



Screen Template Specifications for Cisco Vision Dynamic Signage Director

This chapter defines the screen templates supported by Cisco Vision Dynamic Signage Director. Use a default screen template or create your own custom template.

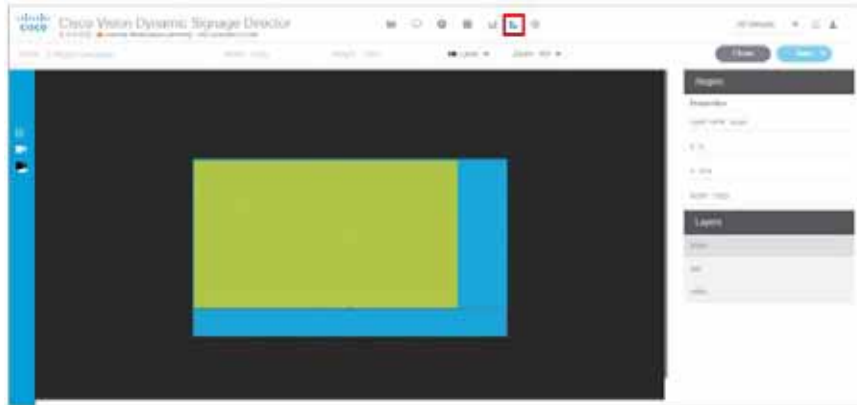
Default Screen Templates

The following templates are standard in Cisco Vision Dynamic Signage Director. The standard templates can be identified by the lock icon that appears next to the template name. The default screen templates make it easy to create event scripts.

- 3-Region Lwrapper
- Full Screen Dual Video
- Full Screen NonVideo
- Full Screen Video
- Quad Template

Figure 1 on page 52 shows the 3-region Lwrapper template.

Figure 1 Default Templates in Cisco Vision Dynamic Signage Director



Default Screen Template Dimensions

The dimensions for the default screen templates are fixed and cannot be changed.

Alternatively, you can create custom screen templates (where you specify different sizes for the screen template regions) and overlay screen templates (where you have a non-video or video region overlapping a video or mixed media region).

Table 1 on page 53 defines the default screen templates that are included in Cisco Vision Dynamic Signage Director.

Note: Obsolete templates (such as 3-Region, 3-Region double, Emergency, Exit, Outside Emergency, Welcome) might still appear in your system if you have upgraded from earlier releases. Installing a full ISO image will remove previously available templates.

Note: For dual video playback on the CV-UHD2 DMP, the secondary video should not contain audio.

Default Screen Template Dimensions

Table 1 Default Screen Template Summary

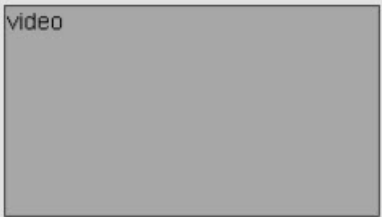
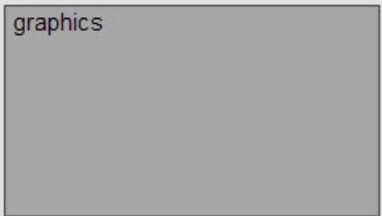

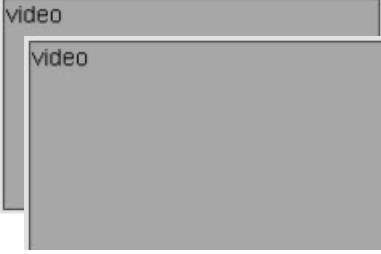

Template Name	Content Type	Dimensions	Region Layout
Full Screen Video	Video Mixed Media	1920x1080	
Full Screen Non-Video	Static Image	1920x1080	

Table 1 Default Screen Template Summary (continued)

