



Trusted colour grading no matter the distance

Work remotely with confidence

In today's post-production environment, there is an increasing call for remote working. But the world of colour correction has its own particular challenges.

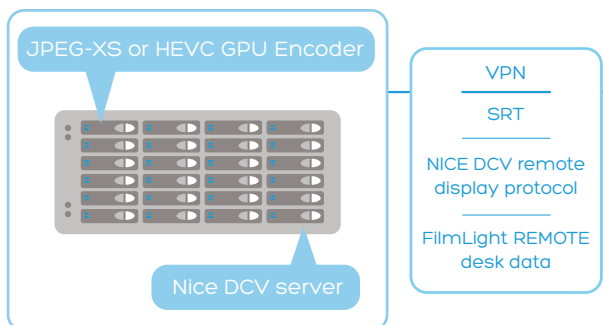
Several solutions have been assembled to service the drive towards remote colour correction both for dailies and finishing - but a complete solution providing true high-quality, low-latency monitoring has been hard to source. While many commercial products provide remote desktops for User Interface (UI) monitors, systems that integrate that remote access with a professional SDI image display and a control surface are few and far between.

The low latency needed for critical image manipulation instantly rules out external hardware boxes, which require images to be clocked out

of the system before encoding can commence. And commonly available distribution compression codecs are unsuitable for critical image viewing during the mastering phase.

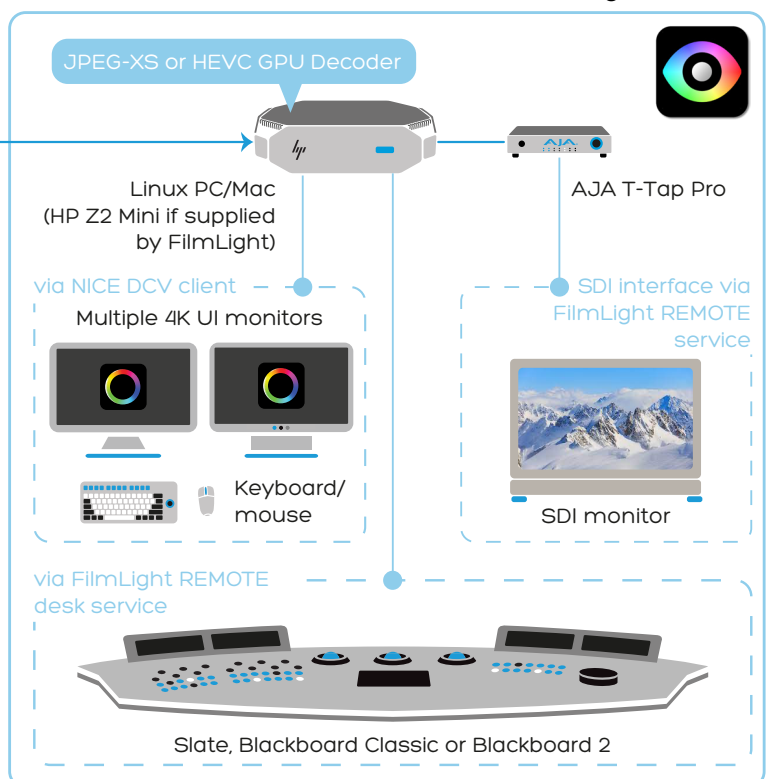
FilmLight REMOTE, with integrated JPEG-XS, has been developed to address these issues.

Baselight



FilmLight REMOTE example configuration: working from home

FilmLight REMOTE



Complete remote monitoring and grading solution

FilmLight has engineered a complete solution for grading remotely: FilmLight REMOTE provides a professional control surface, UI monitors, mouse and keyboard plus professional monitoring over the internet.

The Baselight or Daylight system runs the same NICE DCV server that would be used in an Amazon Web Services hosted application to provide the remote end with multiple UI monitors up to 4K, plus mouse and keyboard.

At the same time an SRT video connection is made to provide a high-quality JPEG-XS video stream to the remote system, where a FilmLight desk service also provides support for a control surface.

JPEG-XS

JPEG-XS specifies a compression technology with an end-to-end latency of a few lines. Optimised for visually lossless compression as defined in ISO/IEC 29170-2 for natural and synthetic images, it offers typical compression ratios between 2:1 and 12:1 for 4:4:4 and 4:2:2 up to 8K 60P.

