FIBBR

Fiber Optic Cable Manual

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CCTV "News Network": YOFC owner the "world's largest optical glass rod".

CORE CONCEPT

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In a continuous exploration, FIBBR hopes to seamlessly connect its brands and users, and meet the ever-changing needs of users, and use this as a corner-stone to further FIBBR's ongoing efforts.

- The BendRobust special fiber by YOFC has solved the problem of fiber breakage in normal use. Based on the future technology of indus try-leading megabit optical fiber transmission, FIBBR delegates it to the civilian audio-visual market, that is a huge technological revolution on the traditional copper wire HDMI industry.
- After excellent technical research and development, FIBBR concen-trates the Optical-Electrical conver-sion technology that can only be completed on large and medium-sized equipment to a small area of less than 0.0001m^2, and makes them have the characteristics of low power consumption, high efficiency which are seemingly conflicting.

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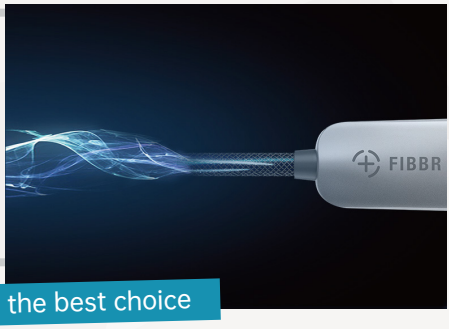
Long distance transmission,

the signal has always been the same

4K HDR high stream data files become more and more popular, smart home/custom theater also has new requirements on the connection length, to achieve high-speed/long-distance digital signal transmission through technological breakthroughs become a new topic.
Optical fiber as the carrier, with active Optical-Electrical conversion of the new cable for data transmission - Fiber Optic HDMI/USB/DVI/DP Cable , is the best choice for now.

* The following advantages are based on HDMI cable.

Optical fiber as a carrier, with lossless conversion, long-distance optical transmission, almost 0 attenuation, stable performance through the Optical-Electrical conversion engine.



4K long-distance transmission is the best choice

- Taking copper wire as the medium, the traditional HDMI cable may not be stable due to the insufficient speed during the 4K transmission, frame loss, color distortion and frequent video smearing occur. When the transmission distance is too long (exceeding 10 m), bandwidth will be narrowed, so it can not realize the effective transmission.
- FIBBR takes fiber as the medium, its theoretical transmission distance can be up to 300m. The selected high quality BendRobust specialty fiber with a sighal attenuation of less than 0.0035dB/m, stable transfer of 18Gbps, true 4K (3840 x 2160 resolution and 60fps), video signals and up to 32 channels and up to 1536kHz sampled audio signal, is the best choice for the current long-distance 4K transmission.

* The 8K HDR HDMI line rate can be up to 48Gbps.

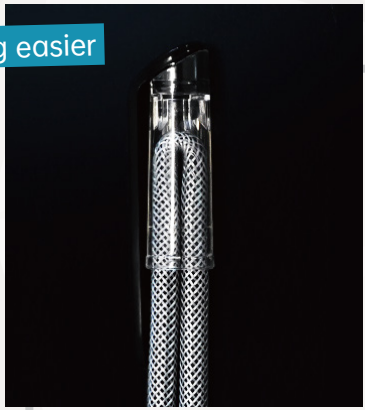
FIBBR optical fiber HDMI cable structure diagram. Optical fiber transmission has advantages of no radiation,interference and without shielding.

No fear of electromagnetic interference, only for the original sound replay

- Class fiber transmission is non-conductive, free from the electromagnetic interference, so optical fiber has a stronger anti-interference ability, no need to worry about other equipment on the screen interference while connection.
- For home theater applications, very low back-ground noise (noise floor) is to ensure the accura-cy of the audio signal transmission and high reproduction (the reproduction of details), and to achieve a true original audio replay. With good anti-interference ability, the gamers can easily cope with any fierce confrontation, in order to create a completely immersive sense.

