

Samsung Pro TVs

Displays



Samsung Pro TVs can be controlled with Mira Connect™, Aveo Systems’ smart control appliance. Mira Connect communicates and controls Samsung Pro TV over an https network connection.

Samsung Pro TVs require a *one-time* setup where a person, using the TV’s infrared or RF controller, must accept the request to control the display when prompted by the display. Once accepted, the TV is ready to be controlled by Mira Connect.

Follow these steps to integrate an Samsung Pro TV with Mira Connect:

Step 1

One-time setup on the Samsung Pro TV

Using the TV’s IR or RF controller, enable the *IP Remote* feature on the Samsung display as follows and as shown in the following figures:

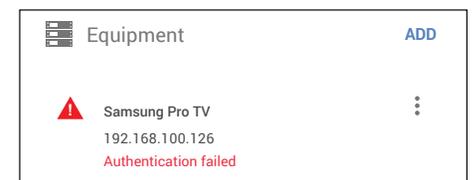
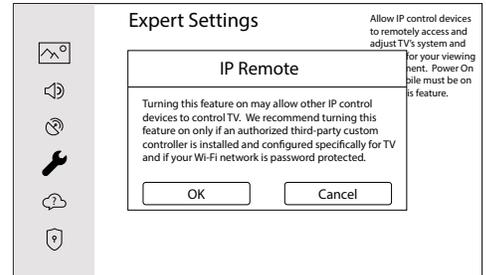
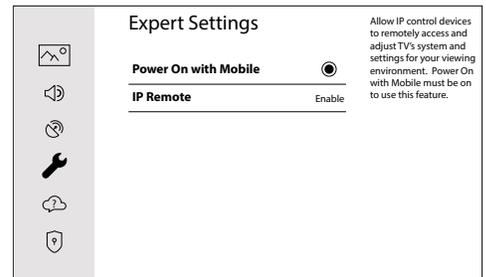
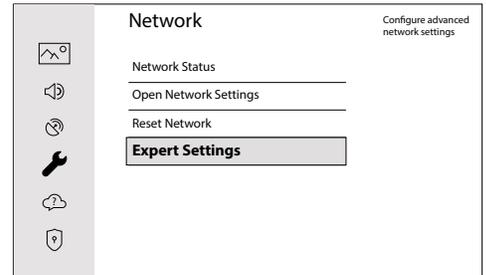
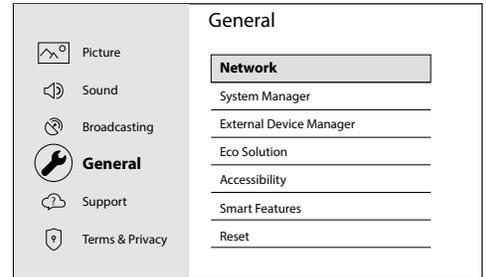
- Navigate to the TV’s Settings icon, , and select **General** and then select **Network**.
- From the network settings menu, select **Expert Settings**
- From the Expert Settings menu, enable **Power On with Mobile**. This step is a requirement for allowing remote control.
- From the Expert Settings menu, enable **IP Remote**. When prompted to confirm the IP Remote feature, choose OK.

The Samsung Pro TV is now ready to be added to the room in Mira Portal.

Step 2

Add the Samsung Pro TV to the room

Add the Samsung Pro TV to the room in Mira Portal (<https://mira.aveosystems.com>), select the desired Samsung series, enter the IP address and MAC address of the Samsung Pro TV and press ADD EQUIPMENT.



If unsure which series to choose, select Universal and enter the port number (defaults to 1515). The BET-H series selection uses port 1516.

The MAC address is *required* because these models require Wake-on-LAN to power on the display after it has been powered off.

Once the Add Equipment has been pressed, Mira Connect will try to connect to the display over the network, and upon successful network connection to the display will return *Authentication Failed* as Samsung Pro TVs require an authentication token for control.

Step 3

Request Authentication from the Samsung Pro TV

Edit the display in Mira Portal by clicking the edit menu, , to the right of the display and navigate to the connection tab.

 **Important note:** This step requires a person to be near the display with the display's IR or RF remote control to approve the remote control request.

With someone in the room with the display's remote control and the display powered on, click the REQUEST AUTHENTICATION button in Mira Portal.

