



Because it matters

How to Enable HDR Mode on Your HDR Monitor in Windows 10?

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2021/03/30

Something about Me...



- Senior Color Expert and Founder of Color Technology Lab, BenQ
- Professional Display Product Manager, BenQ
- ICC Display Working Group Vice Chair
- ISO TC130 Expert
- IDEAlliance G7 Expert
- R&D Director, Printing Technology Research Institution, Taiwan
- Research Engineer, Display Technology Center, ITRI, Taiwan
- MSc in Color Science, University of Leeds, UK
- BAsC in Computer and Electrical Engineering, University of British Columbia, Vancouver, BC, Canada



HDR Reference Monitor



- SONY TRIMASTER BVM-HX310

Picture performance

Panel	α -Si TFT Active Matrix LCD
Picture size (diagonal)	789.1 mm (31.1 inches)
Effective Picture size (H x V)	698.0 x 368.1 mm (27 1/2 x 14 1/2 inches)
Resolution (H x V)	4096 x 2160 pixels
Aspect	17 : 9 (1.89 : 1)
Pixel efficiency	99.99%
Panel drive	10-bit
Panel frame rate	48 Hz / 50 Hz / 60 Hz (48 Hz and 60 Hz are also compatible with 1/1.001 frame rates)
Viewing angle (panel specification)	89°/89°/89°/89° (up/down/left/right contrast > 10:1)
Colour temperature	D55, D61, D65, D93, DCI*1, and user 1-5 (5,000 K to 10,000 K adjustable), DCI XYZ
Luminance (panel specification) (typical)	1000 cd/m2
Colour space (Colour gamut)	ITU-R BT.2020*2, ITU-R BT.709, EBU, SMPTE-C, DCI-P3*2, Native*3, S-GAMUT3*2, S-GAMUT3.cine*2
Transmission Matrix	ITU-R BT.2020 (Non-constant luminance is supported), ITU-R BT.709
EOTF	2.2, 2.4, 2.6, CRT, 2.4 (HDR), S-Log3 (HDR), S-Log3 (Live HDR), S-Log2 (HDR), SMPTE ST 2084(HDR), ITU-BT.2100(HLG)



HDR Capable Display



- BenQ SW271C

Display

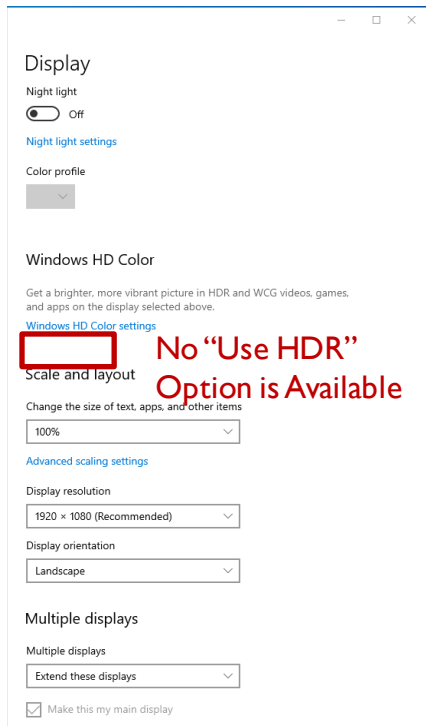
Screen Size	27
Panel Type	IPS
Backlight Technology	LED backlight
Resolution (max.)	3840 x 2160
Brightness	300
Native Contrast(typ.)	1000:1*
Viewing Angle (L/R;U/D) (CR>=10)	178 / 178
Response Time	5 ms (GtG)
Refresh Rate	60Hz
Aspect Ratio	16:9
Display Colors	1.07 billion colors
Color Gamut	99% AdobeRGB, 90% P3, 100% sRGB
Display Area(mm)	596.16 x 335.34
Pixel Pitch (mm)	0.1552
PPI	163
HDR	HDR10 / HLG
Display Mode	Full, Aspect Ratio, 1:1
Color Temperature	5000°K / 6500°K/ 9300°K / Custom / User Defined
Gamma	1.6 - 2.6, sRGB



