



DP-FO10-KVM

**4K@60Hz DisplayPort Extender
(Loop)-10km (Fiber-Optic)**

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USER MANUAL

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Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating, or adjusting this product. Keep this manual for future reference.

Important Safety Note – Surge Protection Recommended

This product contains sensitive electronic components that may be damaged by electrical spikes, surges, lightning strikes, or static discharge. To protect and extend the service life of your equipment, we strongly recommend using a surge protection device.

Warranty Registration

Activate your warranty by registering your product at:

→ www.orei.com/register

Need Technical Support? We're Here to Help.

Our experienced Technical Support Team is available to answer your questions, offer expert advice, and help troubleshoot any issues to keep your project on track—on time and on budget.

Live Support Hours (US/Canada/Mexico):

 Monday-Friday | 9:00 a.m. – 5:00 p.m. Central Time

Contact Us:

 Email: info@orei.com

 Phone: 877-290-5530

 Chat Live: www.orei.com

Send us an instant message—our team typically responds within moments during live support hours.

Introduction

DP-FO10-KVM is a high-performance DisplayPort over fiber optic extender, designed for ultra-long-distance, lossless AV transmission. Supporting DisplayPort 1.4a and HDCP up to version 2.3, it delivers crystal-clear video at resolutions up to 4K@60Hz 4:4:4 with full HDR support. Using single-mode fiber, it extends signals up to 10km, while optional SFP modules allow multi-mode fiber extension up to 300m over OM4.

Equipped with an HDMI™ loop output on the transmitter for local monitoring and audio de-embedding on the receiver, the system ensures versatile integration into professional AV setups. Built-in USB 1.1 KVM support enables remote control of a PC from the Receiver end using a keyboard and mouse.

Engineered with strong anti-interference capability, high security, compact design, and lightweight construction, the DP-FO10-KVM is ideal for mission-critical applications, control rooms, and high-end AV environments requiring stable, long-distance DisplayPort signal delivery.



1. **DisplayPort 1.4a Compliant** – Ensures compatibility with modern DP devices and formats.
2. **HDCP 2.3 Support** – Works seamlessly with protected content.
3. **High Video Bandwidth** – Supports HBR3, HBR2, HBR, and RBR rates (8.1 / 5.4 / 2.7 / 1.62Gbps).
4. **4K@60Hz Video Resolution** – Transmits ultra-clear, uncompressed video over long distances.
5. **Flexible Resolution Support** – Works with any VESA standard resolution.
6. **Ultra-Long Transmission** – Up to 10km over single-mode fiber; up to 300m over OM4 multi-mode fiber (via SFP modules).
7. **3D & HDR Formats** – Pass-through for HDR, HDR10, HDR10+, Dolby Vision, and HLG.
8. **Wide Audio Compatibility** – LPCM 2/5.1/7.1CH, Dolby Digital/Plus/EX, Dolby TrueHD, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio.
9. **HDMI Loop Output** – Local display monitoring from the transmitter side.
10. **Audio De-embedding** – Extracts audio on the receiver side.
11. **USB 1.1 KVM Functionality** – Remote control a PC from the Receiver end.
12. **Compact, Lightweight Design** – Easy to mount and ideal for space-constrained installations.

Package Contents & Specifications

Package Contents

1.	DP-FO10-KVM (Transmitter)	1pcs
2.	DP-FO10-KVM (Receiver)	1pcs
3.	Mounting Ear	4pcs
4.	Machine Screw (KM3*6)	8pcs
5.	USB Cable (USB-A to USB-C)	1pcs
6.	Power Adapter	2pcs
7.	User Manual	1pcs

Specifications

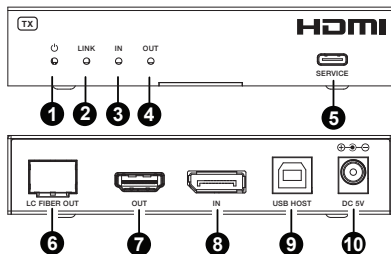
Technical	
DP Compliance	DP 1.4a
HDCP Compliance	HDCP 2.3/2.2/1.x
Video Bandwidth	HBR3, HBR2, HBR and RBR (8.1/5.4/2.7/1.62Gbps)
Input & Output Video Resolution	480i60, 576i50, 480p60, 576p50, 720p50/60, 1080i50/60, 1080p24/25/30/50/60, 4K2K 24/25/30, 4K2K50/60 4:2:0, 4K2K50/60 4:4:4, 640x480@60, 1024x768@60, 1280x768@60, 1280x800@60, 1280x1024@60, 1360x768@60, 1440x900@60, 1680x1050@60, 1920x1200@60RB
Color Space	RGB, YCbCr_4:4:4, YCbCr_4:2:2, YCbCr_4:2:0
Color Depth	8-bit, 10-bit, 12-bit
Audio Formats	LPCM 2/5.1/7.1CH, Dolby Digital/Plus/EX, Dolby True HD, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio

Specifications

Technical	
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Fiber Optic Module	10G SFP+ module
Transmission Distance	Up to 10km over single-mode fiber cable Up to 300m over multi-mode OM4 fiber cable
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connection	
Transmitter	Input: 1× DP [Type A, 19-pin female] Output: 1× HDMI™ [Type A, 19-pin female] 1× LC FIBER OUT [LC female] Control: 1× USB HOST [USB-B, 4-pin female] 1× SERVICE [USB-C, update port]
Receiver	Input: 1× LC FIBER [LC female] Output: 1× DP [Type A, 19-pin female] 1× 3.5mm [Stereo audio jack] Control: 1× SERVICE [USB-C, update port] 1× USB DEVICE [USB 1.1 Type A]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	Transmitter / Receiver: L: 120mm / 4.72in W: 78mm / 3.07 in H: 24.5mm / 0.96in
Weight	Transmitter: 248g / 8.75oz; Receiver: 278g / 9.80oz
Power Consumption	Transmitter: 3.85W (Max); Receiver: 3.3W (Max)
Power Supply	Input: AC 100 - 240V 50/60Hz Output: DC 5V/2A
Operating Temperature	32~104°F / 0~40°C
Storage Temperature	-4~140°F / -20~60°C
Operating Humidity	20%-80% relative humidity, non-condensing
Storage Humidity	10%-90% relative humidity, non-condensing

Operation Controls and Functions

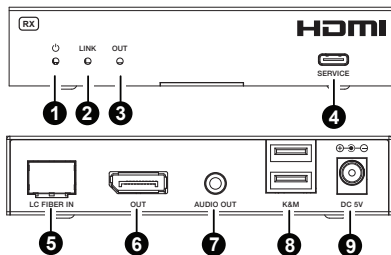
Transmitter



No.	Name	Function Description
1.	POWER LED	The red LED lights up when the transmitter is powered on.
2.	LINK LED	- Light on: Transmitter and Receiver are connected properly and transmitting. - Light flashing: Transmitter and Receiver are not connected properly and not transmitting.
3.	IN LED	The green LED lights up when a source signal is detected on the DisplayPort IN port.
4.	OUT LED	The green LED lights up when a display device is connected to the HDMI OUT port.
5.	SERVICE	Firmware update port.
6.	LC FIBER OUT	Connect a single-mode/multi-mode LC fiber optic cable. The other end connects to the Receiver.
7.	HDMI OUT	Connect a display device such as a TV, Monitor, etc.
8.	DP IN	Connect a media source device such as a Computer or Laptop.
9.	USB HOST	Connect a PC or Laptop through its USB port.
10.	DC 5V	Connect the included power adapter.

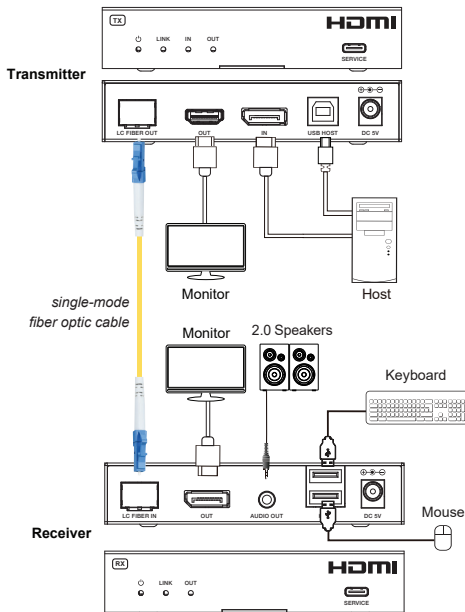
Operation Controls and Functions

Receiver



No.	Name	Function Description
1.	POWER LED	The red LED lights up when the receiver is powered on.
2.	LINK LED	- Light on: Transmitter and Receiver are connected properly and transmitting. - Light flashing: Transmitter and Receiver are not connected properly and not transmitting.
3.	OUT LED	The green LED lights up when a display device is connected to the DisplayPort OUT.
4.	SERVICE	Firmware update port.
5.	LC FIBER IN	Connect a single-mode/multi-mode LC fiber optic cable. The other end connects to the Transmitter.
6.	DP OUT	Connect a display device such as a TV, Monitor, etc.
7.	AUDIO OUT	Connect an audio device such as headphone, soundbar, etc.
8.	K&M	Connect a USB peripheral like Keyboard, and Mouse.
9.	DC 5V	Connect the included power adapter.

Application Example



HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

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FAQ & Troubleshooting

1. Can I use a multi-mode fiber optic with this unit instead of single-mode?

- Multi-mode (OM4) cable can be used as well but the transmission distance would drop to 300m/1000feet

2. No video signal OR flickering output.

- Check DP and fiber optic cable connections.
 - Use a single-mode fiber cable
- Test with a shorter fiber run to rule out cable damage.
 - Try a lower resolution from the media source.
- Check if the HDMI output on the Transmitter also has the same issue.

3. Does it support USB devices other than keyboard and mouse?

No. It only supports USB 1.1 HID devices (keyboard and mouse) for remote control. USB storage or other peripherals are not supported.

Still have some questions?

Our experienced Technical Support Team is here for you to answer your questions, give technical advice or help troubleshoot your project to get you installed on time and on budget. Call, email or chat with us now.

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