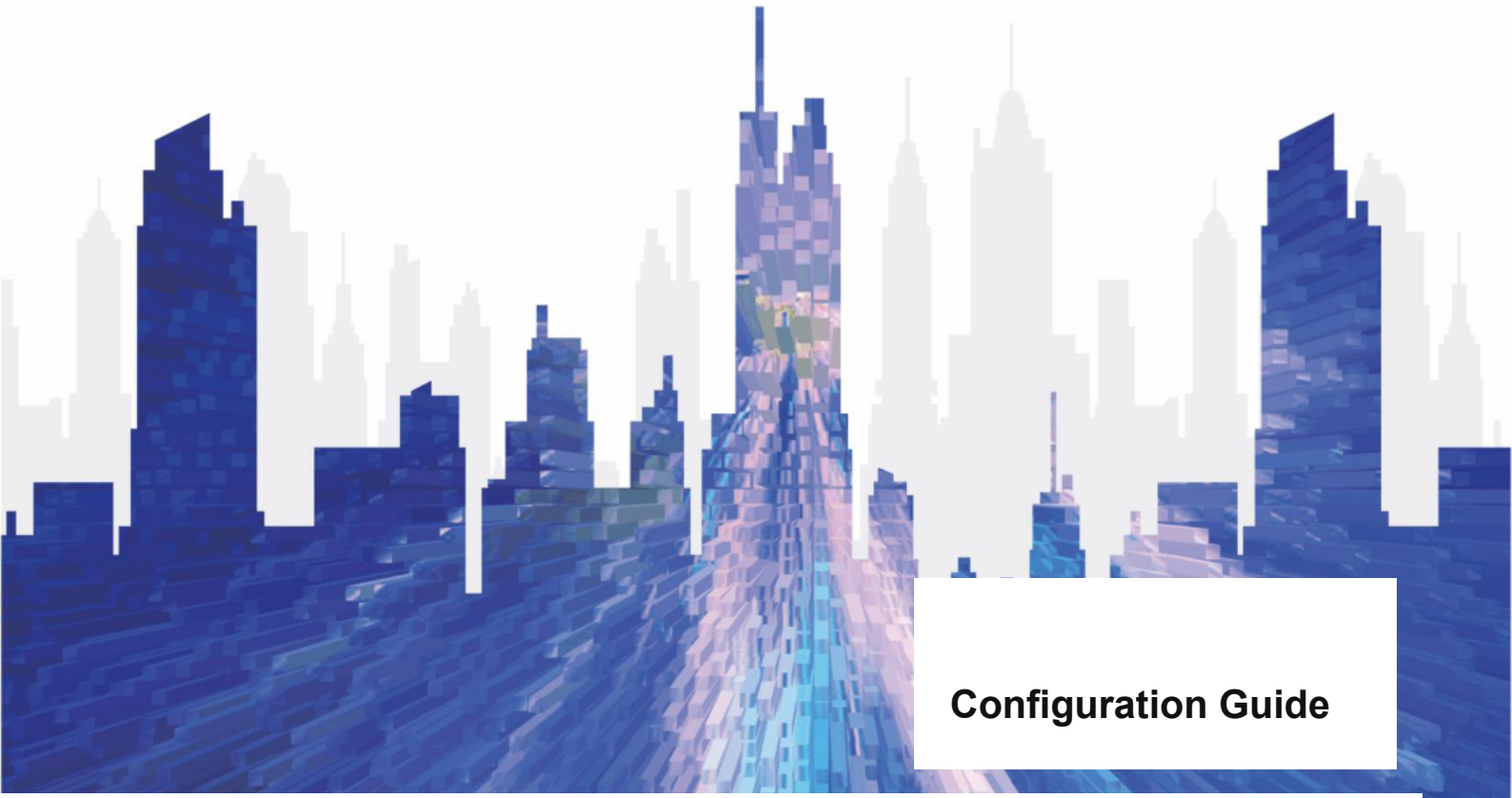
RAYBO

Multi-Screen Splicing





Configuration Guide

Revision History

Document version	Release date	Description
V1.1.5	2025-09-28	Updated prerequisites
V1.1.4	2025-08-29	Updated the maximum number of spliced displays. Added information about adaptive and automatic splicing. Updated document structure and content.
V1.1.3	2025-08-08	Added splicing limitations to Chapter 3, "Parameter Settings". Updated the desktop interface to the latest version.
V1.1.2	2024-11-18	Updated prerequisites for the Screen Elf desktop app
V1.1.1	2024-06-26	Updated notes on parameter settings. Updated the Screen Elf desktop software version.
V1.1.0	2024-06-25	Updated document information
V1.0.0	2022-06-30	Initial release

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1 Purpose

Multi-screen splicing is a typical configuration for LED displays used in digital signage. Using a display driven by Taurus players as an example, this guide describes the hardware connections and parameter settings for multi-screen splicing and provides configuration guidance for project implementers.