Template Name	Content Type	Dimensions	Region Layout
3-Region Lwrapper (Also known as just "Lwrapper.")	<ul style="list-style-type: none"> ■ Video (Live video or replay; Mixed media in Region 1) ■ Advertisements (Playlist of advertisements in Region 2) ■ Ticker (Feed of scores or news in Region 3) 	<ul style="list-style-type: none"> ■ Video: 1624x914 ■ Ads: 296x914 ■ Ticker: 1920x166 	
Full Screen Dual Video	<p>Video in each region.</p> <p>Using a luma key on the video in region 2 (the top-layer video region), you can enable select areas of video content in region 1 to be visible through the video in region 2.</p> <p>Note: A luma key on UHD video is not supported. However, an HD video in the secondary region can use a luma key over a UHD video in the primary region.</p> <p>The Full Screen Dual Video template is available.</p>	<p>Video 1 (bottom video): 1920x1080</p> <p>Video 2 (top video): 1920x1080</p>	
Quad Template	<ul style="list-style-type: none"> ■ Fixed 2x2 template on each screen, taking up the entire screen in four, equal parts. ■ No adjustable template/positioning, z-layer ordering or overlap. ■ No luma key support. ■ Each region can play HD video or a playlist only. ■ One quadrant of audio at a time is supported; select the active audio via local control API only. 	<p>Video 1 (top left region): 1920x1080</p> <p>Video 2 (top right region): 1920x1080</p> <p>Video 3 (bottom left region): 1920x1080</p> <p>Video 4(bottom right region): 1920x1080</p>	

Template Resolutions

The default Cisco Vision Dynamic Signage Director screen template size is 1920x1080.

General Guidelines for All Screen Templates

When creating screen templates and populating content, consider the following guidelines:

- Templates are ordered by name.
- For Proof of Play, you can have more than one region with an ad playlist.
- Regions are listed from top-to-bottom layer order, where the top layer appears at the top of the list.
- Layers are numbered, if a screen template contains a non-video region and a video or mixed media region, the video or mixed media region always appears at the bottom of the list.

Note: You can manually drag a video region to be on top of other regions; however, the rendering of the regions below the video region will not be predictable and can be completely invisible.
- A box icon adds a non-video region.
- A film icon adds a video or mixed media region.
- Switching a non-video region to a video region might produce a warning if there is already an existing video region.
- Saving an existing template with regions removed will produce a force dialog for confirmation. In addition, when a template that is used in an event script is edited (including when one is adding a region) a force dialog appears for confirmation. You should also edit the scripts that use the changed template to verify that the added or removed regions contain the appropriate content and changes occur as expected.

Note: The SV-4K, CV-UHD, and CV-UHD2 media players support HD/SD and video content with UHD resolution. Graphics with UHD resolution are not supported. The DMPs only support HD/SD content and do not support UHD video streaming. Review the list of supported content in the [Overview of Content Support in Cisco Vision Dynamic Signage Director, page 11](#).

Full Screen Default Templates

Use the full-screen templates that come with Cisco Vision Dynamic Signage Director to display full-screen video (or mixed media), or full-screen graphics. [Figure 2 on page 56](#) shows an example of a video (or mixed media) in the full screen template. [Figure 3 on page 56](#) shows an example of a graphic in the full screen template. Both are fixed screen templates and cannot be customized.

Full Screen Default Templates

Figure 2 Full Screen Video (or Mixed Media) Template Example



Table 2 Full Screen Video or Mixed Media Template Dimensions

Content Type	Dimensions
Full Screen Video or Mixed Media	Region 1: 1920x1080

Figure 3 Full Screen Graphic Template Example



Table 3 Full Screen Graphic Template Dimensions

Content Type	Dimensions
Full Screen Graphic	Region 1: 1920x1080

3-Region Lwrapper Default Template

Figure 4 on page 57 shows the region numbering for the 3-Region Lwrapper default template. Table 4 on page 57 describes the characteristics of each region. This is a fixed screen template and cannot be customized.