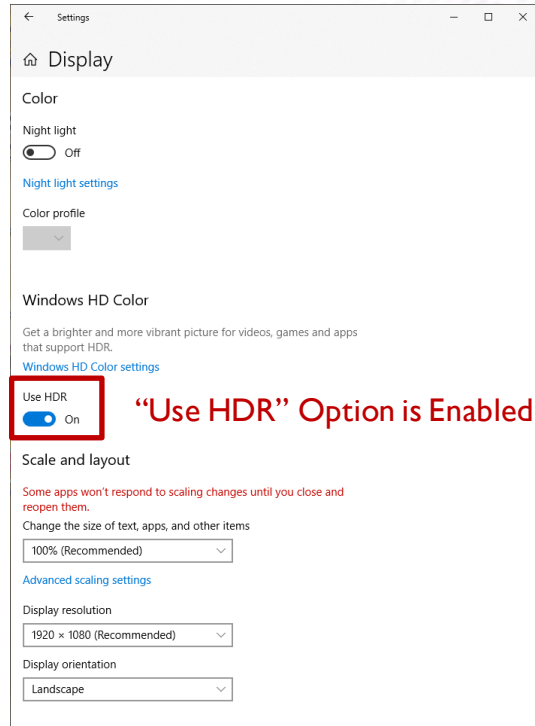
Enable “Use HDR” Option in Windows 10



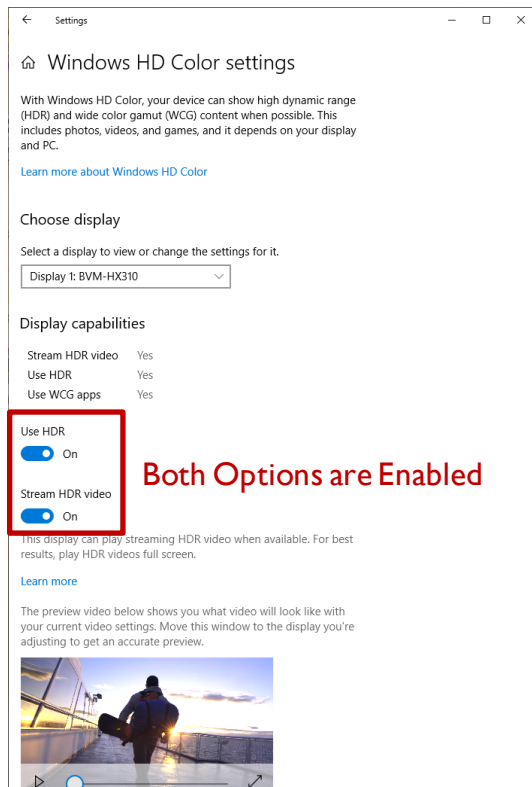
When Requirements are NOT Met.



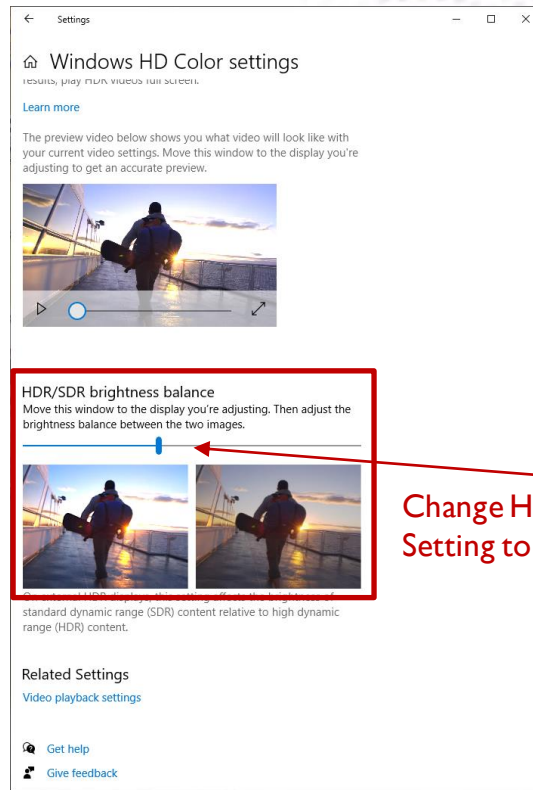
When Requirements are Met.



Change HDR Brightness in Windows 10



Both Options are Enabled



HDR/SDR brightness balance

Move this window to the display you're adjusting. Then adjust the brightness balance between the two images.



Change HDR Brightness Setting to 100

standard dynamic range (SDR) content relative to high dynamic range (HDR) content.

