

# 4K 60Hz DP Fiber Extender

Model: DF01

Ultra-long Distance Transmission | 4K 60Hz UHD | Full HDR & Audio Support | Plug-and-Play | Compact Durable Design

## 一、Product Overview

DF01 is a high-performance "4K 60Hz DP Fiber Extender" launched by PANIO, designed to solve long-distance transmission needs of DisplayPort audio and video signals between signal sources (such as PCs, laptops, 4K players) and display devices (monitors, projectors). It supports DP 1.4 standard and 18Gbps bandwidth, enabling lossless transmission of 4K ultra-high-definition signals over single-mode fiber (up to 10 km) or multi-mode OM4 fiber (up to 300 m). With strong anti-interference capabilities and plug-and-play functionality, it is suitable for conference rooms, monitoring centers, remote multimedia exhibition halls, and large-scale venue signal transmission scenarios, ensuring stable signal transmission and intact picture quality.

## 二、Key Feature Highlights

### 1. Ultra-long Distance Fiber Transmission

- Supports **single-mode fiber transmission up to 10 km** and **multi-mode OM4 fiber transmission up to 300 m**, meeting long-distance signal coverage needs in large spaces.
- Equipped with powerful anti-interference technology, effectively isolating electromagnetic and radio frequency interference (EMI/RFI), ensuring lossless, stable audio and video transmission even in complex environments.

### 2. 4K Ultra HD Resolution

- Supports maximum resolution of **4K2K@50/60Hz (RGB 4:4:4)**, maintaining original video details without compression or distortion.
- Fully compatible with all VESA standard resolutions (e.g., 1080P, 2K), ensuring seamless matching with mainstream display devices and no resolution incompatibility issues.

### 3. Full HDR & Lossless Audio Support

- Compatible with a wide range of HDR formats, including **HDR10, HDR10+, Dolby Vision, and HLG**, enhancing picture contrast and color depth for more realistic visual effects.

- Supports lossless multi-channel audio formats such as **LPCM 7.1CH, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, and DTS:X**, delivering immersive sound experiences.

## 4. Plug-and-Play Design

- Complies with **DP 1.4 and HDCP 2.2 standards**, ensuring broad compatibility with mainstream computers, displays, and 4K players.
- No additional drivers or complex configurations required; simply connect the transmitter (TX), receiver (RX), and fiber cable to start using, reducing operation difficulty.

## 5. Compact & Durable Metal Casing

- Adopts a compact metal casing with dimensions of **81mm × 49mm × 25mm (per unit)** and weight of 138g, making it easy to install in limited spaces.
- The metal shell enhances drop resistance and EMI/RFI resistance, ensuring reliable long-term use in various indoor and semi-outdoor environments.

## ≡ Detailed Specification Table

Model Name	DF01
Compliance	DP 1.4, HDCP 2.2
Video Bandwidth	18 Gbps
Supported Resolutions	Up to 4K2K@60Hz (4:4:4); compatible with VESA standards (1080P, 2K, etc.)
Audio Formats	LPCM 7.1CH, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
Fiber Type & Distance	Single-mode: up to 10 km; Multi-mode OM4: up to 300 m
Connectors	Tx: 1 × DP IN, 1 × SFP+ OUT; Rx: 1 × DP OUT, 1 × SFP+ IN
Power Supply	2 × 5V/1A DC power adapters (included)

Dimensions	81mm (W) × 49mm (D) × 25mm (H) per unit
Weight	138g per unit
Environmental Conditions	Operating: 0–40 °C; Storage: –20–60 °C; Humidity: 20–90% RH (non-condensing)
Safety Protection	ESD electrostatic protection (IEC 61000- 4- 2: ±8kV air/±4kV contact)

## 四、 Connection Diagram

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### Diagram



## 五、 Important Notes for Use

- Surge Protection:** Use a surge protector to connect the power adapters, avoiding damage to internal components from power surges or lightning strikes and extending product lifespan.
- Cable Length Limit:** Ensure the total length of DP cables (between signal source-TX and RX-display) does not exceed 5 meters; otherwise, black screens or flickering may occur.
- Compatibility Check:** When connecting with other devices (e.g., DP splitters, extenders of other brands), confirm compatibility with PANIO in advance to avoid operational issues.
- Fiber Cable Care:** Do not excessively pull or bend fiber optic cables, as this may damage the fiber core and cause signal loss.

5. **Resolution Requirement:** To achieve 4K@60Hz (4:4:4) resolution, ensure all devices (signal source, DP cables, DF01, display) support the DP 1.4 standard.

## 六、 Package Contents

Item	Quantity	Remarks
DF01 Transmitter	1 unit	For connecting signal sources
DF01 Receiver	1 unit	For connecting display devices
5V/1A DC Power Adapters	2 units	Original certified, ensuring stable power supply
Quick Start Guide	1 piece	Detailed installation and operation steps

## Core Advantages Summary

- ✓ Ultra-long distance transmission (10km single-mode / 300m multi-mode) for large-space scenarios
- ✓ 4K 60Hz 4:4:4 + full HDR support, restoring true ultra-high-definition visuals
- ✓ Plug-and-play design, no driver required, simple to operate
- ✓ Compact durable metal casing, anti-interference and long-lasting
- ✓ Comprehensive lossless audio support, creating immersive audio-visual experiences