The JPEG-XS standard has addressed increasing interest across the broadcast industry in areas that previously required the transport of uncompressed image data. As such it is the ideal codec for professional viewing of colour corrected images whilst all processing occurs on the uncompressed material. FilmLight's integration of JPEG-XS occurs with low overhead directly on the GPU that is processing the Baselight or Daylight grading operation to minimise the latency introduced during creative image manipulation.

Remote grading setup

At the remote end of the network the JPEG-XS image stream can be decoded by:

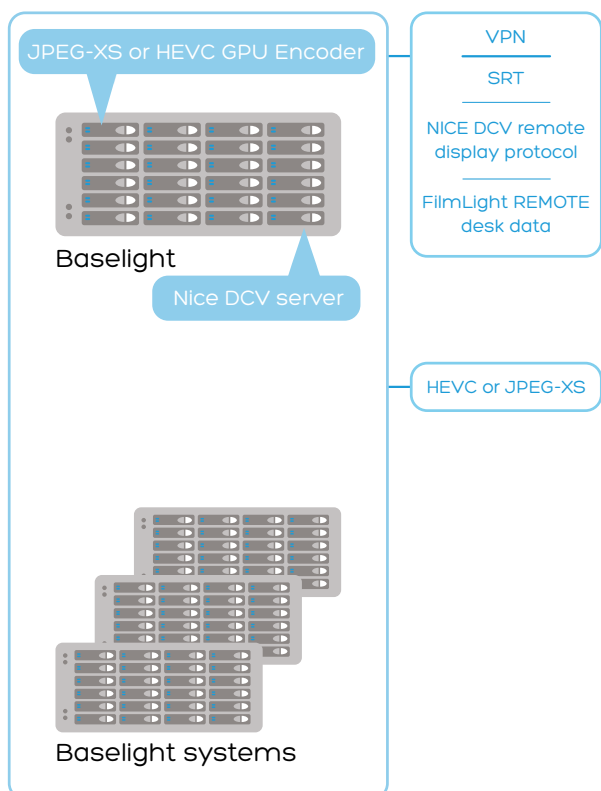
- » Linux workstation with NVIDIA Quadro GPU running FilmLight's REMOTE software and an AJA or Blackmagic Design SDI output card, or an AJA T-TAP Pro if Thunderbolt is available.

In the case of a Linux system FilmLight can supply either of these options, pre-configured with FilmLight REMOTE software, GPU, and network interface:

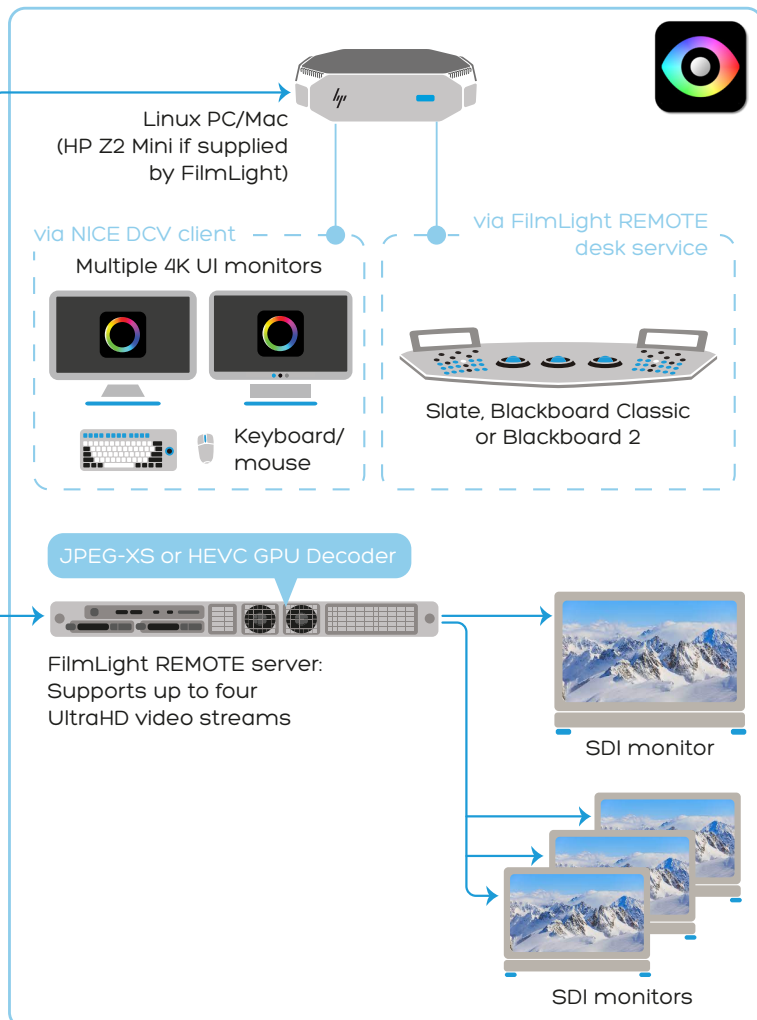
- » A 1U HP ZCentral 4R server with AJA Kona 4/5 or Blackmagic SDI output card for 19" rack deployment.
- » A quiet HP Z2 Mini with AJA Thunderbolt™ 3 T-TAP Pro with 12G-SDI and HDMI 2.0 Output for suite or home deployment.

