DVI Extender Series

User Manual

Model : DE01F

Compact DVI Extender 1km

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Introduction

DE01F is a DVI extender that uses a single fiber optic cable with LC connections to transmit uncompressed full HD DVI signals. EDID and HDCP signals are supported for single-mode fibers. This small compact size allows you to an easier installation for any AV applications

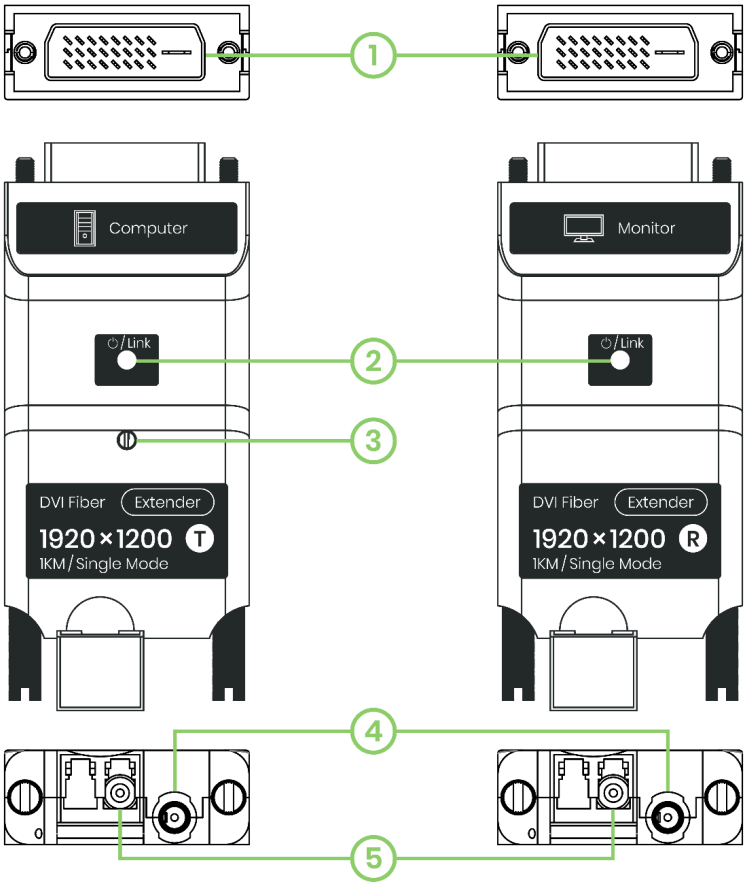
Features

- Resolution up to 1920x1200 60Hz.
- Transmission distance up to 2km over single-mode fibers.
- Built-in LC Fiber Connector.
- Supports EDID management.
- Low latency.
- Plug & Play DC jack powered.

Application Diagram

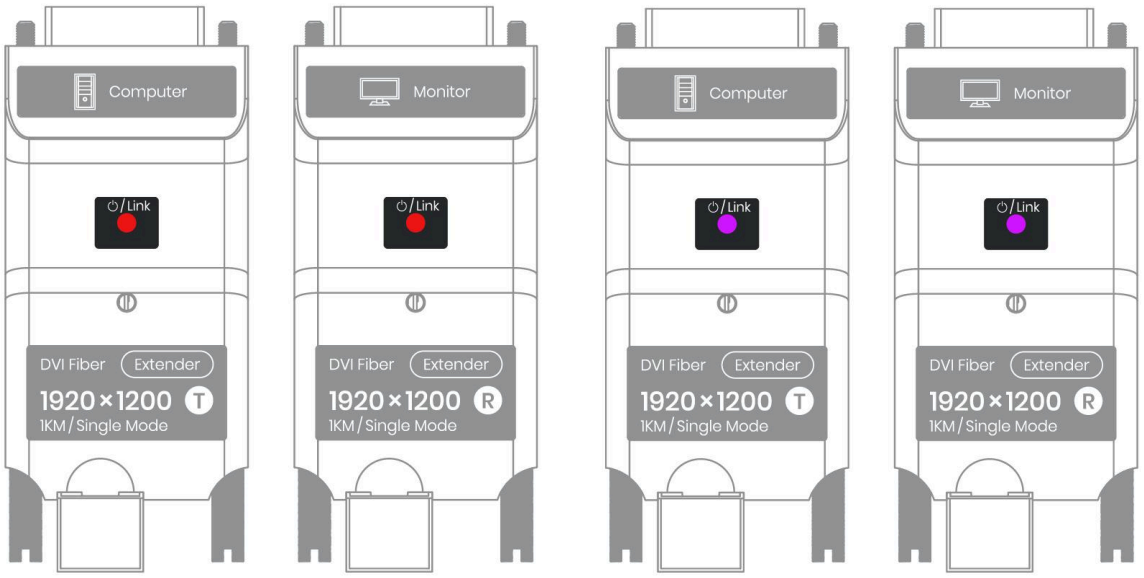
Panel View

DE01FT/DE01FR



Item	Interface	Description
1	DVI-D connector	To connect a DVI device
2	LED Indicator	Power & Link indicator
3	EDID Copy	EDID Copy Button. Refer to EDID settings
4	DC Jack	To input 5V 1A power
5	LC optical connector	To connect a single fiber cable

