



# DVI 4K-F

Single-Fiber Bidirectional  
DVI UHD Extender



**Pixelhue Technology Ltd**

Address: Kruisweg 643-647, 2132 NC, Hoofddorp,  
the Netherlands

Website: [www.pixelhue.com](http://www.pixelhue.com)

E-mail: [info@pixelhue.com](mailto:info@pixelhue.com)



# USER MANUAL

Document Version: V1.0.0.0

## Intellectual Property

Copyright © 2020 Pixelhue Technology Ltd. All rights reserved.  
No part of this document may be copied, reproduced, extracted or transmitted in any form or by any means without the prior written consent of Pixelhue Technology Ltd.

## Safety

- Before installation, distinguish DVI 4K-F TX and DVI 4K-F RX.
- The device should be located at a place free from humidity, high temperature, dust, corrosion and oxidizing gases to avoid damage.
- All components should be handled with care. Shock, knock, falling or collision should be avoided.
- Do not touch any components inside the device.

---

# Table of Contents

---

1. Overview .....	P1
1.1 Overview .....	P1
1.2 Appearance .....	P2
1.3 Features .....	P3
2. Specifications .....	P4
3. Connections .....	P5
4. Packing List .....	P6

# 1 Overview

## 1.1 Overview

The DVI 4K-F UHD extender comprises a DVI 4K-F transmitter (COMPUTER TX, Source) and a DVI 4K-F receiver (MONITOR RX, Display). The DVI-D (18 + 1) connector realizes 300 m (ITU.T.G.652/G655/G672 SMF, or OM1, OM2, OM3 50/125um MMF) 10G high-speed transmission of lossless and uncompressed UHD videos. The optical path adopts single-fiber bidirectional Wavelength Division Multiplexing (WDM) technology to ensure the electrical isolation of between the TMDS differential source and display end equipment, to avoid the noise impact on the grounding circuit, and realize no frame delay of video signals.

Compared with the traditional twisted pair cable transmission, this kind of transmission has many advantages, such as no attenuation, strong anti-interference, strong signal confidentiality, high stability, hot swap protection, long transmission distance, and no signal losses as the external environment changes. At the same time, 300 m SMF or MMF does not require manual EDID learning.

What's more, the convenient monitoring function of link running status makes the product more flexible to adapt to various display devices with different resolutions. The connector of the AC/DC 5V 2A adapter features an anti-falling plug with a safety lock valve, and the LC fiber optic connector are on the same panel, plus an integrated self-priming and dust-proof design, make the overall system simple but elegant, and easy to operate. Additionally, the product adopts the electroplating-frosted zinc alloy material with good heat dissipation ability, which enables a lightweight design and stable temperature characteristics of the system.

### Applications:

- Multimedia information broadcasting, large-scale screen splicing system, news center, traffic guidance, monitoring and information display system.
- Outdoor large-size LED screens, sports field, multimedia classroom and conference system.
- Command exercises, aerospace, customs, airports, stations, ports and piers, prisons, museums and exhibition halls.

## 1.2 Appearance



DVI 4K-F RX (Display)    DVI 4K-F TX (Source)



# 2 Specifications

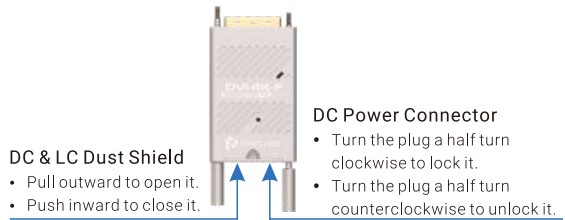
## 1.3 Features

- 300 m SMF and MMF
  - SMF saves the fiber resources to the greatest extent.
- Separated "optical fiber extension" cable directly establishes system connection without EDID learning
- Up to 4096×2160p@30Hz lossless embedded audio (HDCP 1.4a video and ARC)
- Discrete signal status and power LED indicators
- Parallel applications of multi-receiving and multi-sending of video matrix
- 10G single-fiber BiDi LC connector
- ESD protection: ± 15 kV (air), ± 8 kV (contact)
- DC 5V / 2A adapter with 300 mA low power consumption
- The integrated design of LC connector and DC power connector enables dust-proof ability and simple usage.
- The AC/DC power adapter provides an anti-falling plug with a safety lock valve.
- The electroplating-frosted and spray-painting zinc alloy material with good heat dissipation ability
- Dual through-hole screw design, easy for fixing
- RoHS compliant
- Additional function descriptions:
  - If you need 10 km SMF, the following conditions must be met:
    1. The manual EDID learning is required.
    2. The optical path must be upgraded.
    3. The HDCP authentication is no longer supported.
    4. The external AC or DC power adapters are required.

Transmitter	DVI4K-F TX	Input Signal	Connector Type	DVI-D (18+1), DVI 1.0
			Signal Type	DVI 1.0, HDMI 1.4a Up to 4096×2160@30Hz
		Output Signal	Connector Type	LC
			Signal Type	G.652/G.655/G.657 SMF 50 um/125 um, 62.5 um/125 um OM MMF
Receiver	DVI4K-F RX	Input Signal	Connector Type	LC
			Signal Type	G.652/G.655/G.657 SMF 50 um/125 um, 62.5 um/125 um OM MMF
		Output Signal	Connector Type	DVI-D (18+1), DVI 1.0
			Signal Type	DVI 1.0, HDMI 1.4a Up to 4096×2160@30Hz
Transmission Distance			300 m	
Data Rate			Max. 3.4 Gbps	
Graphic Data			340 MB/S	
Optical Signal Rate			11.5 GB/S	
Power Supply			DC 5 V, 2 A	
Total Weight			0.56 kg	
Dimensions (L×W×H)			90mm × 40mm × 15mm	
Operating Temperature			-45°C to +70°C	
Storage Temperature			25°C	

# 3 Connections

# 4 Packing List



Packaging material: Neutral recyclable carton packaging

- 1 × DVI 4K-F Transmitter
- 1 × DVI 4K-F Receiver
- 2 × AC/DC 5 V 2 A Power Supply Adapters
- 1 × Certificate of Approval
- 1 × User manual