Finer, softer and lighter, home wiring easier

- Compared to copper, FIBBR optical fiber HDMI cable' s weight and size can be reduced up to 60%.
- It has the smallest diameter of only 30mm, occupying a very small space, so that wiring becomes easier, more convenient, its reliability has been greatly enhanced; body weight reduction also avoids the traditional HDMI cable may be Damage caused by the connector while connected to the device (heavey cable makes itself fall and port distortion). The use of Bend-Robust's specialty flex-bent fiber makes FIBBR fiber HDMI cables easier to bend than copper (180 ° bendable) without worrying about the stability of the signal transmission.



BendRobust specialty fiber bent into the pen cap, the cable is intact.

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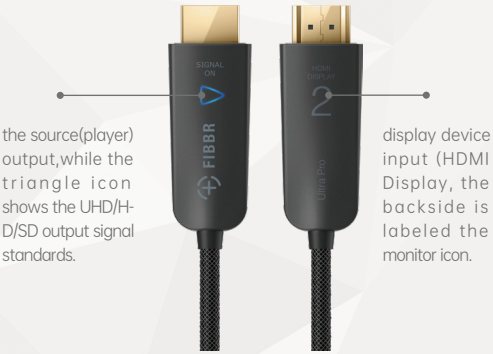
Fiber Optic HDMI Cable Instructions

FIBBR Fiber Optic HDMI cable is directional, providing smart LED indicator instructions to prompt the user if it' s connected correctly and display device resolution, the working status will be clear at a glance.

1. When connected correctly, the green light is blinking, otherwise the red light is on and the error is reported.

2. Intelligent detection of high-definition of both ends of the device, it is blue light, otherwise it is green light.



the source(player) output,while the triangle icon shows the UHD/H-D/SD output signal standards.

display device input (HDMI Display, the backside is labeled the monitor icon.

When the Connector 1 is connected with the signal source, the LED illuminator of Connector 2 will be automatically lit, which is convenient for the user to connect in the dark space. Once the connection is successful, the LED will automatically extinguish.

This page uses FIBBR Ultra HDMI 1.4 as an example.

Europe and the United States safety / environmental certification

FIBBR active fiber optic cable has passed CE, FCC and RoHS safety/ environmental certification, it can be legally sold to Europe and the United States.

CE (European certification) means that the product lines with the relevant directives of the European Commission, and has completed the corresponding assessment procedures.

Electronic products into the US market must be for testing by authorized laboratory referring to FCC (Federal Communications Commission) technical standards.

RoHS (Restriction of Hazardous Substances Directive) is an environmental directive passed by the European Union that requires the elimination of six hazardous substances in electrical and electronic products.

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Ultra Pro HDMI v2.0

Fiber Optic HDMI Cable

Optical HDMI cable with 18Gbps rate, which perfectly matches 4K@60Hz transmission and meets the new version of HDMI ultra-high definition transmission standard, is a reliable choice for customized theater in-wall installation.

Specification Parameters

Specification:
4:4:4 4K@60Hz

Cable Diameter:
4.6mm

Material:
4-core fiber

Housing:
Black PC material

Power:
No external power supply required

Jacket:
Braided PET

Other:
Smart indicator, Illuminating light

Resolution	Bandwidth	LPCM	Audio Sampling
4K@60Hz	18Gbps	32Channels	1536kHz

Ultra Pro 2 HDMI v2.0

Fiber Optic HDMI Cable

The cable strictly complies with the highest standard of American UL flame retardant rating--CMP level, and is the first choice for home wiring installation in America. Commonly known as Plenum cable, it is applicable to safety standard UL910. The experiment stipulates that samples be laid on the horizontal air duct and burned for 20 minutes with 87.9KW gas Bunsen burner.