Figure 4 Region Numbering and Layout of a 3-Region Lwrapper Template



Table 4 3-Region Lwrapper Region Template Dimensions

Region	Content Type	Dimensions	Description
1	Video or Mixed Media	1624x914	<ul style="list-style-type: none"> 16:9 aspect ratio. Supports live video broadcasts or video replay. <p>For more details on video formats, refer to the Cisco Vision Network, Server, and Video Headend Requirements Guide for your release (available to qualified Cisco Vision partners).</p>
2	Non-Video	296x914	<ul style="list-style-type: none"> Supports playlists of advertisements. Due to the small dimensions of Region 2, use graphic-intensive ads rather than ads that have a lot of small text in this region.
3	Non-Video	1920x166	<ul style="list-style-type: none"> Designed for displaying a graphic and/or information in the form of a ticker. The ticker content can be from a compatible RSS feed approved by the venue. The ticker region can be customized with the venue logo (with the ticker content playing in the remaining space).

[Figure 5 on page 58](#) shows an example of content in the 3-Region Lwrapper template.

Figure 5 3-Region Lwrapper Template



Full Screen Dual Video Default Template

A full-screen dual video default template is available for the DMPs. Dual video regions allow you to overlay two video regions—a secondary local or multicast video region and a primary video region.

The dual video template provides the following capabilities:

- Show two video feeds at the same time.
- Place video-based advertisements.
- Promote a moment of exclusivity during an event.
- Apply luminance (luma) keying to the secondary video region.

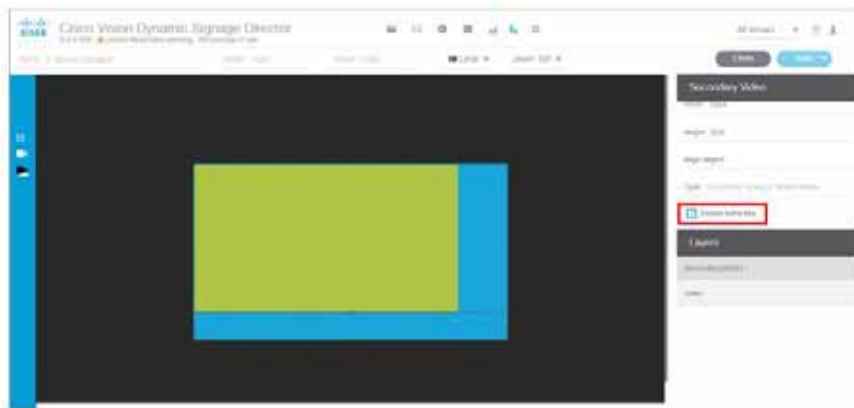
Note: Do not apply a luma key to video content with UHD resolution on the SV-4K, CV-UHD, or CV-UHD2 digital media player. Luma keying is only supported for dual video when an HD video in the secondary region uses a luma key over a UHD video in the primary region.

[Table 5 on page 59](#) lists the specifications of dual video regions.

Table 5 Full Screen Dual Video Template Specifications

Region	Specification
Video 1	<ul style="list-style-type: none"> ■ Can be controlled using an infrared remote (IR) remote or local control. ■ In the template, video region 1 appears as the bottom or primary layer. ■ Supports audio. ■ Source: Local or multicast video.
Video 2	<ul style="list-style-type: none"> ■ Cannot be controlled through an IR remote or local control. ■ In the template, video region 2 fully overlaps video region 1. ■ Luminance (luma) keying is applied to second video region (it cannot be disabled or changed in the template). It cannot be applied on UHD content. ■ Does not play audio. ■ Source: Local or multicast video.

Note: The luma key default is set to #ff2000. To enable luma keying, scroll down the Properties panel and click the checkbox (Figure 6 on page 59).

Figure 6 Full Screen Dual Video Enable Luma Keying

To change the global luma key value:

Click **Configuration > System Configuration > Global DMP Settings > Default - Audio/Video/Closed Caption**.

For additional information on luma keying, refer to the [Cisco Vision Dynamic Signage Director Operations Guide](#).

Guidelines for Dual Video Screen Templates

When using the dual video template for the media players, consider the following:

- A combination of up to full-HD (1920x1080) at either 30 or 60 fps for local video and multicast video are hardware-accelerated.
- Using multicast videos for both video regions is supported; we recommend using a combination of multicast and locally stored videos for the video regions.

