Consumer Technology Association
Video Division
8K UHD Display Characteristics
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A display may be referred to as 8K Ultra High Definition or 8K UHD if it has the following attributes:

Display Resolution— The display shall have at least 33 million active pixels, with at least 7680 horizontally and 4320 vertically within a 16:9 viewable window. The aspect ratio of the image shall be properly produced and not distorted. Physical pixels shall be individually addressable such that the horizontal and vertical resolution above can be demonstrated over the full range of colors provided by the display and measured in accordance with the established guidelines for measurement of visible resolution specified in version 1.03c, section 7.8, of the International Display Measurement Standard (IDMS) specified by the International Committee for Display Metrology (ICDM). Display shall meet a minimum of 50% contrast modulation using a 1x1 grill pattern.*

Up-conversion—The display is capable of upscaling SD, HD and 4K video and displaying it at 8K display resolution or better.

Digital Inputs—Has one or more HDMI inputs supporting the following characteristics:

- Resolution of 7680x4320 pixels.
- Bit depth of 10-bits.
- Progressive scan.
- Frame rates of 24, 30, and 60 frames per second as well as at the associated 1000/1001 fractional frame rates.
- Frame rates of 25 and 50 frames per second for displays intended for use in 50 Hz regions.
- HDR transfer functions as specified by ITU-R BT.2100.
- RGB Colorimetry and the Non-Constant Luminance $Y'C'_BC'_R$ signal format, as specified by ITU-R BT.2100.
- At least one of the 7680x4320 HDMI inputs shall support HDCP v2.2 or equivalent content protection.

Bit Depth—Has the capability to receive 10-bit 8K images and render an image that shows responsiveness to changes to any of the 10 bits. The exact manner of processing is not specified.

* - If the contrast measurement is phase dependent, the average of the measurements of the two phases shall be used for the calculation of contrast modulation as described in section 7.2 of IDMS 1.03c.