



LIGHTWARE

INNOVATIVE, RELIABLE, MADE IN EUROPE.



When a “Simple” HDMI Cable Becomes the Bottleneck in a High-End AV System

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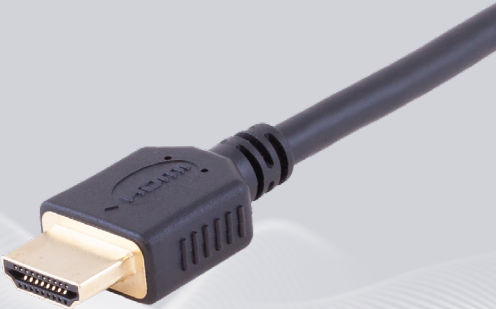


Why Lightware's HDMI Cable Succeeded

Swapping in the **Lightware CAB-HDMI20-PHS300P** reference cable immediately restored full system functionality. The difference lays in the details:

- **True HDMI 2.0 compatibility**, supporting the full 18 Gbps bandwidth
- **Dedicated shielding for each TMDS pair**, terminated precisely to the correct pins (2, 5, 8, 11)
- **Proper DDC GND connection** to pin 17: critical for EDID, HDCP, and CEC protocols
- **Outstanding EMC performance**, minimizing interference and ensuring stable operation in professional environments
- **Certified HDMI Premium Cable** designation
- **Tested and verified for cross-manufacturer compatibility and durability**

These specifications are not just checkbox items: they're integral to ensuring seamless communication between devices, especially in demanding AV environments.



Examined
HDMI Cable



Results

Continuity

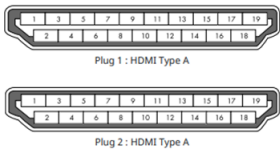
Status	Wire	Plug 1	Expected Plug 1	Plug 2	Expected Plug 2
✓	CEC	13	13	13	13
✓	DDC_SV	18	18	18	18
✗	DDC_CEC_GND		17	17	17
✗	DDC_CEC_GND	17	17		17
✓	DDC_SCL	15	15	15	15
✓	DDC_SDA	16	16	16	16
✓	HEC_D_P	14	14	14	14
✓	HPD_HEC_D_N	19	19	19	19
✓	SHELL	SHELL	SHELL	SHELL	SHELL
✓	TMDS_CLOCK_N	12	12	12	12
✓	TMDS_CLOCK_P	10	10	10	10
✗	TMDS_CLOCK_SHIELD		11	11	11
✗	TMDS_CLOCK_SHIELD	11	11		11
✓	TMDS_DATA0_N	9	9	9	9
✓	TMDS_DATA0_P	7	7	7	7
✗	TMDS_DATA0_SHIELD		8	8	8
✗	TMDS_DATA0_SHIELD	8	8		8
✓	TMDS_DATA1_N	6	6	6	6
✓	TMDS_DATA1_P	4	4	4	4
✗	TMDS_DATA1_SHIELD		5	5	5
✗	TMDS_DATA1_SHIELD	5	5		5
✓	TMDS_DATA2_N	3	3	3	3
✓	TMDS_DATA2_P	1	1	1	1
✗	TMDS_DATA2_SHIELD		2	2	2
✗	TMDS_DATA2_SHIELD	2	2		2

Results

Continuity

Status	Wire	Plug 1	Expected Plug 1	Plug 2	Expected Plug 2
✓	CEC	13	13	13	13
✓	DDC_SV	18	18	18	18
✓	DDC_CEC_GND	17	17	17	17
✓	DDC_SCL	15	15	15	15
✓	DDC_SDA	16	16	16	16
✓	HEC_D_P	14	14	14	14
✓	HPD_HEC_D_N	19	19	19	19
✓	SHELL	SHELL	SHELL	SHELL	SHELL
✓	TMDS_CLOCK_N	12	12	12	12
✓	TMDS_CLOCK_P	10	10	10	10
✓	TMDS_CLOCK_SHIELD	11	11	11	11
✓	TMDS_DATA0_N	9	9	9	9
✓	TMDS_DATA0_P	7	7	7	7
✓	TMDS_DATA0_SHIELD	8	8	8	8
✓	TMDS_DATA1_N	6	6	6	6
✓	TMDS_DATA1_P	4	4	4	4
✓	TMDS_DATA1_SHIELD	5	5	5	5
✓	TMDS_DATA2_N	3	3	3	3
✓	TMDS_DATA2_P	1	1	1	1
✓	TMDS_DATA2_SHIELD	2	2	2	2

Lightware
Reference Cable
(CAB-HDMI20-PHS300P)



Our Testing Approach: No Guesswork, Just Proof

Each Lightware HDMI cable undergoes rigorous validation procedures, including:

- **Automated verification** using Total Phase Advanced Cable Tester
 - Checks for correct pinout, grounding, shielding continuity, and potential shorts
- **Instrument-based tests** for EDID, HDCP, and CEC protocol functionality
- **Plug-and-play testing** with popular laptops, PCs, and AV devices from top manufacturers
- **Stress testing** for mechanical flexibility and long-term durability

These tests go far beyond the industry's bare minimum. Because in mission-critical AV systems, reliability isn't optional.

Cables Aren't Just Cables

This case is a reminder to all AV professionals: not all HDMI cables are created equal. And in professional systems, especially those involving signal extension, switching, or TPS transport, even small deviations from the HDMI standard can have outsized effects.

At Lightware, we don't treat cables as accessories, we treat them as core system components. That's why our cable portfolio is built with the same engineering mindset that drives our AV devices: quality first, tested thoroughly, and built to perform in the real world.

Explore Our Full Cable Portfolio

From short patch cables to long-distance solutions, the **Lightware HDMI cable line** delivers dependable performance: lab-tested, field-proven, and certified to support even your most demanding AV environments.

Learn more at: lightware.com/en/products/Cables