Full Screen Dual Video Default Template

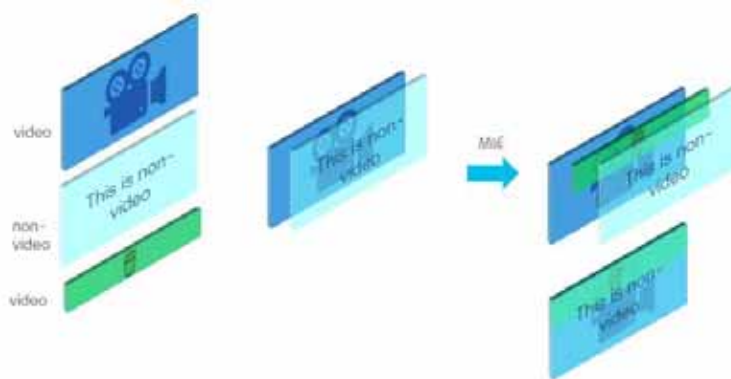
- Place video regions below any non-video content for consistent playback and performance.
- Match the template region aspect ratio with the aspect ratio of the video content that will play in that region.
- If the secondary video region is not displaying, verify that there are no staging errors, that the secondary region is not behind the primary region, and the resolution does not exceed 1920x1080.
- In the dual video template, the secondary region (video 2) will appear above the primary region (video 1). Using luma keying on video region 2, you can enable select areas of video region 1 content to be visible through video region 2. To change the order of the dual video regions, copy the locked template to create a custom template and change the order accordingly.
- Do not apply a luma key to video content with UHD resolution on the SV-4K, CV-UHD, and CV-UHD2 media player. Luma keying is only supported for dual video when an HD video in the secondary region uses a luma key over a UHD video in the primary region.

Dual Video Screen Templates—Enhancements

New in Release 6.3, you can set up the video / HTML layer order of a DMP display by using a new display specification: `dmp.layerOrderMode`.

Previously, the video layers would **always** render on the bottom of the stacking order on the DMP display, regardless of the stacked order in the template (Figure 7 on page 60). You could achieve effects by transparencies and sizing, but video could not be overlaid.

Figure 7 Default Layer Order—Single Video On the Bottom



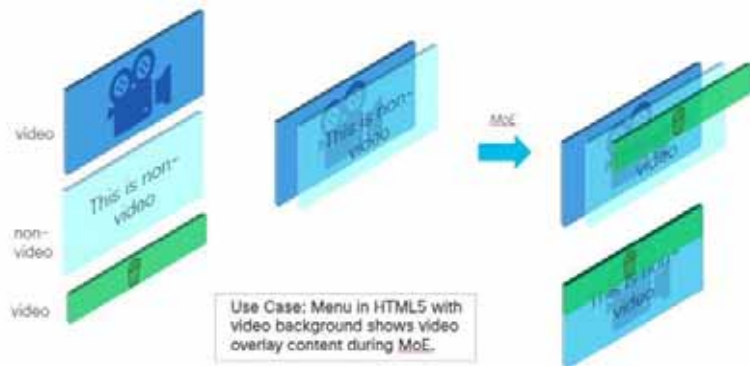
There are three settings for `dmp.layerOrderMode`. By using this new display parameter, you can achieve the following:

- VideoOnBottom (same as existing behavior, Figure 7 on page 60)
- GraphicsInMiddle (Figure 8 on page 61)
- VideoOnTop (Figure 9 on page 61)

For a use case such as a menu in HTML5 with video background showing a video overlay content during a Moment of Exclusivity, use GraphicsInMiddle (Figure 8 on page 61).

Full Screen Dual Video Default Template

Figure 8 GraphicsInMiddle Value Output



Set VideoOnTop when you need the secondary region to always be on top of the primary region, regardless of region layer order. Videos will always be above non-video layers (Figure 9 on page 61).

