HDMI 2.1 - What can the latest HDMI standard do?

There are different HDMI standards because the requirements and technologies for the transmission of audio and video signals have evolved over time. Each new HDMI standard brings improvements in terms of bandwidth, resolution, colour depth, audio quality, control options and other functions.

Bandwidth in comparison:

HDMI 1.4	HDMI 2.0	HDMI 2.1
10.2 Gbps	18 Gbps	48 Gbps

Values in comparison:

HDMI Specification	HDMI 2.0 - 2.0b	HDMI 2.1
Advent	2016	2017
Data rate (max.)	18 Gbps	48 Gbps
Resolutions	3840x2160p 60Hz 1920x1080p 48Hz 3D	7680x4320p 60Hz 3840x2160p 120Hz
Audio formats	32 Channel Audio Sampling rate 1536kHz	32 Channel Audio Sampling rate 1536kHz
New colour formats	Colour space ITU-R BT.2020	RGB with 14 bits each with colour subsampling YCbCr 4:2:0 Video compression DSC 1.2
14 Bit /16 Bit colour depth	No	Yes
4 Audio Streams	Yes	Yes
2 Video Streams (Dual View)	Yes	Yes

There are several reasons why you should use the HDMI 2.1 standard

Higher bandwidth: HDMI 2.1 offers a significantly higher bandwidth compared to previous versions. This enables the transmission of higher resolutions, extended colour spaces and frame rates as well as support for technologies such as 8K resolution at 60Hz or 4K at 120Hz.

Variable Refresh Rate (VRR): HDMI 2.1 supports Variable Refresh Rate, which means that the display can dynamically adjust the refresh rate to the frame rate of the source device. This reduces screen judder and tearing, which is particularly important when gaming.

Quick Media Switching (QMS): With HDMI 2.1, devices can quickly switch between different video sources without any delays or interruptions. This is particularly useful when switching between different input sources such as a Blu-ray player, a games console and a streaming device.

Quick Frame Transport (QFT): HDMI 2.1 offers lower latency, which is particularly important for gaming applications. This enables faster transmission of images from the source device to the display, improving response time and providing a smoother gaming experience.

Enhanced Audio Return Channel (eARC): The improved audio return channel enables the transmission of high-resolution audio formats such as Dolby Atmos and DTS:X from compatible televisions to the audio system via an HDMI cable.

Overall, HDMI 2.1 offers improved performance and functionality, which is particularly beneficial for applications such as gaming, high-resolution streaming and home cinema. So if you want the best possible picture and sound quality as well as maximum feature support, HDMI 2.1 is the right standard.

Our cables for your requirements

Cables that are to be used for HDMI 2.1 applications must fulfil certain characteristics to ensure full performance and compatibility.

Here are some important features:

High-Speed data transmission: HDMI 2.1 requires fast data transmission to support the higher resolutions and frame rates. The cable must be able to transmit the required data rates for these applications without causing signal loss or interference.

Cable length and quality: The length of the cable can influence the signal quality. For longer distances, high-quality cables with a larger cross-section and appropriate shielding and quality are required to minimise signal loss.

Reliability and durability: As HDMI cables are often moved and stressed, they should be robust and durable to ensure reliable signal transmission over a longer period of time.

ROBUST HIGH-QUALITY HDMI CABLES FROM OUR PORTFOLIO

Premium UltraFlex HDMI Cable

The cable has a robust multiple shielding that makes it durable and resistant to external influences. The LSOH UltraFlex jacket material is very flexible, easy to lay and can withstand up to 5000 bending cycles without any loss of performance (4K@60Hz). The wide temperature range of -10°C to +80°C enables a broad spectrum of possible applications, also UL-certified and halogen-free!

UltraFlex HDMI »High-Retention« Cable

The special plug design with ergonomically shaped strain relief and special locking mechanism enables a stable plug connection with up to 3kg additional force and prevents accidental „falling out“ of the socket. This cable is also multi-shielded and has a very flexible cable that enables a small bending radius. The robust workmanship and flexible cable material make the cable durable and suitable for many areas of application where reliable signal transmission with high performance is required.

Steel Armoured HDMI 2.1 Active Optical Cable - Long distance

The active optical HDMI 2.1 cable delivers brilliant images up to 8K/60 Hz over long distances of up to 30 metres and is also extremely robust and resilient, making it perfect for heavy-duty applications. The thin, flexible cable is reinforced with a Kevlar layer and steel armouring. This ensures extremely high resilience and durability as well as very high compressive and tensile strength. The cable diameter is only 3.8 mm, which, in combination with the flexible TPU sheath, makes it very flexible and provides excellent installation properties.