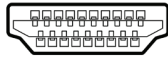

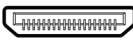








# HDMI Cable & Port Information

Types	Type A (Standard)	Type B (Dual Link)	Type C (Mini)	Type D (Micro)
Connector Image				
Camera HDMI Port Image		Not used		
Support Camera	Panasonic S1R Panasonic GH5 BMPCII Canon EOS R	-	Nikon Z7 Canon 1DX Canon 5DMKIV Nikon D850	Fujifilm XT3 Sony A7RIII Olympus EM10III Sony RX100VI Panasonic GX9

## <Main specifications>

HDMI Version	1.4-1.4b	2.0-2.1b
<b>Signal Specifications</b>		
Transmission Bandwidth	10.2 Gbit/s	18.0 Gbit/s
Maximum Data Rate	8.16 Gbit/s	14.4 Gbit/s
Maximum Character Rate	340 MHz	600 MHz
Data Channels	3	3
Encoding Scheme	8b/10b	8b/10b
<b>Color Format Support</b>		
RGB	Yes	Yes
Y'C <sub>B</sub> C <sub>R</sub> 4:4:4	Yes	Yes
Y'C <sub>B</sub> C <sub>R</sub> 4:2:2	Yes	Yes
Y'C <sub>B</sub> C <sub>R</sub> 4:2:0	No	Yes
<b>Color Depth Support</b>		
8 bpc (24 bit/px)	Yes	Yes
10 bpc (30 bit/px)	Yes	Yes
12 bpc (36 bit/px)	Yes	Yes
16 bpc (48 bit/px)	Yes	Yes
<b>Color Space Support</b>		
SMPTE 170M	Yes	Yes
ITU-R BT.601	Yes	Yes
ITU-R BT.709	Yes	Yes
sRGB	Yes	Yes
xvYCC	Yes	Yes
sYCC <sub>601</sub>	Yes	Yes
Adobe YCC <sub>601</sub>	Yes	Yes
Adobe RGB (1998)	Yes	Yes
ITU-R BT.2020	No	Yes

## <Refresh frequency limits for standard video>

Video Format				HDMI Version / Maximum Data Rate	
Shorthand	Resolution	Refresh Rate (Hz)	Data Rate Required	1.3-1.4b	2.0-2.0b
				8.16 Gbit/s	14.4 Gbit/s
720p	1280 × 720	30	720 Mbit/s	Yes	Yes
		60	1.45 Gbit/s	Yes	Yes
		120	2.99 Gbit/s	Yes	Yes
1080p	1920 × 1080	30	1.58 Gbit/s	Yes	Yes
		60	3.20 Gbit/s	Yes	Yes
		120	6.59 Gbit/s	Yes	Yes
		144	8.00 Gbit/s	Yes	Yes
1440p	2560 × 1440	240	14.00 Gbit/s	4:2:0	Yes
		30	2.78 Gbit/s	Yes	Yes
		60	5.63 Gbit/s	Yes	Yes
		75	7.09 Gbit/s	Yes	Yes
		120	11.59 Gbit/s	4:2:2	Yes
4K	3840 × 2160	144	14.08 Gbit/s	4:2:0	Yes
		240	24.62 Gbit/s	No	4:2:0
		30	6.18 Gbit/s	Yes	Yes
		60	12.54 Gbit/s	4:2:0	Yes
		75	15.79 Gbit/s	4:2:0	4:2:2
5K	5120 × 2880	120	25.82 Gbit/s	No	4:2:0
		144	31.35 Gbit/s	No	No
		240	54.84 Gbit/s	No	No
		30	10.94 Gbit/s	4:2:2	Yes
		60	22.18 Gbit/s	No	4:2:0
		120	45.66 Gbit/s	No	No

[https://en.wikipedia.org/wiki/HDMI#cite\\_note-hdmi\\_2.0\\_pr-110](https://en.wikipedia.org/wiki/HDMI#cite_note-hdmi_2.0_pr-110)

The HDMI cable is made up of 19 pins/wires that all have to be precisely soldered to a very small connector. The wires must maintain a very precise tolerance in length. HDMI passes a tremendous amount of data and there is very little room for error. If even one of the wires is damaged, you may experience issues with the signal.