Figure 9 VideoOnTop Value Output

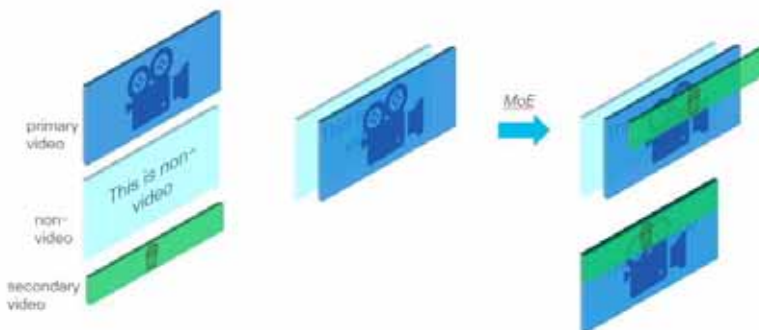


Figure 10 on page 61 shows a graphic representation of single video behavior.

Figure 10 Single Video Content Layering Behavior

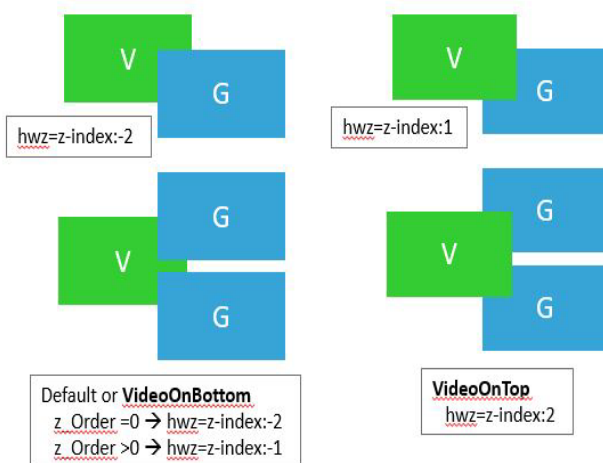
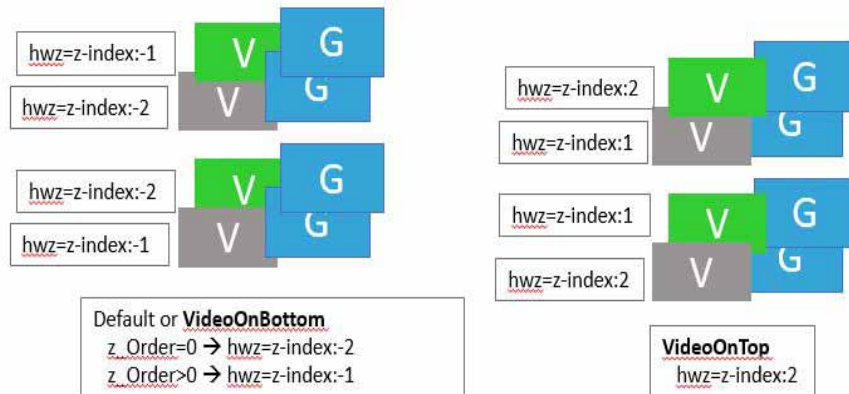


Figure 11 on page 62 shows a graphic representation of dual video behavior.

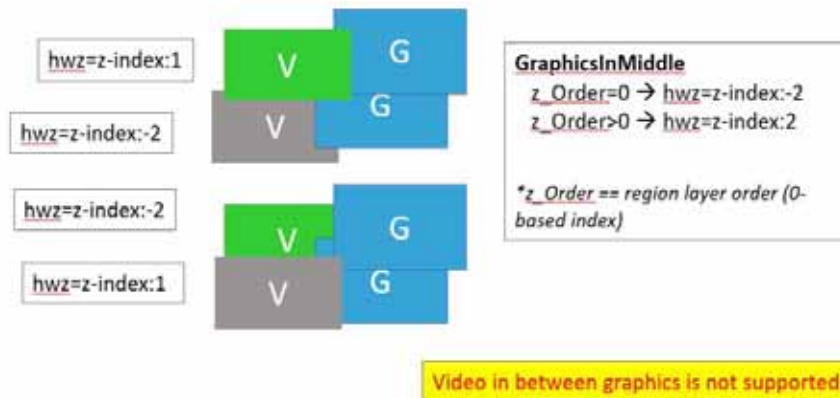
Figure 11 Dual Video Behavior: VideoOnBottom/VideoOnTop



Note: Use when you want HTML content below primary/secondary regions. Diagnostics, StartWebApp, Guide, TV Banner and PIN may not be visible.