If authentication had previously been approved, Mira Portal will prompt to confirm that you want to request authorization again with this message:

The equipment is currently connected and authenticated. Requesting authentication will revoke the previous authentication and requires a person with physical access to the equipment to confirm the authentication request. Until the request is confirmed, the equipment will be offline.

Are you sure you want to request authentication?

The authorization request generates a message on the upper right corner of the room's display for a user to accept the room control as shown in the figure to the right. Click enter on the TV's remote to allow the connection.

Once this option is presented on the display, a user in the room has approximately 30 seconds to accept remote control access.

If the time window elapses before accepting on the display, press REQUEST AUTHORIZATION again.

 If you don't see a message appear on the display when you click REQUEST AUTHENTICATION, then edit the display and enter port 1516 if you had previously tried port 1515 (or try 1515 if you previously tried 1516). Click UPDATE EQUIPMENT, then edit the equipment and request authentication again.

Once remote control has been accepted by a user in the room, a green check mark will appear next to the Request Authentication button as shown in the following figure.

The screenshot shows the 'Add Equipment' form with 'Equipment Type*' set to 'Samsung Pro TV' and 'Model*' set to 'BETH Series'. The 'CONNECTION' and 'VIDEO INPUTS' tabs are active. The IP address is 192.168.100.126 and the MAC address is 12:34:56:78:90:12. A red warning icon and the text 'REQUEST AUTHENTICATION' are visible. Below this, there is explanatory text: 'This equipment requires an interactive authentication step to control it. First, make sure Mira Connect is paired with the room and that the equipment is powered on. Then, enter any other connection information such as the IP address and click 'Add Equipment'. Once the equipment shows an 'Authentication failed' warning, edit the equipment again, and press the 'Request Authentication' button. A person with physical access to the equipment and IR remote control must confirm the authentication request.'

This screenshot is identical to the previous one, but the 'REQUEST AUTHENTICATION' button now has a green checkmark next to it, indicating that the request has been approved.

The dialog box has a bell icon and the title 'IP Remote'. The text reads: 'Your permission is required to connect your device to this TV.' Below the text are three buttons: 'Allow' (highlighted in grey), 'Deny', and 'Close'.

The screenshot shows a list of equipment under the heading 'Equipment'. There is an 'ADD' button in the top right. The list contains one entry: 'Samsung Pro TV' with the IP address '192.168.100.126'. A green checkmark is visible to the left of the equipment name, and a vertical ellipsis menu icon is to the right.

Mira Portal will show the equipment status with a green circle if Mira Connect has received authentication and can communicate with the display.

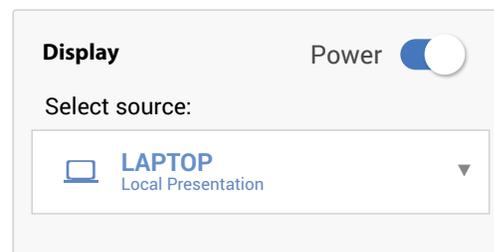
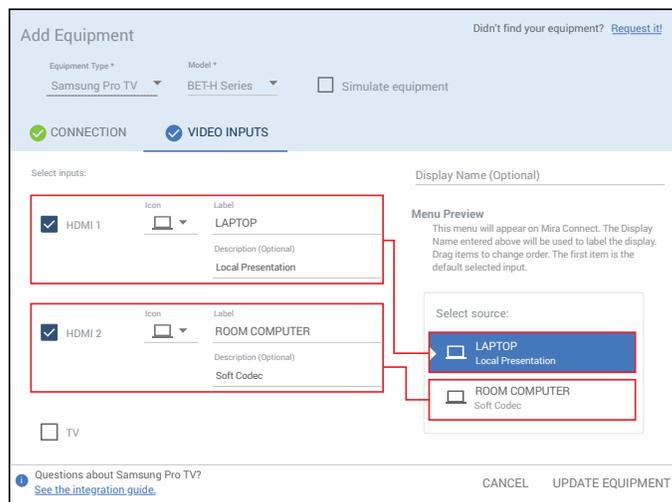
Step 4

Enable Video Inputs on the Samsung Pro TV

Specify which video inputs are used on the display by selecting Edit from the device's menu, selecting the VIDEO INPUTS tab and enabling an input, selecting an icon, and entering text labels for the desired inputs. This will create a display menu as shown in the following figures.