### To prevent damage to your HDMI cable:

- \* Don't place excessive stress on your HDMI cable connector
- \* Don't bend or twist your HDMI cable.

# HDMI 1.4 Input & Output

<Supporting monitor housings>

- 17904 Nauticam Atomos Shogun
- 17906 Nauticam 502H
- 17909 Nauticam Atomos Flame
- 17920 Nauticam 502B-H

## Check List for Three Essential items

\*Each group should have at least one item

Optional items

### 1. Cable for connecting Monitor housing and Camera Housing

- 25048 HDMI (A-D) 200mm
- 25071 HDMI (A-D) 750mm (for Shogun housing)

- 25038 HDMI (A-D) 750mm
- 25039 HDMI (A-D) 200mm
- 25040 HDMI (A-D) 5000mm
- 25047 HDMI (D-D) 800mm

### 2. HDMI Bulkhead for Camera housing

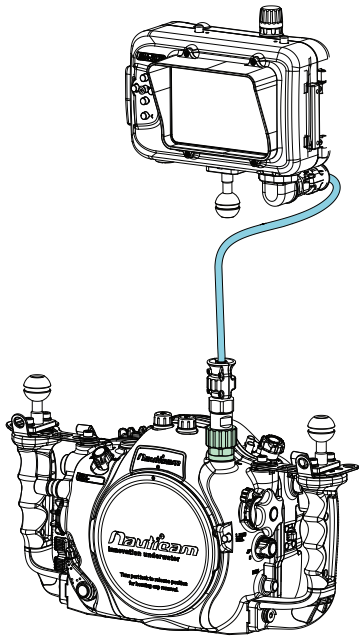
- 25033 Standard HDMI Bulkhead

- 25029 Socket extension for HDMI bulkhead with M14 thread
- 25031 Socket extension for HDMI bulkhead with 1/2" thread

### 3. Internal Cable for Camera housing

- 25036 HDMI(D-C) 190mm
- 25046 HDMI(D-D) 200MM

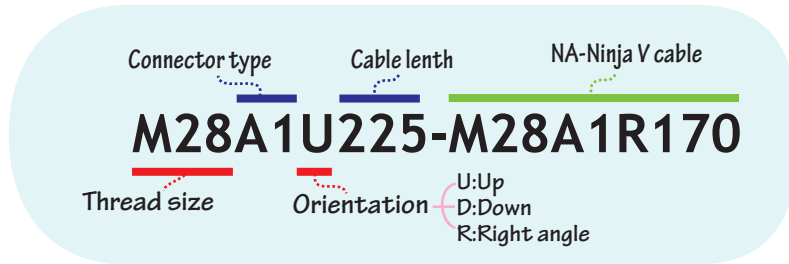
- 25034 HDMI(D-C) 110mm
- 25035 HDMI(D-C) 130mm
- 25042 HDMI(D-C) 240mm



Nauticam monitor housing is inclusive of all the three required essential items. Optional items can be ordered as spare parts.