Specification Parameters

Specification:
4:4:4 4K@60Hz

Cable Diameter:
4.6mm

Material:
4-core fiber

Housing:
Black PC material

Power:
No external power supply required

Jacket:
CMP level

Support:
ARC

Resolution	Bandwidth	ARC	HDCP
4K@60Hz	21Gbps	Audio Return Channe	2.2

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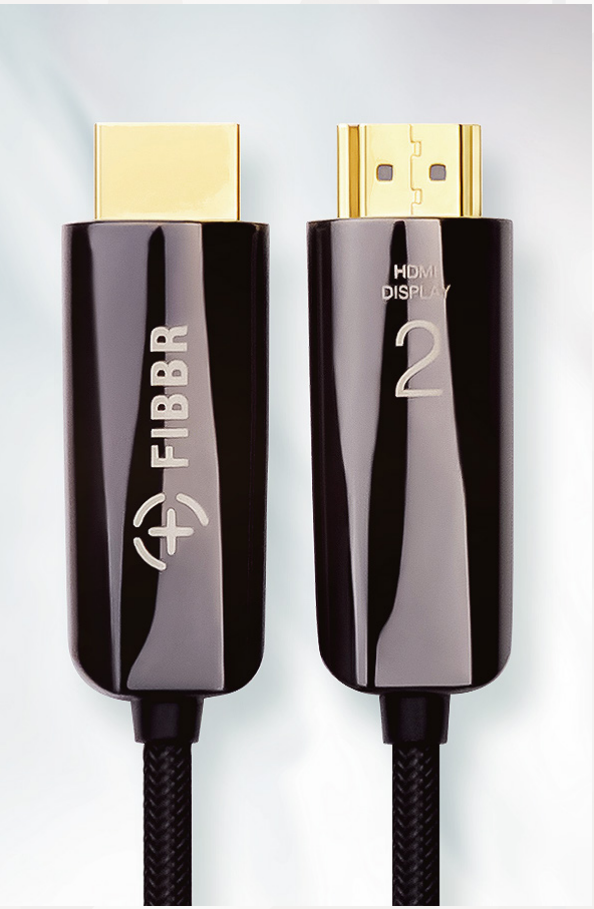
Pure HDMI v2.0

Fiber Optic HDMI Cable



The upgraded optical HDMI cable equipped with piano lacquer, zinc alloy connector and PET braided jacket perfectly matches 4K@60Hz ultra-high-definition transmission, which is the ultimate choice for high-end customized theater.

Specification Parameters

Specification:
4:4:4 4K@60Hz

Cable Diameter:
4.6mm

Material:
4-core fiber

Housing:
Piano lacquer alloy

Power:
No external power supply required

Jacket:
Braided PET

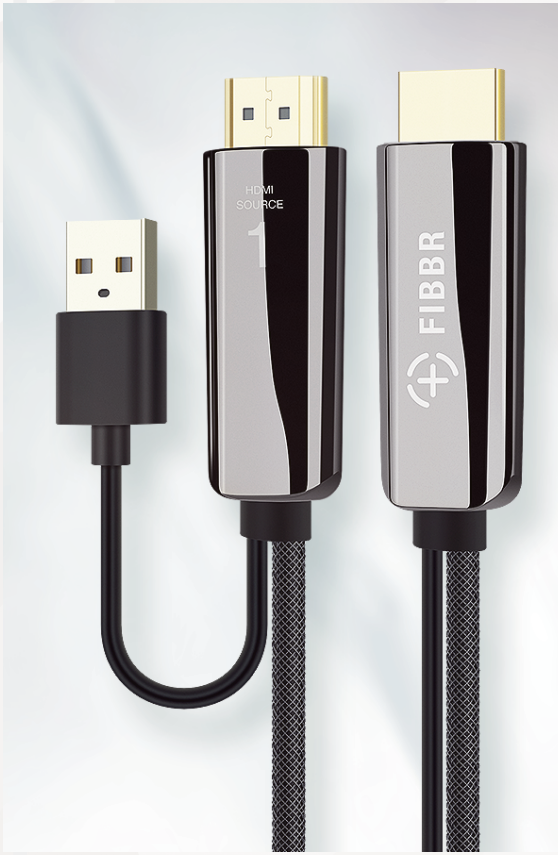
Other:
Illuminating light

Resolution	Bandwidth	HDR	1.5~20m
4K@60Hz	18Gbps	12bit	can be selected

Pure 2 HDMI v2.0

Fiber Optic HDMI Cable

FIBBR active optical fiber solves the shortcomings of traditional HDMI cable with the new materials. It has the advantages of high rate, high bandwidth, no radiation, anti-interference and so on. It also provides better stability and has a better application experience for high-definition audio and video.