LED Indication



Transmitter/Receiver	LED Status	Description
DE01FT (Transmitter)/ DE01FR (Receiver)	Off	Not powered
	Red	Powered, but no DVI signal
	Purple	Powered and DVI signals transferring

Functional Description

DVI Interface

The DVI Video input and output functionality in DE01F allows for the transmission and reception of high-definition video signals over optical fiber for longer distances. These features enable integration of DVI-equipped audiovisual sources and displays into the AV over optical fiber, facilitating flexible and scalable multimedia content distribution.

Support Resolution

DE01F supports various resolutions, indicated by the table below:

Resolution	
1920x1200	60Hz
1920x1080	50/60/120Hz
1680x1050	60Hz
1600x1200	60/75Hz
1440x900	60Hz
1366x768	60Hz
1360x768	60Hz
1280x1024	60/75Hz
1280x960	60Hz
1280x800	60/75Hz
1280x768	60/75Hz
1280x720	60Hz
1024x768	60/75Hz
800x600	60/75Hz
720x480	60Hz
640x480	60/72/75Hz

Fiber Optic Interface

DE01F integrates single-mode modules for its fiber optic transmission functionality, offering flexibility and scalability in extending DVI signals over various distances.
DE01FT converts electrical DVI signals into optical signals by the fiber transmitter module for transmission over fiber optic cables, while DE01FR converts optical signals back into electrical DVI signals with the fiber receiver module at the receiving end.
DE01F is compatible with single-mode fiber optic cables, offering flexibility in deployment based on distance requirements and installation environments.

Latency

DE01F has a latency[1] less than one frame according to our test, and here is our test condition. The Test result is shown as follows:

DE01F Transmission Latency Test		
Test condition		Test result (Latency)
Distance	Resolution	
Single-Mode 1000m	1920x1080p 60Hz	0 frame

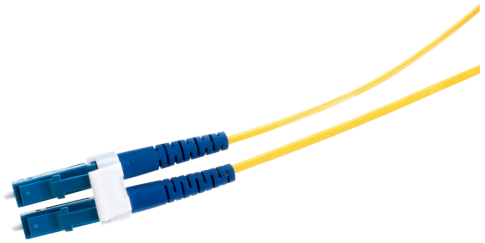
Transmission Distance

DE01F integrates single-mode modules, which are optimized for long-distance transmission, with a specified transmission distance up to 1km/1000m.
The transmission distance will vary depending on the quality of the fiber optic cable used.

DE01F Transmission Distance Test		
Test condition		Test result
Cable used	Resolution	
Single Mode OPTICAL FIBER Duplex SM 9/125 LC-LC	1920x1080p 60Hz	1000m

Fiber Connector Type

DE01F uses Lucent Connector (LC) type single fiber connectors for seamless integration with existing fiber optic infrastructure. The LC connector's small form-factor and single fiber design enable high-density connections and efficient use of fiber optic cables in networking environments.



