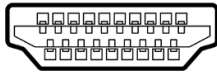




Not used in
any products

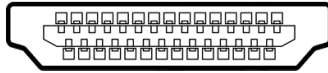


Automotive
Connection System



Standard

A



Dual-Link

B



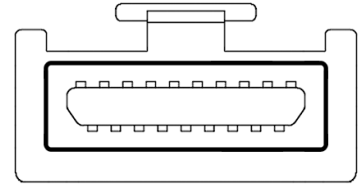
Mini

C



Micro

D



E

Video Format				HDMI Version / Maximum Data Rate				
Shorthand	Resolution	Refresh Rate (Hz)	Data Rate Required ^[a]	1.0–1.1	1.2–1.2a	1.3–1.4b	2.0–2.0b	2.1
				3.96 Gbit/s	3.96 Gbit/s	8.16 Gbit/s	14.4 Gbit/s	42.5 Gbit/s
720p	1280 × 720	24	576 Mbit/s	Yes	Yes	Yes	Yes	Yes
		30	720 Mbit/s	Yes	Yes	Yes	Yes	Yes
		60	1.45 Gbit/s	Yes	Yes	Yes	Yes	Yes
		120	2.99 Gbit/s	No	Yes	Yes	Yes	Yes
1080p	1920 × 1080	24	1.26 Gbit/s	Yes	Yes	Yes	Yes	Yes
		30	1.58 Gbit/s	Yes	Yes	Yes	Yes	Yes
		60	3.20 Gbit/s	Yes	Yes	Yes	Yes	Yes
		120	6.59 Gbit/s	No	No	Yes	Yes	Yes
		144	8.00 Gbit/s	No	No	Yes	Yes	Yes
		240	14.00 Gbit/s	No	No	No	Yes	Yes
1440p	2560 × 1440	30	2.78 Gbit/s	No	Yes	Yes	Yes	Yes
		60	5.63 Gbit/s	No	No	Yes	Yes	Yes
		75	7.09 Gbit/s	No	No	Yes	Yes	Yes
		120	11.59 Gbit/s	No	No	No	Yes	Yes
		144	14.08 Gbit/s	No	No	No	Yes	Yes
		240	24.62 Gbit/s	No	No	No	No	Yes
4K	3840 × 2160	30	6.18 Gbit/s	No	No	Yes	Yes	Yes
		60	12.54 Gbit/s	No	No	No	Yes	Yes
		75	15.79 Gbit/s	No	No	No	No	Yes
		120	25.82 Gbit/s	No	No	No	No	Yes
		144	31.35 Gbit/s	No	No	No	No	Yes
		240	54.84 Gbit/s	No	No	No	No	Yes ^[b]
5K	5120 × 2880	30	10.94 Gbit/s	No	No	No	Yes	Yes
		60	22.18 Gbit/s	No	No	No	No	Yes
		120	45.66 Gbit/s	No	No	No	No	Yes ^[b]
8K	7680 × 4320	30	24.48 Gbit/s	No	No	No	No	Yes
		60	49.65 Gbit/s	No	No	No	No	Yes ^[b]
		120	102.2 Gbit/s	No	No	No	No	Yes ^[b]
				1.0–1.1	1.2–1.2a	1.3–1.4b	2.0–2.0b	2.1
				HDMI Version				

	HDMI Version				
	1.0–1.2a	1.3–1.3a	1.4–1.4b	2.0–2.0b	2.1
Release Date	Dec 2002 (1.0) ^[123] May 2004 (1.1) Aug 2005 (1.2) ^[124] Dec 2005 (1.2a) ^[125]	Jun 2006 (1.3) ^[126] Nov 2006 (1.3a) ^[6]	Jun 2009 (1.4) ^[127] Mar 2010 (1.4a) ^[128] Oct 2011 (1.4b)	Sep 2013 (2.0) ^[110] Apr 2015 (2.0a) ^[129] Mar 2016 (2.0b)	Unreleased
Signal Specifications					
Transmission Bandwidth ^[a]	4.95 Gbit/s	10.2 Gbit/s	10.2 Gbit/s	18.0 Gbit/s	48.0 Gbit/s
Maximum Data Rate ^[b]	3.96 Gbit/s	8.16 Gbit/s	8.16 Gbit/s	14.4 Gbit/s	42.6 Gbit/s
TMDS Clock	165 MHz ^{[92](§3)}	340 MHz ^[126]	340 MHz	600 MHz	1200 MHz
TMDS Channels	3	3	3	3	4
Encoding Scheme ^[c]	8b/10b ^{[92](§5.1)}	8b/10b	8b/10b	8b/10b	16b/18b ^[122]
Compression (Optional)	-	-	-	-	DSC 1.2 ^[130]
Color Format Support					
RGB	Yes ^{[92](§6.2.3)}	Yes	Yes	Yes	Yes
YCbCr 4:4:4	Yes ^{[92](§6.2.3)}	Yes	Yes	Yes	Yes
YCbCr 4:2:2	Yes ^{[92](§6.2.3)}	Yes	Yes	Yes	Yes
YCbCr 4:2:0	No	No	No	Yes ^[131]	Yes
Color Depth Support					
8 bpc (24 bit/px)	Yes ^{[92](§3)}	Yes	Yes	Yes	Yes
10 bpc (30 bit/px)	Yes ^[d]	Yes	Yes	Yes	Yes
12 bpc (36 bit/px)	Yes ^[d]	Yes	Yes	Yes	Yes
16 bpc (48 bit/px)	No	Yes ^{[6](§6.5)}	Yes	Yes	Yes
Color Space Support					
SMPTE 170M	Yes ^{[92](§6.7.1)}	Yes	Yes	Yes	Yes
ITU-R BT.601	Yes ^{[92](§6.7.1)}	Yes	Yes	Yes	Yes
ITU-R BT.709	Yes ^{[92](§6.7.2)}	Yes	Yes	Yes	Yes
sRGB	No	Yes ^{[6](§6.7.1.3)}	Yes	Yes	Yes
xvYCC	No	Yes ^{[6](§6.7.2.3)}	Yes	Yes	Yes
sYCC ₆₀₁	No	No	Yes ^{[98](§6.7.2.4)}	Yes	Yes
AdobeYCC ₆₀₁	No	No	Yes ^{[98](§6.7.2.5)}	Yes	Yes
Adobe RGB (1998)	No	No	Yes ^{[98](§6.7.2.5)}	Yes	Yes
ITU-R BT.2020	No	No	No	Yes ^[131]	Yes
Audio Specifications					
Max. Sample Rate Per Channel	192 kHz ^{[92](§7.3)}	192 kHz	192 kHz	192 kHz	192 kHz
Max. Aggregate Sample Rate	?	?	768 kHz ^{[98](§7.3)}	1536 kHz ^[131]	1536 kHz
Sample Size	16–24 bits ^{[92](§7.3)}	16–24 bits	16–24 bits	16–24 bits	16–24 bits
Maximum Audio Channels	8 ^{[92](§7.3.1)}	8	8	32 ^[131]	32
	1.0–1.2a	1.3–1.3a	1.4–1.4b	2.0–2.0b	2.1
	HDMI Version				