Related Settings

[Video playback settings](#)

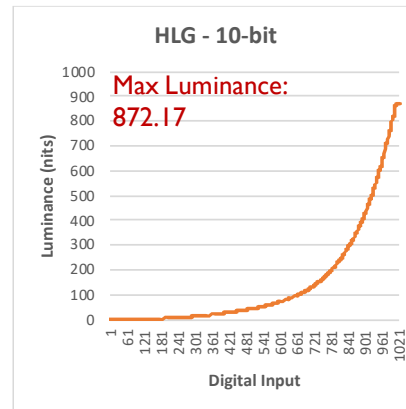
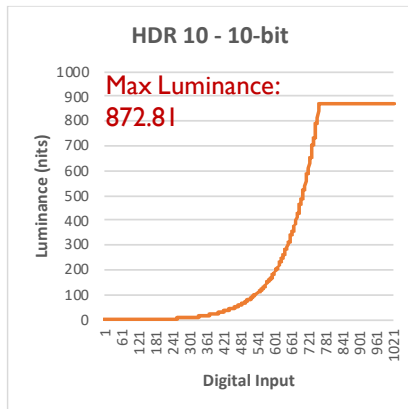
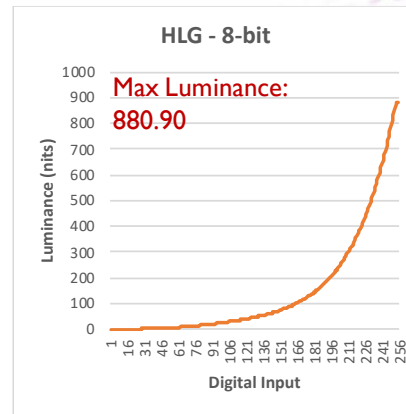
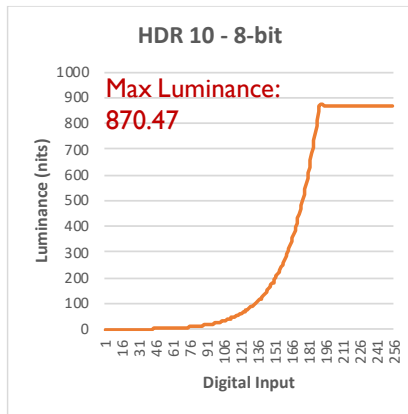
[Get help](#)

[Give feedback](#)

Gamma Curves under Different HDR Brightness Settings

HDR Reference Monitor

HDR 10 & HLG in 8-bit and 10-bit Measurements



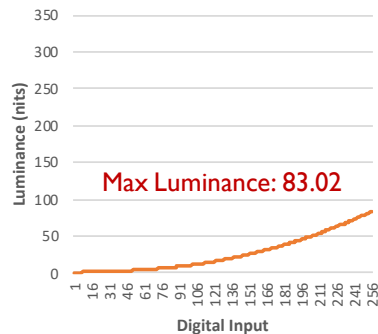
Gamma Curves under Different HDR Brightness Settings

