

TEST

Oehlbach
Flex Evolution

lite Testurteil
2021

Highlight

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Oehlbach Flex Evolution

FLEXIBLE 8K ULTRA
HIGH-SPEED HDMI-CABLE

CLEVER KINK
PROTECTION

Gaming fun
in 4K/120 Hz



The Oehlbach Flex Evolution is an HDMI cable that reliably transmits image and sound signals up to 4K/120 Hz. The bend protection relieves the strain on the plug and HDMI socket, thus preventing damage.
Photo: Michael B. Rehders

Oehlbach Flex Evolution Flexible 8K Ultra High-Speed HDMI-Cable

The Flex Evolution from Oehlbach is more than "just" another HDMI cable. It is a multifunctional signal conductor for the highest demands and a real problem solver. It enables the interference-free signal transmission of high-resolution UHD/HDR content. Gamers can also enjoy the smooth gameplay in HFR. But that's not all, the Flex Evolution has a few more advantages to offer.

Home cinema enthusiasts and gamers are familiar with this: as soon as the new game console is in the house or the new 4K Blu-ray player, interference is visible on the TV or projector. Since everything has been running flawlessly with Full HD resolution so far, the blame for picture and sound errors is initially placed on the new devices. As a rule, however, these are not defective. The fault often lies in the HDMI signal transmission. But why is that? The answer to this question is relatively simple: Because the old cables cannot fully transport the now higher bandwidth. While movies and games with Full HD resolution are relatively frugal, 4K content demands up to 18 gigabits/second. Compared to less picky Full HD movies, that is twice as much. If you add brand-new features, for example HFR (High Frame Rate), which allows video games and movies

in 4K resolution to run at up to 120 FPS (Frames per Second). Commercially available 18 Gbps HDMI cables are overtaxed with this. This is where Oehlbach comes into play.

The right HDMI cable

Ideally, an HDMI cable should output image and sound signals exactly as they are fed in. There should be no errors or losses on the transmission path, so that you can experience movies and games in the best quality. Now, I already mentioned at the beginning that different image signals require more or less bandwidth. In addition, there are often typical interferences. These can come from smartphones, antennas and even from the freezer next door. But also an HDMI cable hanging on voltage over the years can break, as I have experienced myself. Constant plugging and unplugging is also not particularly conducive to long-term durability. The Oehlbach Flex Evolution is supposed to remedy this. It's an HDMI cable that supports all the latest features. Movies and games are transmitted flawlessly in 4K up to 120 FPS and in 8K up to 60 FPS. This is currently the upper limit of the HDMI standard. Moreover, it has a strain relief for the connector.

Clever kink protection

The Flex Evolution Ultra High-Speed HDMI cable features the patent plug with integrated kink protection developed and registered by Oehlbach. Thanks to its design and material composition, it is intended to optimally protect the cable against cable breakage. In addition, the plug housing is shorter than that of other HDMI cables. This allows the projector to be pushed even closer to the rear wall. If you plan the image size exactly to the millimeter, you still get a few centimeters of leeway to the rear, which are extremely welcome. I can easily move the Oehlbach Flex Evolution down or to the side in a relatively tight radius. This also has advantages for the AV receiver when it is quite close to the wall. Cables, plugs and connection sockets are less stressed when the HDMI cable is laid in tight curves. This can significantly extend the durability. Oehlbach is so convinced of the quality of the Flex Evolution that the company even grants a 30-year (!) warranty.



The Ultra High-Speed HDMI cable from Oehlbach is available in two lengths: In one meter and three meters. Both support the highest HDMI standard currently available. Photo: Michael B. Rehders



The flexible housing protects the cable and reduces the risk of cable breakage. Especially when space is tight during installation and the cable is to be routed downwards or sideways in tight curves. Photo: Michael B. Rehders



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Model: Oehlbach Flex Evolution

Product category: HDMI cable
Price: - 69,99 Euro (3 Meter)
- 39,99 Euro (1 Meter)

Warranty: 30 years

Versions: Petrol blue / Anthracite

Vertrieb: **Oehlbach, Cologne**
02203 / 2974 700
www.oehlbach.com

Dimensions: 1 Meter / 3 Meter

Transmission rate: 48 Gbps

Material: OFC - oxygen-free Copper

Shielding structure: 2 x aluminum foil + 1 x copper braid

Shielding structure: 3-fold

Resolution: - 8K UHD 50/60 Hz
- 4K UHD 120 Hz

HDMI features: - 32 digital audio channels
- Deep Color 30/36/48-bit 21:9
- Cinema aspect ratio
- HDMI CEC Automated A/V Control
- HEC - HDMI with Ethernet Channel
- CEC 2.0 HDR - High Dynamic Range Image
- Dolby Vision
- eARC - Enhanced Audio Return Channel
- VRR - Variable Refresh Rate
- Dynamic HDR

Sound formats: - Dolby TrueHD
- Dolby Atmos
- DTS-HD Master Audio
- DTS:X 5.1
- DTS HD

Overall grade: **Highlight**

Class: Top class
Price/performance: excellent



The Oehlbach Flex Evolution performs well with 4K projectors like the ViewSonic PX728-4K. It transmits all image signals completely free of interference. The sound is transmitted from the projector to the AV receiver via eARC. This is practical if the ViewSonic is to receive apps and the sound is to be played back from the 5.1 system. Photo: Michael B. Rehders

4K movies on the big screen

Today I start my picture test with the 4K Blu-ray "Jungle Cruise" on an entry-level 4K beamer, the ViewSonic PX728-4K. Beforehand, I connect the projector and AV receiver with the three-meter cable. The player is also connected to the AV receiver via the one-meter version. The contacts of the Oehlbach are 24-carat gold-plated, PVC-free and the inner conductors are made of oxygen-free copper (OFC). Since all common picture and sound formats are supported, I would first like to see how the Flex Evolution HDMI cables do in normal 4K playback.

