* (as described in the figures above) as the value will be empty if the previous value (OUT1 in this example) no longer exists. Select a valid output, click Update Equipment, and the warning will be resolved.

Changing the Number of Inputs / Transmitters

Inputs that were once used on the system, but are no longer available, will result in warning messages on the Video Source Menu in Mira Portal with a message that the inputs are no longer detected as shown on the MXNet Video Inputs tab.



Any invalid inputs will be grayed out on display's source selection menus. To resolve this issue, uncheck the no longer recognized input from the Video Inputs tab. Once the input has been unchedked, the warning be resolved and the input removed from the source selection menus.

Troubleshooting

- If Mira Connect cannot connect to the product, confirm the IP address of the switcher is correct and confirm Mira Connect's IP address is on the same subnet as the device.
- On an MXNet system, if you add or remove transmitters or receivers, or rename transmitters and receivers, review the Changing the Number of Outputs or Inputs sections above.

For more information please contact our Sales Department at sales@aveosystems.com.

About Aveo Systems

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