Specification Parameters

Specification:
4:4:4 4K@60Hz

Cable Diameter:
4.8mm

Material:
4-core fiber

Housing:
Piano lacquer alloy

Power:
USB power supply connector

Jacket:
Braided PET

Support:
ARC

Resolution	Bandwidth	ARC	4:4:4
4K@60Hz	24Gbps	Audio Return Channe	12bit

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Pure 3 HDMI v2.1

Fiber Optic HDMI Cable

Chip is upgraded. Bandwidth is increased to 48Gbps. The transmission distance is extended to 50m. eARC and HDCP2.3 were added. It completely solves the power consumption problem without external power supply, creating the ultimate fever audio-visual effect.

Specification Parameters

Specification:	8K@60Hz, 4K@120Hz
Cable Diameter:	4.8mm
Material:	4-core fiber+7 copper wires
Housing:	Piano lacquer alloy
Power:	No external power supply required
Jacket:	Black LSZH
Support:	eARC

Resolution	Bandwidth	eARC	HDCP
8K@60Hz	48Gbps	Enhanced AudioReturn Channel	2.3

USB-C5 Type-C

Fiber Optic USB Cable

It is a USB 3.1 Gen1 type-C to C optical cable, which supports high-speed data transmission and fast charging. It is compatible with Oculus Quest Link. Users can enjoy PC VR content at will without worrying about running out of power during use.

Specification Parameters

Bandwidth:	5Gbps
Connector:	USB Type-C
Length:	4.5m
Cable Diameter:	4.6mm
Jacket:	TPU
Power:	PD3.0 20V/3A
Attenuation	⩽3.5dB/km

Compatible with Oculus Quest Link

Bandwidth 5Gbps

PD 3.0 20V/3A

No Direction Distinction

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CM HDMI v2.0

Fiber Optic HDMI Cable

18Gbps bandwidth, 50-meter long-distance transmission, up to 4K@60Hz UHD image transmission. The cable is light, soft, slim and long, with good signal quality and free from electromagnetic interference. This optical cable is easy to use, has good compatibility and does not need external power supply. It is applicable to home theater, video conferencing, outdoor advertising and many other fields.

Specification Parameters

Catalog:
10m/15m/20m/25m/30m/40m/50m

Cable Diameter:
4.2mm

Connector Dimension:
44.3mmx20mm

Minimum Bend Radius (Dynamic/Static):
20mm/10mm

Tensile Strength (Long term/Short term):
100N/200N

Operating / Storage Temperature:
0 ~ 50°C/-20 ~ 70°C

Individuation:
Distinguished by red and gray colors

Resolution	Bandwidth	Version	Alloy
4K@60Hz	18Gbps	HDMI v2.0	Housing

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AM-AF USB 3.0

Fiber Optic USB Cable

As the leading optical USB 3.0 cable, it can extend the USB 3.0 signal to 50 meters without external power supply. It greatly addresses the application needs of professional engineering (traditional USB3.0 copper wire can be extended to 3 meters at most).