Figure 12 on page 62 shows a graphic representation of dual video with graphics in the middle layers.

Figure 12 Dual Video with Graphics in the Middle Layers Between the Videos



Layering Content—What is Not Supported

We do not recommend doing the following when designing your content displays:

- Video in between two non-video content layers, such as when using a URL channel.
- Secondary video below a primary video when using VideoOnTop. The runtime will force the primary video to be below the secondary video.
- Swapping layer order of two video regions across different script states. This may have unpredictable results.
- Template regions do not match layer order. This may have unpredictable results.

IMPORTANT: Here is the current caveat to using this new display parameter:

- The template layering must be consistent with the layer mode. For example, once VideoOnTop is set for a DMP, the video layer will **always** be on top, even if the **template** has the video layer on the bottom. Therefore, carefully design your display templates and content if you intend to use this new capability.

Quad Template

The following is an example process using GraphicsInMiddle. Make sure the template used in the script has the regions layered properly (Video/non-Video/Video).

To set the Display Parameter allowing new video layering:

1. Click **Configuration > Devices > Display Specifications > Display Parameters**.
2. Select the DMP in the left panel.
3. Type **layer** in the Search field on the right. The `dmp.layerOrderMode` displays in the list.
4. Click **Edit** (pencil icon). The Edit Display Parameter dialog box appears (Figure 13 on page 63).
5. In the **Configured Status** field, type **GraphicsInMiddle**.
6. Click **Save**.

Figure 13 Configuring `dmp.layerOrderMode` Display Parameter

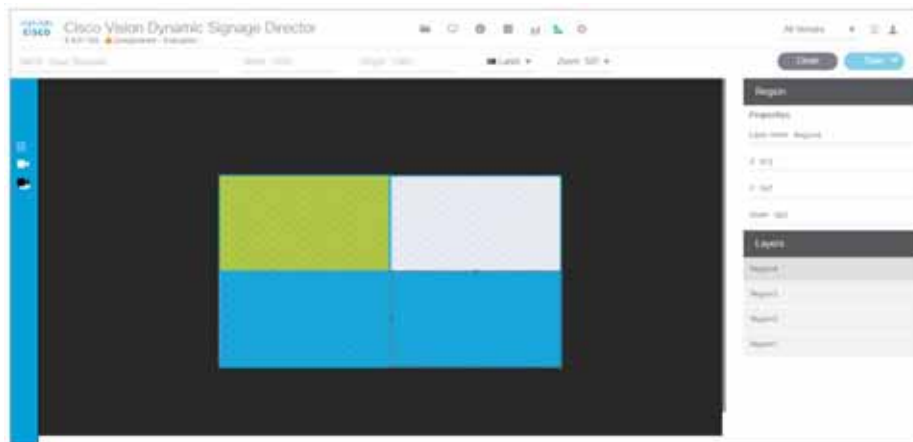


7. Reboot the DMP to get the new configuration to appear on screen.

Quad Template

Release 6.4 SP1 introduces a four-region video streaming feature. This feature is available **only** on the CV-UHD2 and CV-UHD DMPs. The quad default template splits the screen into four, equal 16:9 video quadrants/regions. The top left area is Region 1, the top right area is Region 2, the bottom left area is Region 3, and the bottom right area is Region 4. When you click into a region, the Layer information highlights (Figure 14 on page 63). All these regions use local control for the audio volume and channel changing, so this feature works best in a more private area, such as a luxury suite.

Figure 14 Quad Template for Four Video Regions



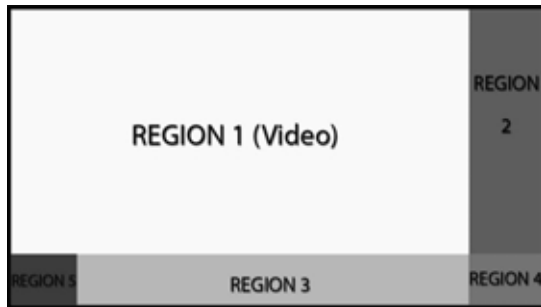
See [Quad-Region Template Specifications, page 75](#) for the quad-region template specifications.