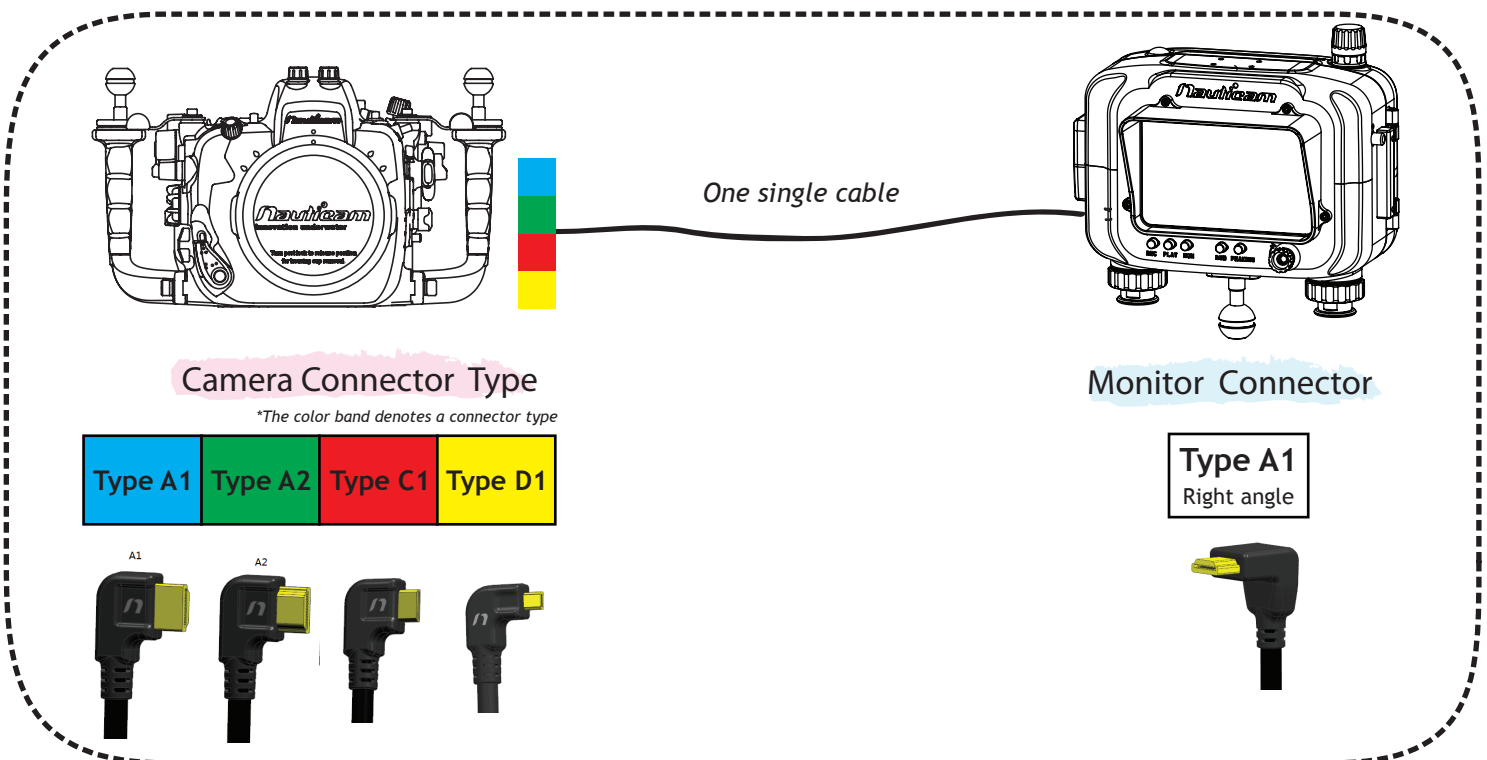
HDMI 1.4 support for 4096x2160 at 24 Hz, 3840x2160 at 24, 25, and 30 Hz, and 1920x1080 at 120 Hz

# HDMI 2.0 Input & Output



P/N	Supporting Housings	Supporting Monitor	Description
25077	NA-XT3	NA-Ninja V	M24D1R205-M28A1R170
25078	NA-BMPCCII NA-S1R	NA-Ninja V	M28A1R225-M28A1R170
25079	NA-GH5SV	NA-Ninja V	M28A2R210-M28A1R170
25084	NA-EM1X	NA-Ninja V	M28C1RTBD-M28A1R170
25085	NA-Z7V	NA-Ninja V	M28C1RTBD-M28A1R170

Nauticam Ninja V housing doesn't include HDMI 2.0 cable since it is housing model specific. Please order the cable separately accordingly to the compatible table to work with your housing.



HDMI 2.0 increases the maximum bandwidth to 18.0 Gbit/s, HDMI 2.0 uses 8b/10b encoding for video transmission like previous versions, giving it a maximum video bandwidth of 14.4 Gbit/s. This enables HDMI 2.0 to carry 4K video at 60 Hz with 24 bit/px color depth