To make a long story short: Both Oehlbach HDMI cables transmit all signals without interference. Since menus from 4K Blu-rays are often available in 60 Hz, the cable and projector must be able to handle this frequency. Otherwise, signal interruptions occur. Not so in this combination. The menu of "Jungle Cruise" is there immediately. The handshake when starting the movie is done in no time. Our test sample also masters eARC (Enhanced Audio Return Channel).

Experience 8K movies

The future of home entertainment has long since begun: Projectors and televisions with 8K Ultra HD are already available today. Admittedly, movies in this resolution are still scarce. Currently, there are no Blu-ray players that can handle this resolution. At best, a few 8K videos can be played via YouTube on a PC. But the development continues at a rapid pace. It is only a matter of time until fea-

ture films are available in 8K resolution. The Oehlbach Flex Evolution is ready for that. Now I'm connecting it to a JVC DLA-NZ9, a brand new 8K e-shift laser projector. Over the entire test period, the signal transmission remains stable. I'm really excited about it. Both cables transmit photos and YouTube videos flawlessly and in full UHD resolution at 7,680 x 4,320 pixels in 60 Hz. I have never been able to experience my photos in such splendor. 8K movies are also impressive for their sheer resolution. Movements are completely judder-free and run smoothly throughout.

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Input	HDMI 1
Source	4320p 60
Resolution	7680 x 4320
Color range	YCbCr 4:2:0 10bit
Colorimetry	ITU-R BT.709
HDR	SDR
Max CLL/Max FALL	--- / --- nits
Light source time	92 H
Soft. Ver.	v0.95

A look at the projector's on-screen menu proves this: Thanks to the reliable transmission of the Flex Evolution, the source signal arrives in full 8K resolution. Photo: Michael B. Rehders

HFR for starters

Where some other HDMI cables already have problems transmitting the feature film "Gemini Man" at 4K/60 Hz without errors, the Oehlbach Flex Evolution, on the other hand, does not show any weakness. The movie runs absolutely smoothly in 60 Hz. As expected, everything that was fed into the HDMI cable at the beginning arrives correctly at the projector. Artifacts in the form of interference, which can be traced back to the HDMI signal transmission, do not exist with the Oehlbach. Influences from smartphones, antenna cables and WiFi sticks leave our test sample completely unimpressed. It does what it is supposed to: Transmit signals circumferentially and without interference. Henry Brogan (Will Smith) is a contract killer with extraordinary abilities. His way of working is precise and he completes his missions in the shortest possible time. When he is pursued by his cloned younger self on a motorcycle, crazy fast camera pans occur. The projector and HDMI cable show up with aplomb. Everything is crystal clear on the screen. It doesn't get any better than this.



Even my 8K panorama shot of Hamburg is completely transmitted by the Oehlbach Flex Evolution. The screenshot from the screen proves that the high resolution is transmitted completely and true to the original. Photo: Michael B. Rehders

Gaming fun in 4K/120 Hz

While movies in 4K/120 Hz are limited to a relatively few YouTube videos and manufacturer demos, gamers currently have it better. The first games with 120 FPS are available via PS5. These include, for example: "Call Of Duty Black Ops: Cold War", "Borderlands 3", "Devil May Cry 5: Special Edition" and "Centerpede Recharged". Played back via the Philips 55OLED806, the result is simply stunning when running games at 4K/120 FPS. Fast movements are crisp and totally smooth. Reactions on the controller are promptly implemented. The sound is rendered absolutely synchronously with the picture. There is no noise at all. The combination of PS5, Oehlbach Flex Evolution and Smart TV harmonizes perfectly. The three meter HDMI cable is even long enough to lay it inconspicuously behind the TV and connect it to the PS5. The cable sits firmly and wobble-free in the HDMI sockets of the TV and console. This ensures an absolutely interference-free transmission. This makes gaming fun!

Conclusion

The Oehlbach Flex Evolution is an 8K ultra high-speed HDMI cable that meets all current HDMI standards. It can be flexibly routed in the tightest of spaces, has a patented anti-kink connector to prevent cable breakage, and it is excellently crafted. The signal transmission of 8K with 50/60 Hz and 4K with 120 Hz succeeds flawlessly over the entire distance. Gamers who demand the highest standards and movie enthusiasts alike who are already speculating on 8K will benefit from this.

With the Oehlbach Flex Evolution, the optimum is extracted from console, flat screen and projector, in which image and sound signals are transmitted true to the original. All this at a price that is more affordable than many think.

At 69 euros (3 meters) and 39 euros (1 meter), the Oehlbach Flex Evolution HDMI cable is surprisingly inexpensive.



*Test, text and photos:
Michael B. Rehders*