Custom Screen Templates

In addition to using the standard templates that come with Cisco Vision Dynamic Signage Director, you can also create your own custom or overlay template.

Custom screen templates allow you to change the size and arrangements of the regions on the screen to fit the sponsor/venue needs. See [Figure 15 on page 64](#) for an example.

Figure 15 Custom Template Example



Guidelines for Custom Screen Templates

Consider the following guidelines when creating custom screen templates:

- Regions can contain non-video content (static graphics), video, or a combination of both (in a mixed media region).
- Up to 5 regions are supported for each screen template—more than 5 may cause degradation. Results may vary depending on what type of non-video content is used. For example, a very simple widget may not cause degradation but a very complex widget could.
- A custom template can contain up to two video regions.
 - Dual UHD video regions on the SV-4K, CV-UHD, and CV-UHD2 are not supported.
 - Using luma keying on video content in Region 2, you can enable select areas of video Region 1 content to be visible through video Region 2 (see [Figure 6 on page 59](#)).
 - Change the order of the video regions by changing their relative layer order in the template.
- When layering regions, the non-video content (graphics, widgets, etc.) will always appear according to how you set the display specification: `dmp.layerOrderMode`. See [Dual Video Screen Templates-Enhancements, page 60](#).

Note: When layering two video/mixed media regions, if the playlist for the first video/mixed media region includes both video and non-video content, the non-video content in the first region will always appear **on top** of the video in the second video region. To alter this, see [Dual Video Screen Templates-Enhancements, page 60](#).

TIP: If you must include non-video content in Region 1, create a local video of the static content and use that in the playlist so that it remains in the primary region.

- To optimize performance, the video and graphic aspect ratio sizes should match the aspect ratio of the region. Multi-screen template stretching generally is not currently supported. However, multicast video and local video scaling is supported on all digital media players.
- All regions must fit within the 1920x1080 dimensions. If you are using an overlay, then you can have two regions that are both 1920x1080.

Custom Overlay Screen Templates

Note: The DMPs support negotiation to many resolutions. However, when the negotiated resolution is less than 1920x1080, the template will crop to that lower resolution.

[Table 6 on page 65](#) provides the number of content regions you can have when creating custom templates.

Table 6 Number of Allowed Regions When Creating Custom Templates

Region Type	SV-4K, CV-UHD, CV-UHD2	DMP 2K, CV-HD and CV-HD2
Non-Video Graphic	0 or more	0 or more
Video Region 1 or Mixed Media	Up to One	Up to One
Video Region 2 or Mixed Media	Up to One	Not Supported

Custom Overlay Screen Templates

Overlay screen templates are custom templates that allow a non-video region (graphics) to overlap a video (or mixed media) region on the media players. You also can create a custom screen template with dual video regions (or you can use the default full-screen dual video template).

The screen overlay feature can be assigned to any region. Using the overlay feature you can display:

- A full-screen video (or mixed media) region with a full-screen non-video (graphic) content region overlaid on top.
- A brand/graphic overlaid in a small region of the screen.
- A ghosted brand/graphic such as a transparent logo where some of the colors in the logo are transparent and others are not.

Note: When creating an overlay screen template that has a primary video and a non-video region on top, be sure that the image is designed to fit on the canvas. If the image is placed off the canvas, only part of the image will appear.

Guidelines for Graphics in Overlay Screen Templates

- Use 8-bit or 24-bit PNG (transparent pixels supported) file format.
- Make the pixels transparent in the .PNG for the full-size video region.
- Do not use .JPG files because they do not preserve transparency.

Note: Graphics always overlay video. You cannot place video over graphics unless you use `dmp.layerOrderMode`. See [Dual Video Screen Templates-Enhancements, page 60](#).

Custom Overlay Screen Templates