Figure 1-1 Multi-screen splicing example



2 Prerequisites

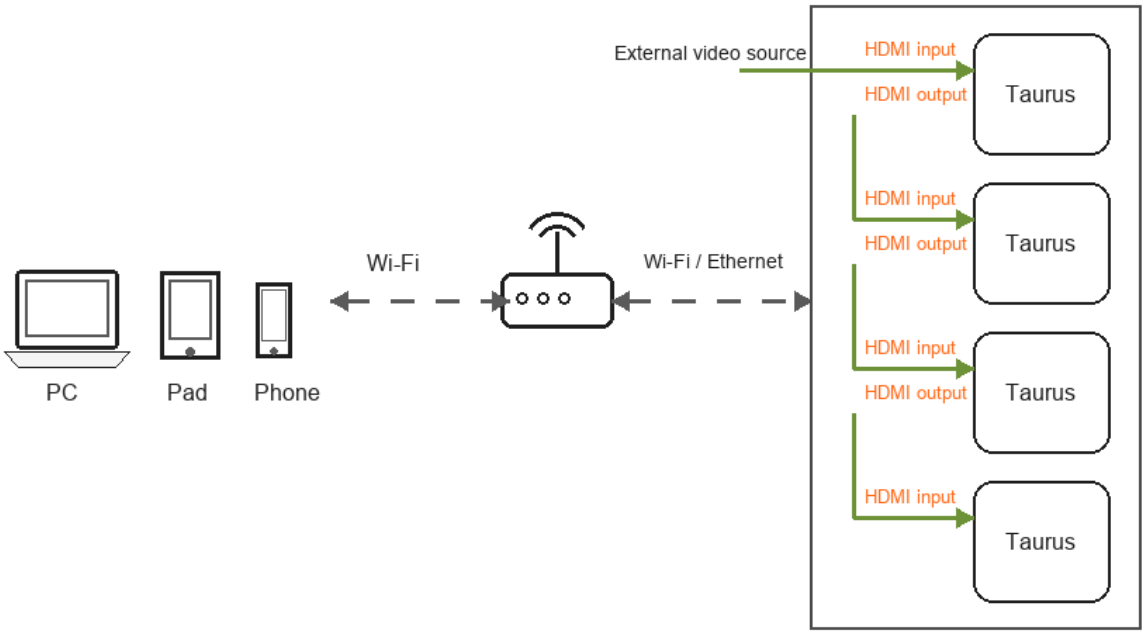
- Participating devices must be T50/T60/TB40/TB50/TB60/AD20 (V4.7.7 or later).
- All devices participating in the splice must use the same model and firmware version.
- The configured screen size must be the same for all participating devices; no offset is required.
- Taurus devices running V4.7.7 or earlier do not support adaptive splicing.
- For adaptive splicing, the video source control mode must remain at the factory default, "HDMI Priority".
- Multi-screen splicing supports up to 2.33 million pixels (2160 x 1080).
  - The loaded width and height must not exceed the device limits.
  - The pixel clock for a custom device resolution must not exceed 153 MHz.
- The maximum number of spliced displays is 10, and the maximum spliced width is 4096 pixels.
- The video source only needs to be connected to the input of the starting device. The device's internal-source resolution (1080p by default) must be at least the resolution of the complete spliced screen.
- Video source scaling
  - When using the internal source for multi-screen splicing, set the program resolution to the full-screen resolution after splicing for the best display effect. If display quality is not a concern, the program resolution can be ignored during production; the program will be scaled to the spliced full-screen size.
  - When using an external source, the external video source size must match the spliced full-screen size for the external image to fill the screen.

- When multi-screen splicing is disabled in the software, each device displays the program that was playing before splicing. If no program is stored on the device, the screen displays black.

3 Hardware Connections

Figure 3-1 shows an example of the hardware connections for four displays driven by Taurus players. Connect the PC, Pad, or phone running the Screen Elf mobile or desktop app to the same wireless LAN as the Taurus players. An external video source is used in this example.