The display menu will be built and previewed on the VIDEO INPUTS tab within Mira Portal. An optional display name may be entered which is useful if you have multiple displays in a room.

You can re-arrange the order of the items in the display menu by clicking and dragging an input in the Menu Preview.



Step 5

Add TV Tuner Channels

If using the built-in TV input, you can add channel favorites by selecting the Channel Favorites tab.

To enter a channel favorite, click ADD FAVORITE.

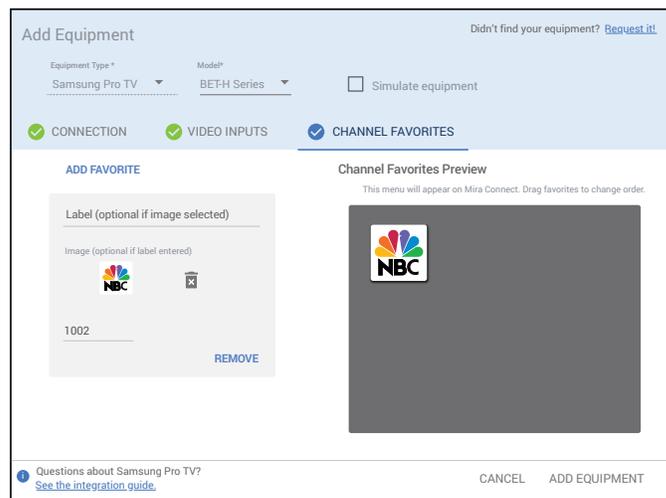
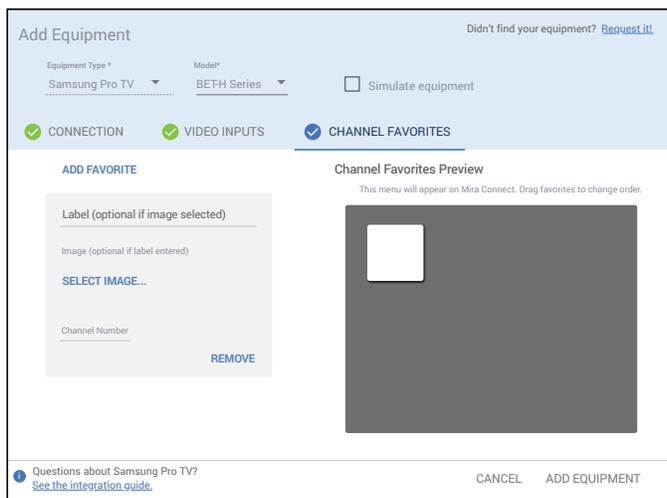
You can select an image and/or enter a label for the channel and then enter a channel number. You must provide either a label or image for a channel favorite.

To upload an image for a favorite icon, click SELECT IMAGE... and select an image from your local computer. The image will be automatically sized to fit. Image are limited to 1MB in size and can be a standard image file (png, jpg, ...) or svg vector image. To delete an uploaded image, click the trash can icon next to the image.

Once an image has been uploaded, it will appear as shown in the following figure. Click ADD FAVORITE again to add more favorite channels. Up to 24 channel favorites can be defined.

You can rearrange the favorites by clicking and dragging in the Channel Favorites Preview window.

When done adding favorites, click Add Equipment.



See the [Mira Connect Administrators Guide](#) for more information about using Mira Portal to set up Mira Connect.

Important information about the integration is summarized below.

Control Interface

Network connection using HTTPS using port 1515 or port 1516 depending on the model selected.

Set a static IP address, or use a 'reserved' lease on a DHCP server to ensure the IP address does not change over time. The MAC address is required to power the TV on after it has been powered off.

Supported Control

Supports power, video source selection, volume, mute, menu navigation, and TV tuner control.

Supported Models

Mira Connect supports the Samsung QN-series (over port 1515) and BET-H series (over port 1516) series.

For other Samsung models that use the https protocol, select the Universal model and enter the port number (defaults to 1515) and MAC address for the display.

You may need to try port 1516 also if, when using 1515, you don't see the confirmation message on the display described in Step 3.

Software Versions

Tested against the Samsung QN-series and BET-H series API.

