Feature Spotlight

High Dynamic Range (HDR△)

Lifelike colour and brightness without compromise.

HDR offers a new approach to delivering impressive image quality improvements on LED screens.

For every pixel, HDR offers a greater brightness range, a wider colour gamut and a higher bit depth, and in doing so delivers more detail within the shadows and highlights, increases contrast, and gives more headroom for exceptionally bright content that might otherwise be 'clipped'.

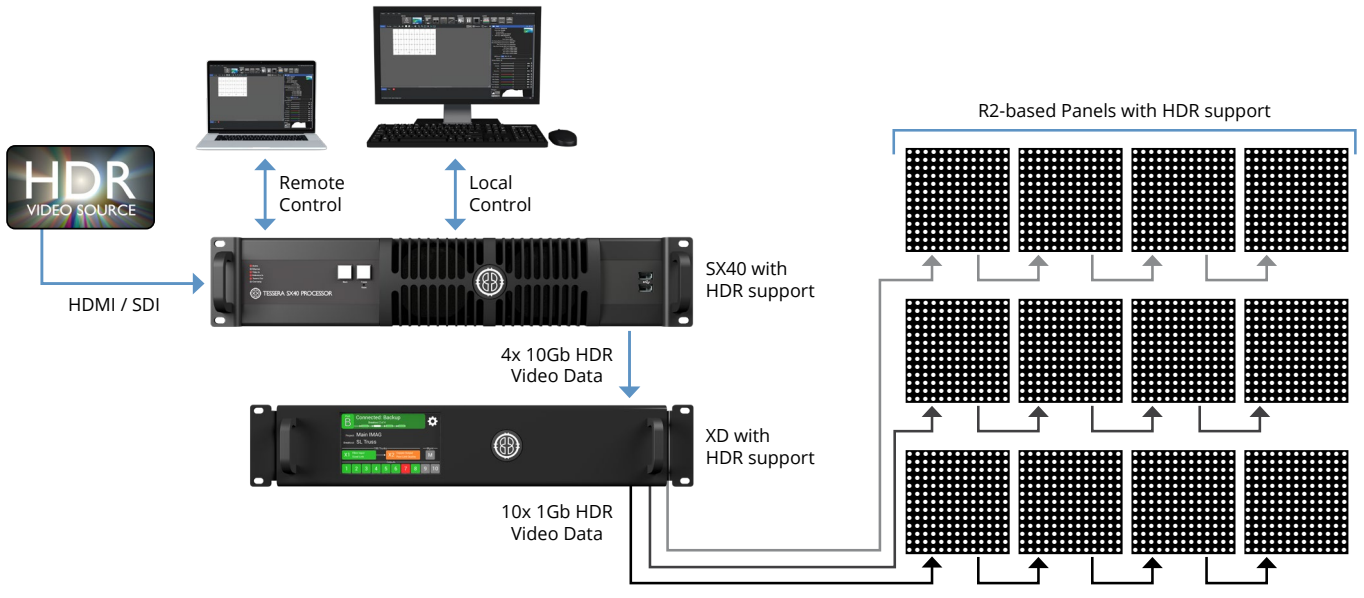
The resulting image is perceived as sharper and more detailed with greater 'depth', providing vivid, lifelike images when compared to Standard Dynamic Range (SDR), even when the pixel count remains the same. HDR is available for Tessera receiver card based panels calibrated with Dynamic Calibration, and is exclusive to the Tessera SX40 and Tessera S8 LED processors.

The Brompton Difference

To realise the benefits offered by HDR, full support is required all the way from the video input, through the processor, network, data distribution units, and panel receiver cards.

We have fully updated our Tessera SX40 and Tessera S8 LED Processors, XD Data Distribution Unit and the receiver cards with new processing capabilities to maintain full HDR video quality throughout the entire system, resulting in breathtaking HDR output quality.

- ✓ HDR offers a new approach to delivering impressive image quality improvements on LED screens.
- ✓ An HDR image appears perceptibly sharper and more detailed with greater 'depth'.



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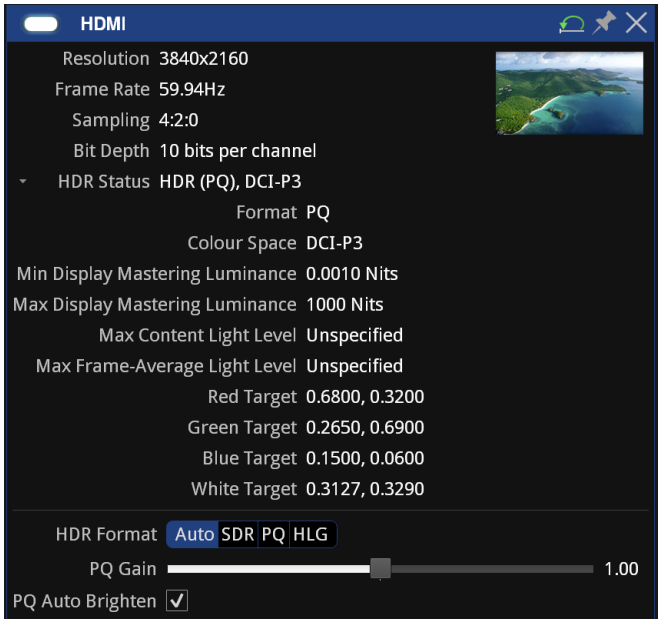
Flexible HDR Inputs