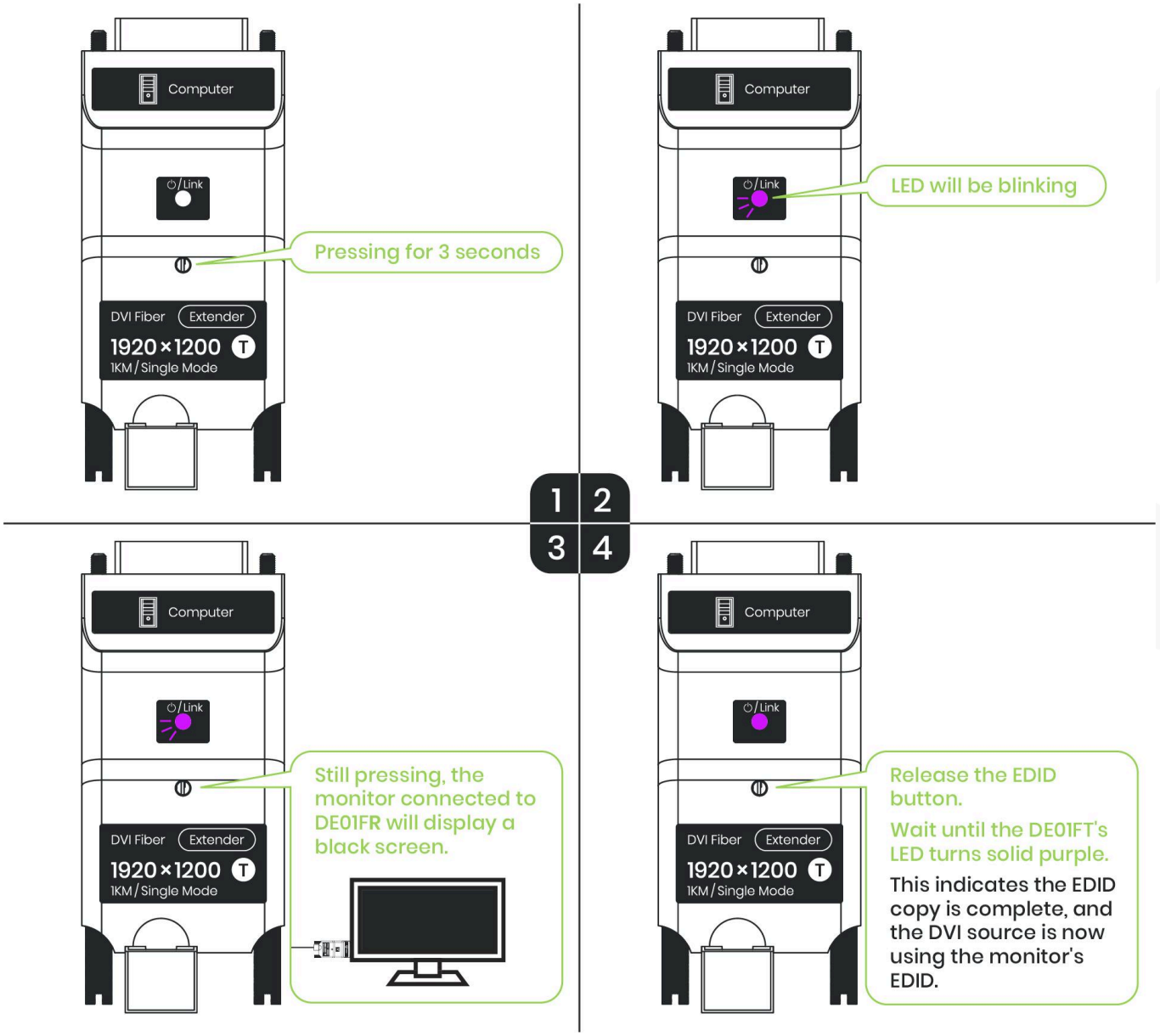
[1] The compression introduces ultra-low latency which is crucial for real-time applications such as video conferencing and live streaming, where minimizing delay is essential for smooth and responsive communication.

EDID Settings

Copying Monitor EDID to the DVI Source

To allow the DVI source connected to DE01FT to use the actual EDID of the monitor connected to DE01FR, follow these steps:

1. Press and hold the EDID button on DE01FT for 3 seconds.
2. After 3 seconds:
    a. The LED on DE01FT will start blinking
    b. The monitor connected to DE01FR will display a black screen.
3. Release the EDID button.
4. Wait until the DE01FTs' LED turns to a solid purple. This indicates that the EDID copy is complete and the DVI source is now using the monitor's EDID.



Factory Default

When powered on and linked for the first time, the DE01FT provides a default EDID (1080p @ 60Hz) to the DVI source.

To restore the factory default EDID:

1. Press and hold the EDID button on DE01FT.
2. After 3 seconds, the LED on DE01FT will start blinking, indicating it has entered EDID copy standby mode.
3. Continue holding the button beyond 3 seconds:
    a. The LED will turn solid purple after a short moment, indicating that no EDID copy was executed.
    b. Keep holding the button for 10 seconds..
4. After 10 seconds, the LED will start blinking again, now indicating EDID reset mode.
5. Release the EDID button.
6. Wait until the DE01FTs' LED turns to a solid purple. This indicates that the EDID reset is complete and the DVI source is now using the default EDID.

Important EDID Notes

- If you change the monitor connected to DE01FR, you must repeat the EDID copy steps above.
- If this step is skipped, the DVI source will continue using the previous monitor's EDID.