HDR Capable Display

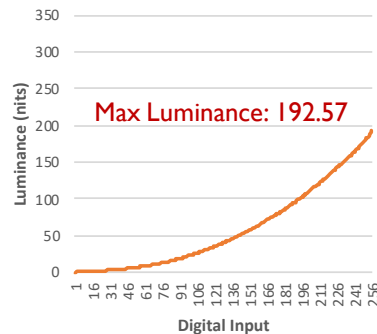
HDR Brightness 1, 25 & 50



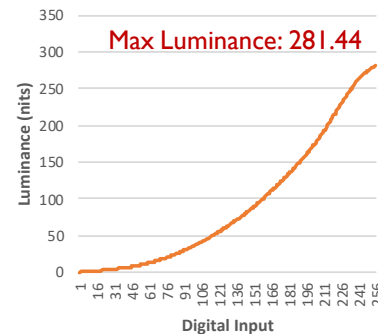
HDR Brightness 1 - 8-bit



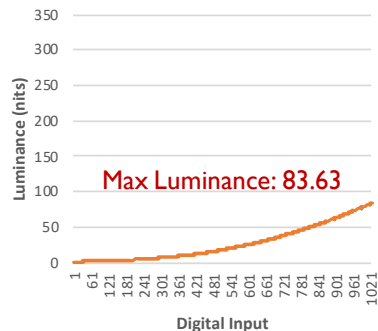
HDR Brightness 25 - 8-bit



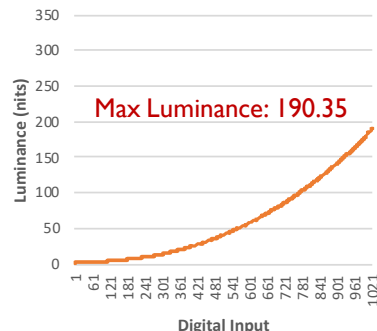
HDR Brightness 50 - 8-bit



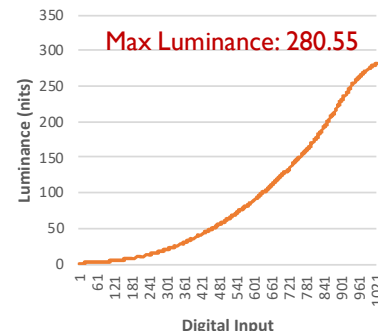
HDR Brightness 1 - 10-bit



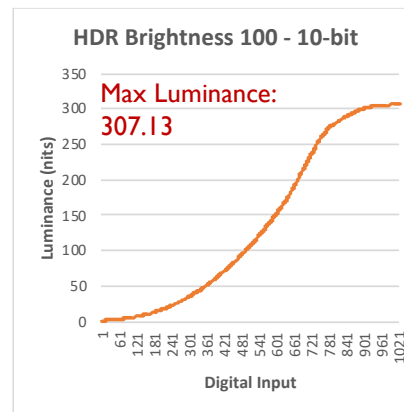
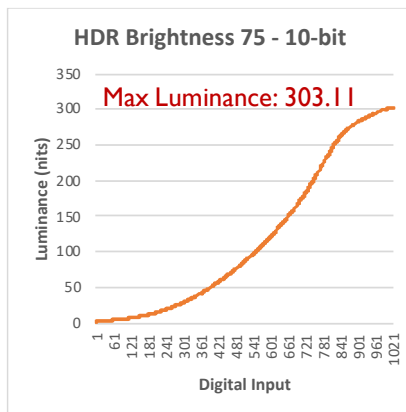
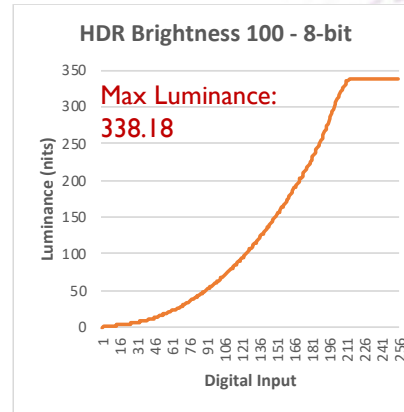
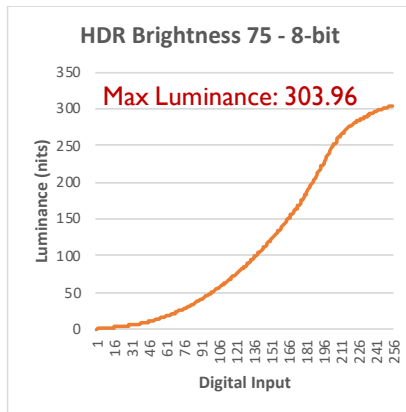
HDR Brightness 25 - 10-bit



HDR Brightness 50 - 10-bit



HDR Brightness 75 & 100



Troubleshooting Guide from Microsoft



- <https://support.microsoft.com/en-us/windows/hdr-and-wcg-color-settings-in-windows-10-2d767185-38ec-7fdc-6f97-bbc6c5ef24e6>

Fixing common problems

Many HDR displays today are designed primarily for watching movies and videos in HDR mode. As a result, you might need to do some things to get the best results when using your HDR display in Windows 10. If you're buying a new HDR display, we recommend looking for [VESA Certified DisplayHDR](#). These displays are designed and tested for a wide range of things you might do with HDR on a PC—including playing HDR games and using HDR apps.

If you're having problems displaying HDR content from your PC, here are things you can try to fix them.

Problem	Try this
Display or TV isn't showing HDR	▪ Make sure your display or TV has HDR turned on. The way you get to the on-screen menu on your HDR TV or display varies by make and model. Check out the documentation for your display or TV by visiting the manufacturer's website. ▪ Go to Settings ⚙️ > System 🖥️ > Display 🖥️ and make sure Use HDR is turned on under Windows HD Color.

Thank You for Your Attention!

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