Troubleshooting

If the display shows a Connection failed message or isn't responding to commands, check:

1. The IP address of the display matches the IP address entered in Mira Portal and that Mira Connect is on the same network or has a network route to the display.
2. If the TV is controllable until it is powered off, then ensure the MAC address of the display was correctly entered into Mira Portal.

Check '8' and 'B' values closely as they look very similar.

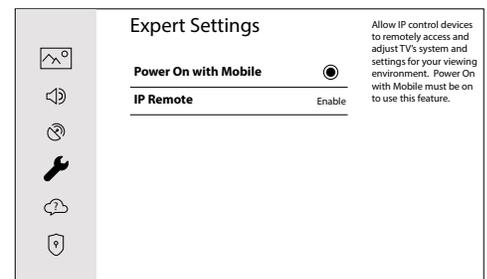
Confirm that **Power On With Mobile** has been enabled on the display's Expert Settings menu as described in Step 1 and shown in the figure.

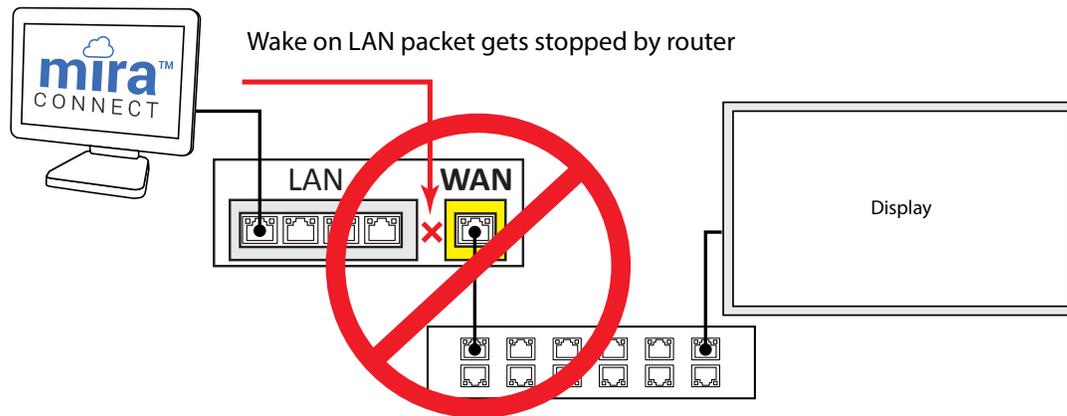
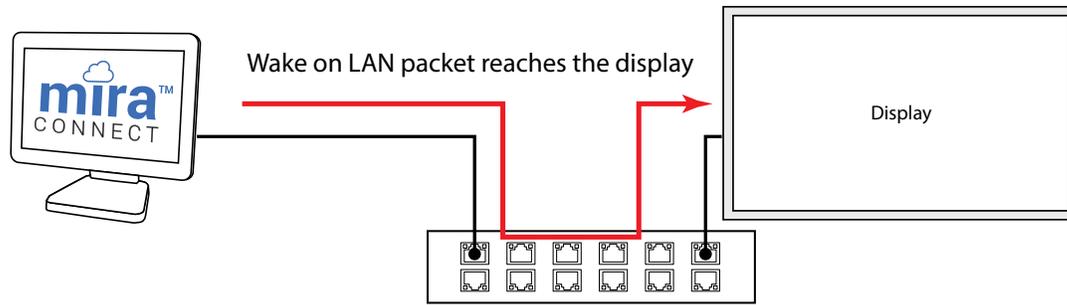
Try turning off IP Remote, saving the setting on the display, and turning IP remote back on again.

3. Try the universal model first with port 1515 and then with port 1516. One of those port numbers will work.
4. If the Mira Connect is on a different network (e.g., on a wireless network) than the display, ensure that the network allows the Wake-On-LAN packet to be sent from the Mira Connect to the display.

Wake-On-LAN packets typically are not passed through routers which means that if the Mira Connect is on a different network from the display, Mira Connect may not be able to power on the display as shown in the following figure.

Resolve this by having Mira Connect on the same network as the display.





5. If the display shows as disconnected after it has been powered off, ensure the MAC address has been entered so Mira Connect knows to send wake on LAN magic packets when the display is powered off.

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

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