

OBS Project

- [Open Broadcaster Software \(OBS Studio\)](#)

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Third-Party Integration Notes

Blackmagic Design DeckLink

Getting a DeckLink capture/output card working with OBS is quite easy, but there are a few sharp edges which can result in less-than-ideal system resource utilization.

When optimizing for DeckLink output:

- DeckLink Out With/Without Keying, Non-Streaming
 - OBS should be configured for the BGRA texture format, as this both allows optional keying, and also avoids a CPU-based color format conversion step. Color range should be set to Full, and color space to Rec.709, even if outputting UHD content.
- DeckLink Out + Streaming/Recording
 - It is recommended to keep OBS in its default NV12 color space. This allows video encoders to make use of shared-texture encoding on all platforms. Some resources will be used to convert NV12 to BGRA for DeckLink feeds.

- If DeckLink keying is required, then the OBS color format must be set to BGRA, and there will be a performance hit for video encoders due to a CPU-based BGRA -> NV12 conversion.

When optimizing for DeckLink input:

- Currently, no OBS-side changes are required in order to obtain the best available performance.

V210 Experimental Fork

A source-code fork of obs-studio has been created for the development of V210 color format output support for OBS. The intention of this fork is to eventually merge this fork into the upstream repository. V210 support on output has **significant** performance benefits when using DeckLink output, and also provides a way to obtain a true 10-bit 4:2:2 pipeline from OBS. For ST2110 cards, V210 color format is required in order to interoperate with many non-BMD vendors, due to the card's lack of hardware color conversion. Unfortunately, keying is not supported for the V210 format, since it is a YUV format with no Alpha channel.

To use this fork, you can follow the OBS build instructions for your platform. There is only one modification to the build steps which must be made, which is to run `git clone --recursive -b v210 https://github.com/tt2468/obs-studio.git` instead of the git clone command specified in the build instructions.

OBSProject Official Build Instructions:

- [Windows](#)
- [macOS](#)
- [Linux](#)

When running this fork, Color Format should be set to V210, and Color Range should be set to Limited. Most video encoders (streaming/recording) will not work out of the box, however, the Video Toolbox encoders on macOS will.