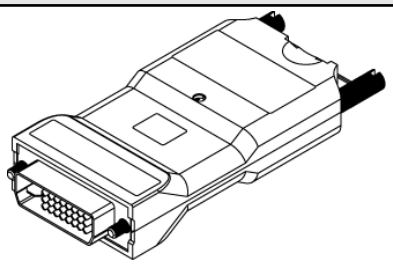
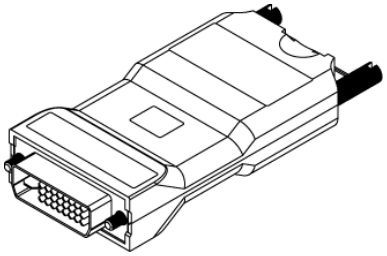
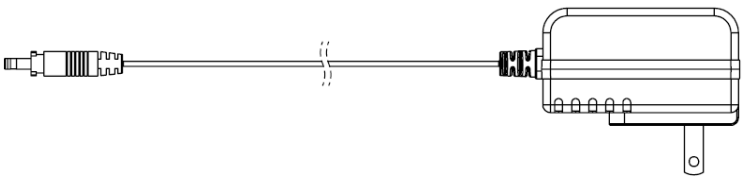
Technical Specification

Item No.	DE01FT	DE01FR
Compliance		
Standard	DVI-D HDCP 1.4	
Max. Video Resolution	1920x1200 60Hz	
Max. Transmission Distance	1 km over single-mode fiber	
Wavelength	1310nm	1550nm
Ports & Interfaces		
Video Input	1 x 25 Pin DVI-D	1 x LC Fiber Connector
Video Output	1 x LC Fiber Connector	1 x 25 Pin DVI-D
Power Input	1 x DC Jack	1 x DC Jack
Power		
Power Supply	5V 1A	5V 1A
Power Consumption	< 2W	< 2W
Ambient Temperature		
Operation	0 to 55℃	
Storage	-40 to 80℃	
Operating Altitude	2000m	
Humidity	Up to 95%	
Physical Characteristics		
Dimension	89 x 39 x 15mm	89 x 39 x 15mm
Weight	101.8 g	101.8 g

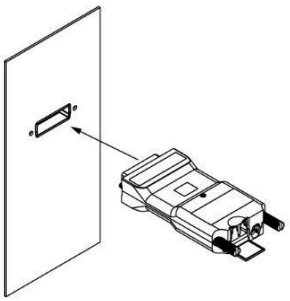
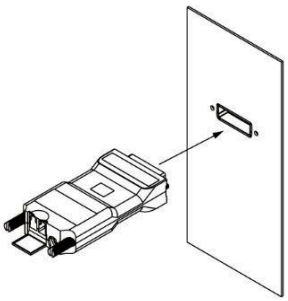
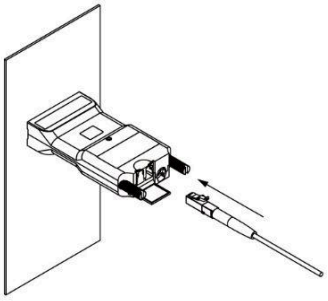
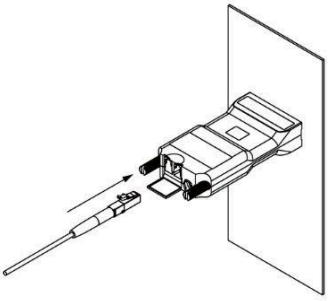
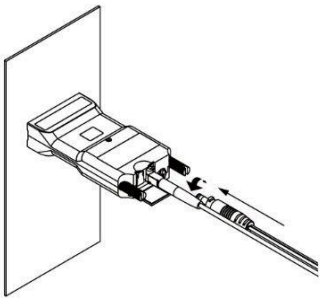
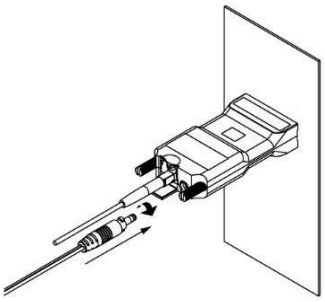
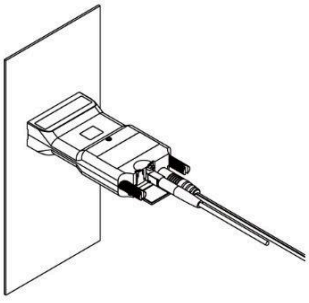
Caution

1. This product is designed for indoor applications. If you plan to use it outdoors, we recommend installing additional equipment for waterproof protection and surge protectors to prevent damage caused by lightning.
2. Do not put anything on the power and system cables, place them where they cannot be stepped on. Please be sure there is nothing resting on any cables.
3. Avoid using this product close to water places, or near high temperature devices such as radiators, stoves, etc.
4. Shut down the power supply and unplugged all equipment immediately if:
    A. water or any kind of liquid has been spilled into the product;
    B. the product has been damaged by external force;
    C. the product does not operate normally as this manual indicates;
    D. please contact us for further repair if above conditions happen.
5. Using standardized and certified optical fiber cables (at least OS1) to transfer high-resolution video is recommended.

Package Includes

Item	Amount	Image
DE01FT	1 pc	
DE01FR	1 pc	
DC 5V 1A Power Adapter	2 pcs	

Installation

Transmittter	Receiver
1 	1 
2 	2 
3 	3 
4 	4