8K ULTRA HD

Cable Guide

All lengths in metres

Guaranteed Bandwidth

32.4 Gbps

48.0 Gbps

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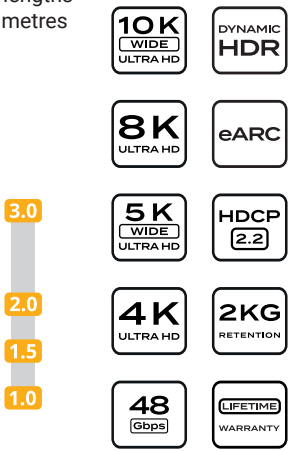

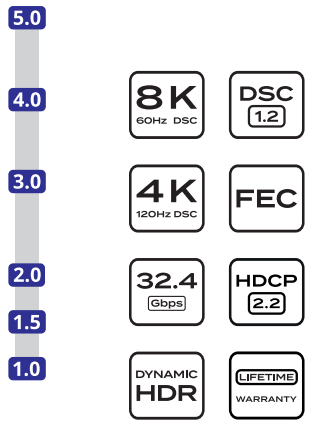

Bravo HDMI

HDMI 2.1 supports legacy TMDS mode and introduces Fixed Rate Link (FRL) mode which uses 3 Lanes operating at 3 or 6Gbps (max 18Gbps) or 4 Lanes at 6, 8, 10 or 12 Gbps (max 48Gbps). Bandwidth and optional DSC compression allow for a wide range of 4K, 5K Wide, 8K and 10K Wide resolutions, 8,10 & 12bit colour depths and frame rates up to 120fps. New Category 3 HDMI cables will be required to support all 2.1 features.

PRO DisplayPort

DisplayPort 1.4 uses the transmission mode HBR3 (32.4 Gbit/s) as introduced in version 1.3 and is still the highest available mode. DisplayPort 1.4 adds support for 4K, 5K & 8K resolutions with frame rates up to 240fps, Display Stream Compression 1.2 (DSC), Forward Error Correction, 8, 10 & 12 bit colour space including static and dynamic HDR. It also includes Rec.2020 colour space for HDMI interoperability. Audio capabilities extend to a maximum number of 32 audio channels.

8K Bandwidth Guide

HDMI® DisplayPort

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HDMI® Resolution			Frame Rate	Color depth (bits)	Chroma Subsampling	Speed	Data Rate (Gbps)
HDMI 2.1 - 2019-2020	4K	3840 x 2160p	60	HDR10	4:4:4/RGB	Ultra High Speed	20.05
				HDR12			24.06
			100/120	8, HDR10 or 12	4:2:0/4:2:2		32.08
				8-bit	4:4:4/RGB		32.08
				HDR10			40.10
				HDR12			48.11
	5K	5120 x 2160p	48/60	8, HDR10 or 12	4:2:0/4:2:2	Ultra High Speed	20.05
				8-bit	4:4:4/RGB		20.05
				HDR10			25.06
				HDR12			30.07
			100/120	8, HDR10 or 12	4:2:0/4:2:2		40.10
				8-bit	4:4:4/RGB		40.10
				HDR10		Ultra + DSC	50.12
				HDR12			60.14
	8K	7680 x 4320p	24/30	8-bit	4:2:0	Ultra High Speed	17.82
				HDR10 or 12	4:2:0/4:2:2		32.08
				HDR10	4:4:4/RGB		40.10
				HDR12			48.11
			48/60	HDR10	4:2:0		40.10
				HDR12			48.11
				HDR10 or 12	4:2:0/4:2:2	Ultra + DSC	64.15
				HDR10	4:4:4/RGB		80.19
				HDR12			96.23
			100/120	HDR10 or 12	4:2:0/4:2:2		128.30
	10K	10240 x 4320p	24/30	HDR10 or 12	4:2:0/4:2:2	Ultra High Speed	40.10
				HDR10	4:4:4/RGB	Ultra + DSC	50.12
				HDR12			60.10
			48/60	HDR10 or 12	4:2:0/4:2:2		80.19
				HDR10	4:4:4/RGB		100.24
				HDR12			120.29
			100/120	HDR10	4:2:0		100.24
				HDR12			120.29

DisplayPort Resolution			Frame Rate	Color depth (bits)	Chroma Subsampling	DSC 1.2[1]	Data Rate (Gbps)
DisplayPort 1.4 2018-2019	4K	3840 x 2160	60	8-bit	4:4:4/RGB	No	15.68
			75				19.74
			120				32.28
			144			DSC or 4:2:2	39.19 or 26.16
			240			DSC or 4:2:0	68.55 or 30.92
	5K	5120 x 2880	30	8-bit	4:4:4/RGB	No	13.68
			60				27.73
			120			DSC or 4:2:0	57.08 or 27.36
			144			DSC	69.30
			240		4:2:2	DSC + 4:2:2	80.91
	8K	7680 x 4320	30	8-bit	4:4:4/RGB	No	30.60
			60			DSC or 4:2:0	62.06 or 30.60
			120		4:2:2	DSC + 4:2:2	85.28
			144		4:2:0	DSC + 4:2:0	77.56

[1] - Display Stream Compression (DSC1.2) is a VESA-developed low-latency compression algorithm to overcome the limitations posed by sending high-resolution video over physical media of limited bandwidth. It is a visually lossless low-latency algorithm based on delta PCM coding and YCoCg-R colour space; it allows increased resolutions and colour depths and reduced power consumption.

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