Figure 3-1 Hardware connection example



4 Parameter Settings

4.1 Adaptive Splicing

Adaptive splicing is enabled by default. Connect the devices with HDMI cables and the complete image will be stretched and displayed automatically.

Operation Steps

Step 1 View the screens from the front and designate the leftmost device as the primary device.

Step 2 Use an HDMI cable to connect the primary device's HDMI OUT to the HDMI IN of the device on its right, and continue connecting from left to right.

Step 3 Create a program in Screen Elf and publish it to the primary device.

4.2 Automatic Splicing

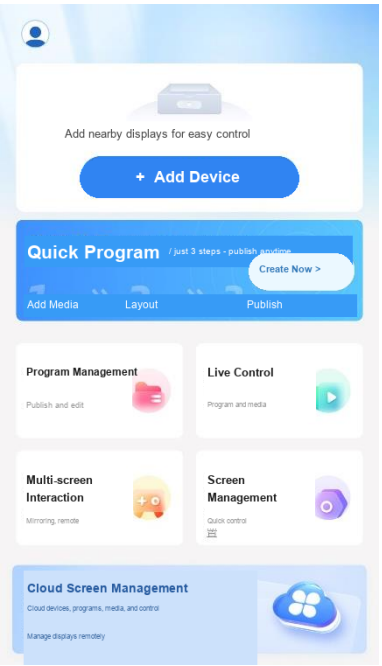
When "Multi-Screen Splicing" is enabled in Screen Elf, the devices splice the displays according to the parameters entered by the user. Automatic splicing parameters can be configured in the Screen Elf mobile or desktop app; only the parameters of the starting device need to be configured, as described below.

4.2.1 Screen Elf Mobile App

Operation Steps

Step 1 Open the Screen Elf mobile app and tap "Add Device" on the home page.

Figure 4-1 Add Device



Step 2 Connect to the starting device's Wi-Fi AP (the default password is shown on the device SSID label), or use the hardware connection shown in Figure 3-1 to connect the phone and devices to the same LAN.

Step 3 In the Device Management list, find the device and tap "Connect".

Step 4 Enter the password and tap "OK".

The default password is shown on the device SSID label.

Step 5 Select "Screen Management > Multi-Screen Splicing".

Step 6 Enable "Multi-Screen Splicing".

Figure 4-2 Enable Multi-Screen Splicing



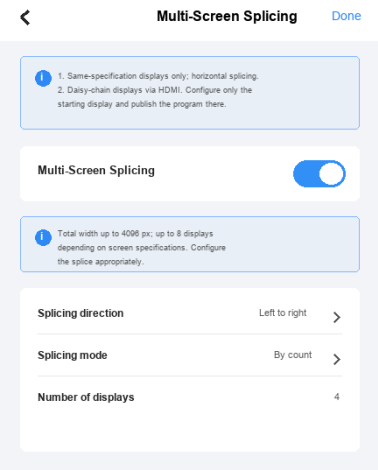
Step 7 Set the relevant parameters according to the actual configuration.

- Splicing direction: Sets the direction in which the displays are spliced: "Left to right" (default) or "Right to left".

Both internal and external sources support splicing from left to right or from right to left.

- Splicing mode: Supports splicing by display count (default) or by display width (enter the full-screen width after splicing).
- Number of displays: When "By count" is selected as the splicing mode, set the number of displays participating in the splice.

Figure 4-3 Set multi-screen splicing parameters



Step 8 When all settings are complete, tap "Done" in the upper-right corner of the page.

4.2.2 Screen Elf Desktop App

Operation Steps

Step 1 Use the hardware connection shown in Figure 3-1 to connect the PC and devices to the same LAN.