The HDMI 2.0b input on both the Tessera SX40 and Tessera S8 accepts HDR video at up to 12 bits per colour.

Metadata reception enables automatic detection and handling of HDR content, with input signal properties displayed in the user interface to confirm the source device is operating as intended.

For content with incorrect or missing metadata, the processor's HDR behaviour can be manually overridden to ensure the video is correctly displayed.

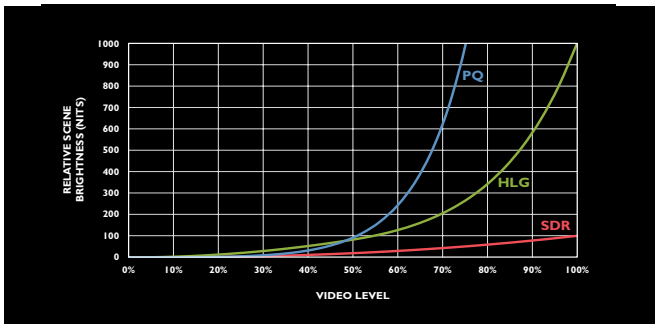
HDR video is also accepted via the 12G-SDI input with manual HDR configuration.



Multi-Format HDR Support

The HDMI and SDI inputs on the Tessera SX40 and Tessera S8 support both of the commonly used HDR formats, PQ (ST-2084) and HLG, offering compatibility with a wide range of HDR video sources.

The system switches seamlessly between SDR, PQ and HLG without interrupting the video output, so multiple content types may be displayed back-to-back with manual or automatic (metadata-controlled) switching. Additional controls are provided to optimise the appearance of HDR content to suit the viewing environment.



Stunning Wide Colour Gamuts

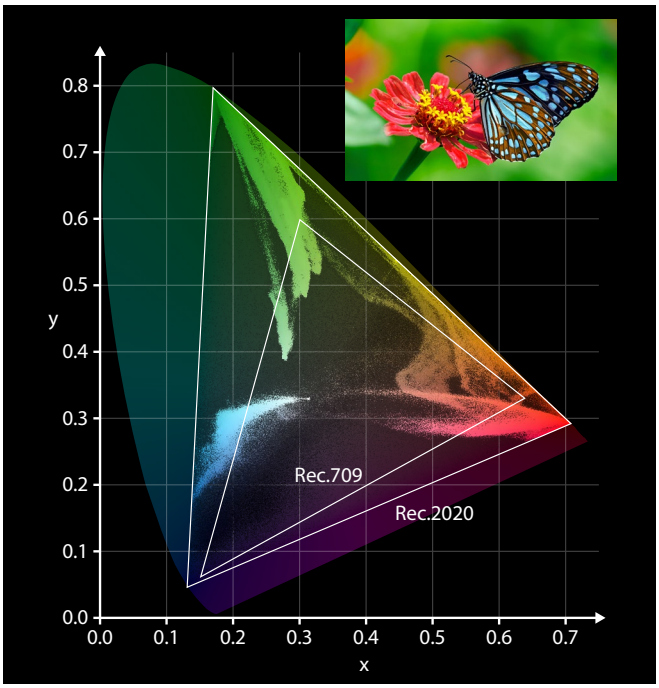
Rec.709, DCI-P3, Rec.2020, ACEScg and fully custom wide colour gamuts are all supported, enabling video content to use a much broader range of colours.

The Tessera system makes the best possible use of this increased range, with custom-developed LED-specific optimisations to accurately reproduce the vibrant colours required for an amazingly realistic and visually stunning HDR image.

Fully Integrated

HDR is seamlessly supported at all resolutions and frame rates, with all existing processor features remaining available.

This deep level of integration not only ensures the best possible display of HDR on LED; it also ensures an exceptional overall HDR experience for operators and end clients alike.



Brompton Technology is the market leader in LED video processing for the most demanding applications across live events, virtual production, broadcast/XR, simulation/VR, fine-pitch installations and esports. The company has won multiple awards and become a globally respected brand, known for the quality and reliability of its products and exceptional technical support. For more information, visit www.bromptontech.com.

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