

CineLife+™ 2K supported video formats

This document provides information on supported video formats for Christie CineLife+ 2K projection systems.

The range of available input selections depends on the projector model and/or input/output combinations.

The following inputs are supported for each configuration:

- Single input HDMI
- S2 IMB—IMB
- S4 IMB—IMB

HDMI video formats

The following image formats are supported by the two HDMI 2.0 inputs.



Fractional 1/1.001 frame rates, 1920 x 1080 (HD), and 3840 x 2160 (UHD) formats are also supported.

One-port 2D HD/2K and UHD/4K

The following one-port 2D HD/2K and UHD/4K HDMI 2.0 image formats are supported on each of the HDMI inputs.



- 4K image formats are downsampled to 2048X1080 in the projector video processing. 4K image formats at frame rates greater than 60Hz are not supported and the display performance is undefined.
- 24, 30, 60, and 120 Hz frame rates also include fractional 1/1.001 frame rates.

	Format	Cables	Frame rate (Hz)	Sampling	Bit-depth
HD	1920x1080	1	24, 25, 30, 50, 60, 120	Y'C _B C _R /RGB/4:4:4 Y'C _B C _R /4:2:2	8/10/12 bpc
	2048x1080	1	24, 25, 30, 50, 60, 120	Y'C _B C _R /RGB/4:4:4 Y'C _B C _R /4:2:2	8/10/12 bpc
4K	3840x2160	1	24, 25, 30	Y'C _B C _R /RGB/4:4:4	8/10 bpc

Format	Cables	Frame rate (Hz)	Sampling	Bit-depth
3840x2160	1	24, 25, 30	Y'C _B C _R /4:2:2	8/10/12 bpc
3840x2160	1	50, 60	Y'C _B C _R /RGB/4:4:4	8 bpc
3840x2160	1	50, 60	Y'C _B C _R /4:2:2	8/10/12 bpc
4096x2160	1	24, 25, 30	Y'C _B C _R /RGB/4:4:4	8/10 bpc
4096x2160	1	24, 25, 30	Y'C _B C _R /4:2:2	8/10/12 bpc
4096x2160	1	50, 60	Y'C _B C _R /RGB/4:4:4	8 bpc
4096x2160	1	50, 60	Y'C _B C _R /4:2:2	8/10/12 bpc

One-port 2D 720p and 1080i

The following one-port 2D 720p and 1080i HDMI 2.0 image formats are supported on each of the HDMI inputs.



24, 30, 60, and 120 Hz frame rates also include fractional 1/1.001 frame rates.

Format	Cables	Frame rate (Hz)	Sampling	Bit-depth	Notes
HD 1280x720	1	24, 25, 30, 50, 60, 120	Y'C _B C _R /RGB/4:4:4 Y'C _B C _R /4:2:2	8/10/12 bpc	—
1920x1080i	1	25, 30	Y'C _B C _R /RGB/4:4:4 Y'C _B C _R /4:2:2	8/10/12 bpc	1920x1080 interlaced (50/60 Hz field rate)

One-port 3D HD/2K

The following one-port 3D HDMI 2.0 image formats are supported on each of the HDMI inputs.



24, 30, and 60 Hz frame rates also include fractional 1/1.001 frame rates.

Format	Cables	Frame rate (Hz)	Sampling	Bit-depth	Notes
HD 1280x720	1	50, 60	Y'C _B C _R /RGB/4:4:4 Y'C _B C _R /4:2:2	8/10/12 bpc	Frame-packing/top-and-bottom
1920x1080	1	24, 25, 30, 50, 60	Y'C _B C _R /RGB/4:4:4 Y'C _B C _R /4:2:2	8/10/12 bpc	Frame-packing
2048x1080	1	24, 25, 30, 50, 60	Y'C _B C _R /RGB/4:4:4 Y'C _B C _R /4:2:2	8/10/12 bpc	Frame-packing

Series 2 Integrated Media Block (IMB) video formats

S2 Integrated Media Block (IMB) video format support is determined by the IMB make and model. Refer to the associated IMB documentation to understand which of the following video signals are supported.

The following image formats are supported in the Series 2 IMB interface in RGB 4:4:4 format.

Format	Resolution	Max frame rate 2D	Max frame rate 3D	Min frame rate	Bit-depth
VGA	640x480	120.0	120.0	23.0	8-bits
4CIF	704x576	120.0	120.0	23.0	8-bits
525 4SIF	704x480	120.0	120.0	23.0	8-bits
525 SD	720x480	120.0	120.0	23.0	8-bits
625 SD	720x568	120.0	120.0	23.0	8-bits
SVGA	800x600	79.6	79.6	23.0	8-bits
XGA	1024x768	79.6	79.6	23.0	8-bits
720p HD	1280x720	68.0	68.0	23.0	8-bits
4VGA	1280x960	51.0	51.0	23.0	8-bits
SXGA	1280x1024	47.8	N/A	23.0	8-bits
525 16SIF	1408x960	46.3	N/A	23.0	8-bits
16CIF	1408x1152	38.6	N/A	23.0	8-bits
4SVGA	1600x1200	32.6	N/A	23.0	8-bits
1080 HD	2048x1080	30.0	N/A	23.0	8-bits

SMPTE-compatible 2D cinema image formats



4K image formats are downscaled to 2048x1080 in the projector video processing. 4K image formats at frame rates greater than 30 Hz are not supported and the output image is undefined.

