



The Consumer Electronics Association (CEA) updates the characteristics making Ultra High Definition (UHD) TVs, monitors and projectors for the home, building on the first generation characteristics released back in October 2012.

- Under the updated characteristics (aka "Ultra High-Definition Display Characteristics V2") a display requires the following to be defined as UHD:
  - Display Resolution - Has at least 8 million active pixels, with at least 3840 horizontally and at least 2160 vertically.
  - Aspect Ratio - Has a width to height ratio of the display,Âs native resolution of 16:9 or wider.
  - Upconversion - Is capable of upscaling HD video and displaying it at UHD resolution.
  - Digital Input - Has 1 or more HDMI inputs supporting at least 3840x2160 native content resolution at 24p, 30p and 60p frames per second. At least one of the 3840x2160 HDMI inputs shall support HDCP revision 2.2 or equivalent content protection.
  - Colorimetry - Processes 2160p video inputs encoded according to ITU-R BT.709 colour space and may support wider colorimetry standards.
  - Bit Depth - Has a minimum colour bit depth of eight bits.

The CEA also updated the minimum performance attributes making a Connected UHD Device:

- UHD Capability - Meets all of the requirements of the CEA UHD Display Characteristics V2.
- Video Codec - Decodes IP-delivered video of 3840x2160 resolution that has been compressed using HEVC and may decode video from other standard encoders.
- Audio Codec - Receives and reproduces, and/or outputs multichannel audio.
- IP and Networking - Receives IP-delivered UHD video through a wifi, ethernet or other appropriate connection.
- Application Services - Supports IP-delivered UHD video through services or applications on the platform of the manufacturer's choosing.

## CEA Updates UHD Definition

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The Association is also working on a logo to help customers identify UHD products, which is set to be launched later this year.

"UHD TV is the next revolution in home display technology, offering consumers an incredibly immersive viewing experience with outstanding new levels of picture quality," CEA president and CEO Gary Shapiro says. "These updated attributes will help ensure consumers get the most out of this exciting new technology and will provide additional certainty in the marketplace."

The characteristics take effect on a voluntary basis from September 2014.

Go [CEA Updates Characteristics for UHD Displays](#)