

BROADCOM SUPPORTED VIDEO TIMINGS



- 4:4:4 TMDs bit Rate Computation:** $f_{bit,4:4:4} = 10 * f_{pixel} * (\frac{BitsPerColor}{8})$
 - Bits-per-color can be 8, 10, or 12.
- 4:2:2 TMDs bit Rate Computation:** $f_{bit,4:2:2} = 10 * f_{pixel}$
 - Applies to all bits-per-color options; 4:2:2 is never deep color, but is always 12-bits-per-color
- 4:2:0 TMDs bit Rate Computation:** $f_{bit,4:2:0} = 10 * f_{pixel} * (\frac{BitsPerColor}{8})/2$
 - Bits-per-color can be 8, 10, or 12.
- Rates depicted in the table as “Supported” are supported by the fastest HDMI cores**
 - To support a particular video timing, the remainder of the IC video path must also be capable of supporting it
 - The timings listed in the table are the ones most commonly used by HDMI capable devices
 - In addition, HDMI is capable of supporting dozens of other video timings

		TMDs Bit Rates (GHz) x 3 Channels							
		Resolution	Pixel Clock (MHz)	4:2:0			4:2:2	4:4:4	
				8-bit	10-bit	12-bit	12-bit	8-bit	10-bit
Supported in 1.4b		480p	27	0.1350	0.1688	0.2025	0.2700	0.2700	0.3375
Supported in 2.0		720p/1080i	74.25	0.3713	0.4641	0.5569	0.7425	0.7425	0.9281
Not Supported		1080p	148.5	0.7425	0.9281	1.1138	1.4850	1.4850	1.8563
Not Allowed		2160p30	297	1.4850	1.8563	2.2275	2.9700	2.9700	3.7125
		2160p60	594	2.9700	3.7125	4.4550	5.9400	5.9400	7.4250