Specification	Resolution	Frame rate	Color format	Bit-depth
SMPTE 428-1-2006	2048x1080	24.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	25.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	30.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	48.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	50.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	60.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	96.0	X'Y'Z' (4:4:4)	12-bits

Specification	Resolution	Frame rate	Color format	Bit-depth
SMPTE 428-11-2009	2048x1080	100.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	120.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-1-2006	4096x2160	24.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	4096x2160	25.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	4096x2160	30.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 2048-1-2011	4096x2160	48.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 2048-1-2011	4096x2160	50.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 2048-1-2011	4096x2160	60.0	X'Y'Z' (4:4:4)	12-bits

SMPTE-compatible single 3D cinema image formats



4K image formats are downsampled to 2048x1080 in the projector video processing. 4K image formats at frame rates greater than 30 Hz per eye are not supported and the output image is undefined.

Specification	Resolution	Frame rate (per eye)	Color format	Bit-depth
SMPTE 428-1-2006	2048x1080	24.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	25.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	30.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	48.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	50.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	60.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-1-2006	4096x2160	24.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	4096x2160	25.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	4096x2160	30.0	X'Y'Z' (4:4:4)	12-bits

SMPTE-compatible dual 3D cinema image formats



4K image formats are downsampled to 2048 x 1080 in the projector video processing.

Specification	Resolution	Frame rate	Color format	Bit-depth
SMPTE 428-1-2006	2048x1080	24.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	25.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	30.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	48.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	50.0	X'Y'Z' (4:4:4)	12-bits

Specification	Resolution	Frame rate	Color format	Bit-depth
SMPTE 428-11-2009	2048x1080	60.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	96.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	100.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	2048x1080	120.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-1-2006	4096x2160	24.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	4096x2160	25.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 428-11-2009	4096x2160	30.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 2048-1-2011	4096x2160	48.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 2048-1-2011	4096x2160	50.0	X'Y'Z' (4:4:4)	12-bits
SMPTE 2048-1-2011	4096x2160	60.0	X'Y'Z' (4:4:4)	12-bits

Series 4 Integrated Media Block (IMB) video formats

S4 Integrated Media Block (IMB) video format support is determined by the IMB make and model. Refer to the associated IMB documentation to understand which of the following video signals are supported.

The following image formats are supported in the Series 4 IMB interface in RGB 4:4:4 format.

Format	Resolution	Max frame rate 2D	Max frame rate 3D	Min frame rate	Bit depth
VGA	640x480	120.0	120.0	23.0	8-bits
525 4SIF	704x480	120.0	120.0	23.0	8-bits
525 SD	720x480	120.0	120.0	23.0	8-bits
4CIF	704x576	120.0	120.0	23.0	8-bits
625 SD	720x568	120.0	120.0	23.0	8-bits
SVGA	800x600	79.6	79.6	23.0	8-bits
XGA	1024x768	79.6	79.6	23.0	8-bits
720p HD	1280x720	68.0	68.0	23.0	8-bits
4VGA	1280x960	51.0	51.0	23.0	8-bits
SXGA	1280x1024	47.8	N/A	23.0	8-bits
525 16SIF	1408x960	46.3	N/A	23.0	8-bits
16CIF	1408x1152	38.6	N/A	23.0	8-bits
4SVGA	1600x1200	32.6	N/A	23.0	8-bits
1080 HD	1920x1080	30.0	N/A	23.0	8-bits

SMPTE-compatible 2D cinema image formats



4K image formats are downsampled to 2048x1080 in the projector video processing.

Specification	Resolution	Frame rate	Color format	Bit depth	Notes
SMPTE 428-1-2006	2048x1080	24.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	25.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	30.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-1-2009	2048x1080	48.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	50.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	60.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	96.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	100.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	120.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-1-2006	4096x2160	24.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	4096x2160	25.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	4096x2160	30.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 2048-1-2011	4096x2160	48.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 2048-1-2011	4096x2160	50.0	X'Y'Z' (4:4:4)	12-bits	Requires 96 Hz video license in IMB-S4
SMPTE 2048-1-2011	4096x2160	60.0	X'Y'Z' (4:4:4)	12-bits	Requires 96 Hz video license in IMB-S4

SMPTE-compatible single 3D cinema image formats



4K image formats are downsampled to 2048x1080 in the projector video processing. 4K image formats at frame rates greater than 30 Hz per eye are not supported and the output image is undefined.

Specification	Resolution	Frame rate (per eye)	Color format	Bit depth	Notes
SMPTE 428-1-2006	2048x1080	24.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	25.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	30.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	48.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	50.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	60.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-1-2006	4096x2160	24.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	4096x2160	25.0	X'Y'Z' (4:4:4)	12-bits	Requires 96 Hz video license in IMB-S4
SMPTE 428-11-2009	4096x2160	30.0	X'Y'Z' (4:4:4)	12-bits	Requires 96 Hz video license in IMB-S4

SMPTE-compatible dual 3D cinema image formats



4K image formats are downscaled to 2048x1080 in the projector video processing.

Specification	Resolution	Frame rate (per eye)	Color format	Bit depth	Notes
SMPTE 428-1-2006	2048x1080	24.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	25.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	30.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	48.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	50.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	60.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	96.0	X'Y'Z' (4:4:4)	12-bits	—

Specification	Resolution	Frame rate (per eye)	Color format	Bit depth	Notes
SMPTE 428-11-2009	2048x1080	100.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	2048x1080	120.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-1-2006	4096x2160	24.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	4096x2160	25.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 428-11-2009	4096x2160	30.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 2048-1-2011	4096x2160	48.0	X'Y'Z' (4:4:4)	12-bits	—
SMPTE 2048-1-2011	4096x2160	50.0	X'Y'Z' (4:4:4)	12-bits	Requires 96 Hz video license in IMB-S4
SMPTE 2048-1-2011	4096x2160	60.0	X'Y'Z' (4:4:4)	12-bits	Requires 96 Hz video license in IMB-S4

Technical support

Technical support for Christie Cinema products is available at:

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