Specification Parameters

Catalog:
10m/15m/20m/25m/30m/35m/40m/45m/50m

Connector:
USB 3.0 standard type-A male to female

Power:
USB 2.0 Micro-B Receptacle

Cable Diameter:
3.7mm

Minimum Bend Radius:
20mm

Connector Dimension:
Host, 43mmx19mm; Device, 82mmx26mm

Operating / Storage Temperature:
-20 ~ 70°C/-40 ~ 80 °C

Super TT Technology	Bandwidth 5Gbps	Version USB 3.0	Power Consumption 0.94W

Pure Optical USB 3.0

Fiber Optic USB Cable

100-meter ultra-long distance transmission, using YOFC special bending-resistant optical fiber, effective anti-electromagnetic interference. The cable is light, soft, slim and convenient for wiring. Equipped with Dongle adapter, built-in SuperTT technology can convert USB3.0 and USB2.0 protocols to each other so that USB2.0 can share the high-speed bandwidth (5Gbps) of USB3.0.

Specification Parameters

Catalog:
10m/20m/30m/40m/50m/60m/70m/80m/90m/100m

Connector:
USB3.0 Standard Type-A Male Connector

Cable Diameter:
3mm

Minimum Bend Radius:
20mm

Connector Dimension:
52.2mmx17mm

Operating / Storage Temperature:
0 ~ 55°C/-40 ~ 80 °C

*Extra long distance needs to be customized

Super TT Technology	Bandwidth 5Gbps	Version USB 3.0	Power Consumption 0.58W

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Flash144-L DP v1.4

Fiber Optic DP Cable

Adopt pure optical fiber to transmit data signals at high speed, up to 32.4Gbps bandwidth;Support DP1.4 8K@60Hz, display UHD image quality and smooth video signals;Maximum length can reach 200m, which is suitable for commercial engineering fields such as high-definition video conference, digital signage and video surveillance.

Specification Parameters

Catalog	20m/25m/30m/40m/50m/70m/100m/200m
Connector	DP Type-A connector, with lock on connector
Dimension	46.74mmx22.15mmx11mm
Bend Radius (Dynamic/Static)	80mm/40mm
Tensile Strength (Long term/Short term)	100N/200N
Crush Resistance (Long term/Short term)	200N/400N
Operating / Storage Temperature	0 ~ 50°C/-20 ~ 70°C

Resolution	Bandwidth	Version	20~200m can be selected
8K@60Hz	32.4Gbps	DP1.4	

Ultra Elite HDMI v2.0

Fiber Optic HDMI Cable

Specially designed for engineering, 4.0mm ultra soft optical cable body, convenient for wiring, strong anti-interference, no fear of surrounding complex environment, suitable for video conferencing, engineering projection and many other application scenarios; 18G high bandwidth, stable frame rate, coherent pictures, 60Hz true 4K perfectly presented; patented design of connector color ring makes it easy to distinguish the interconnection of different devices; Mature extrusion process, seamless, dustproof, moisture-proof, wear-resistant and dry-resistant, ensuring long-term stable transmission.

Specification Parameters

Catalog:
10m/15m/20m/30m/50m/70m/100m

Connector:
HDMI Standard Type-A Male Connector

Cable Diameter:
4.0mm

Minimum Bend Radius:
20mm

Cable Core Material:
4-core YOFC BendRobust® Special Optical Fiber

Craft:
Extrusion Molding

Individuation:
Three-colour Marking Ring

Resolution 4K@60Hz	Bandwidth 18Gbps	Three-colour MarkingRing	Extrusion Process

TF HDMI/DP

Fiber Optic Multi-purpose Cable

TF cable has the exclusive multi-channel optical-electrical conversion chip developed based on the professional audio-visual market. With the Type-C connector, it can realize different switching between HDMI2.0 and DisplayPort1.4. It can solve the need of small-sized connectors for engineering wiring through pipes.

Specification Parameters

Catalog	10m/20m/30m/40m/50m/60m/70m
Connector	USB C male to HDMI A male/DP A male
Cable Diameter	4.8mm
Cable Core Material	6-Core Fiber
Outer Jacket Material	PVC
Attenuation Rate	⩽3.5dB/km
Product Color	Black

Resolution HDMI 2.0	Resolution DP 1.4	Bandwidth HDMI 2.0	Bandwidth DP 1.4
4K@60Hz	4K@144Hz	18Gbps	32.4Gbps

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