It is also possible to use FilmLight REMOTE with a Mac at the remote end, but in this scenario only H.264 or HEVC is available for the image display.

Data centre



On premises



Key features

Linux & macOS

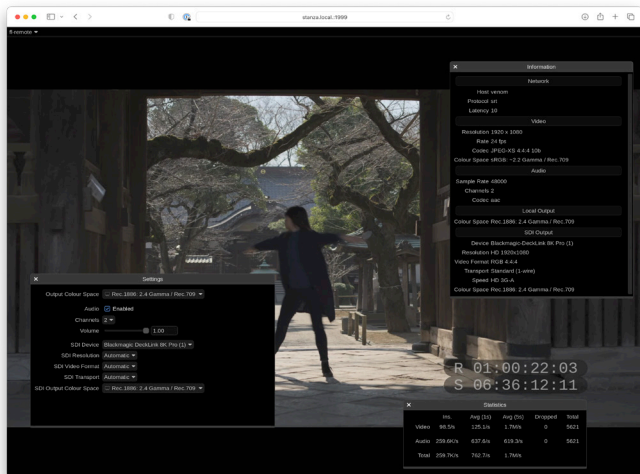
- » No physical SDI encode hardware required for the Baselight or Daylight system
- » Lower bit rate HEVC and H.264:
 - HEVC 4:4:4 10-bit or 4:2:0 10-bit
 - H.264 4:2:0 8-bit
- » Direct NVIDIA GPU encoding at a lower latency compared to hardware solutions that require frames to be clocked out before encoding
- » Decoding on local workstation - either Linux with NVIDIA GPU or Mac - that streams images out via SDI card
- » Uses industry-standard NICE DCV remote desktop software for UI monitors, keyboard and mouse (licenced separately by end user); Teradici PCoIP is also supported as an alternative to NICE DCV
- » Combines with FilmLight's desk service to allow Slate, Blackboard Classic, Blackboard 2 or Tangent Element/Wave to run remotely, providing a fully professional remote grading experience
- » FilmLight REMOTE receiver application
- » Able to display stream via SDI hardware devices from AJA or Blackmagic Design
- » Web UI for management & configuration

Linux only

- » High quality JPEG-XS in HD, UHD or 8K (maximum 7860 pixels per line) up to 60fps:
 - 4:2:2 10-bit, 4:4:4 10-bit or 4:4:4 12-bit
 - Configurable compression ratios between 2:1 & 12:1
 - Available at a low subscription price on top of a normal Baselight support contract
- » FilmLight REMOTE server can be supplied fully configured and ready to go as a 1U HP Z4 or HP Z2 Mini

Mac only

- » Able to display stream on directly driven HDR displays



FilmLight REMOTE configuration Web UI

System Requirements

To use FilmLight REMOTE you must be running Baselight or Daylight version 6 or above on:

- » FilmLightOS 8.4 or later on Generation V, VI, VII or VIII hardware with a minimum VRAM of 12GB per GPU
- » macOS 13-15 on Apple Silicon



For more information on configuring and using FilmLight REMOTE, see the *FilmLight REMOTE User Guide* - scan the QR code to download it from the FilmLight web site.

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