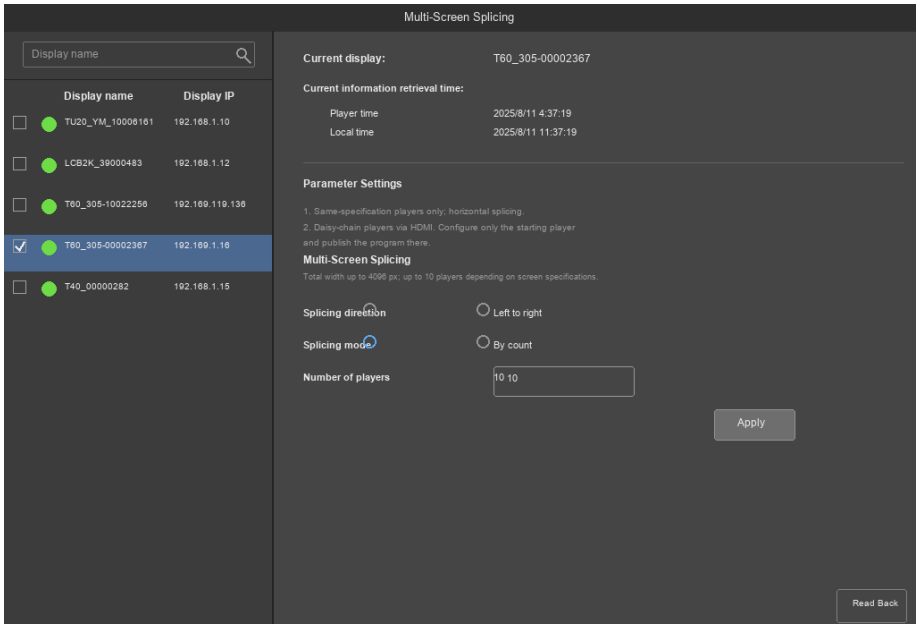
Step 2 Open the Screen Elf desktop app and log in to the device.

The default password is shown on the device SSID label.

Step 3 Select "Control > Multi-Screen Splicing".

Step 4 Enable "Multi-Screen Splicing".

Figure 4-4 Enable Multi-Screen Splicing

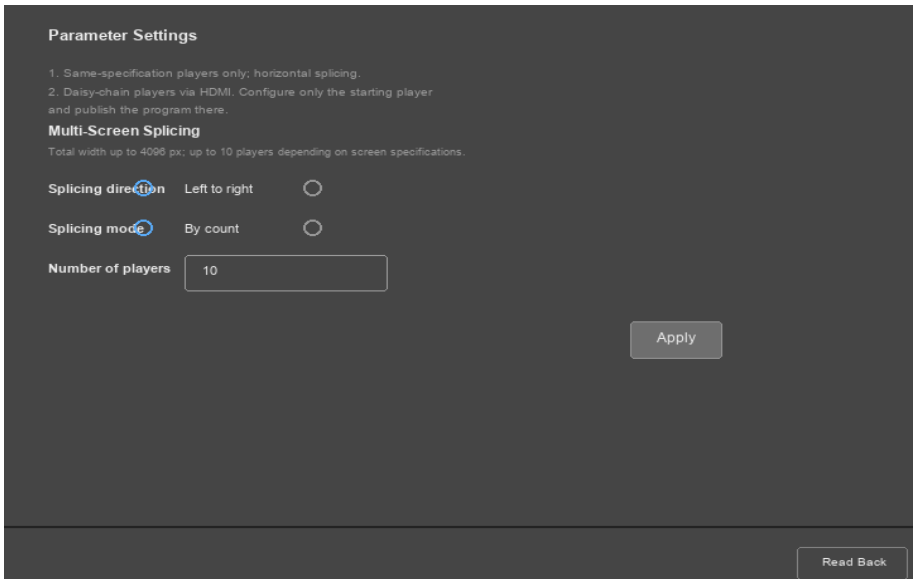


Step 5 Set the relevant parameters according to the actual configuration.

- Splicing direction: Sets the direction in which the displays are spliced: "Left to right" (default) or "Right to left". Both internal and external sources support either direction.
- Splicing mode: Supports splicing by display count (default) or by display width (enter the full-screen width after splicing).
- Number of displays: When "By count" is selected as the splicing mode, set the number of displays participating in the splice.

  When the screen configuration parameters change, click "Refresh" on the Terminal Management page to obtain the latest parameters and calculate the latest splicing count.

Figure 4-5 Set multi-screen splicing parameters



Step 6 When all settings are complete, click "Apply" to finish.

5 Notes

- When using an internal video source after multi-screen splicing, the program is scaled to the spliced full-screen size. If display quality is important, set the program resolution to the spliced full-screen resolution.
- When using an external video source after multi-screen splicing, the external source does not support scaling. Its resolution must therefore match the spliced full-screen resolution for the image to fill the screen.
- When multi-screen splicing is disabled in the software, each device displays the program that was playing before splicing. If no program is stored on the device, the screen displays black.
- If the video source of a device other than the primary device is manually changed to the internal source, the screen driven by that device will not display the spliced image. Set the video source control mode back to "HDMI Priority" to restore the spliced image.

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