User Manual

UFM-4K
Extender Set

Mini 4K Optical Fibre Extender

The mini UFM-4K Optical Fibre Extender Set consists of a transmitter and receiver pair that can extend 4K HDMI video over a single fibre LC-LC optic cable.

HDMI 1.4 and HDCP 1.4 is supported with video transmission distance of 300m when using either single-mode or multi-mode fibre (HDCP supported) at resolutions up to 4K30.

Maximum distance of 2000m can be achieved without any HDCP support, using a simplex single-mode (9/125µ) LC-LC optical fibre. This extender pair also fully supports HDMI 1.4 and HDCP 1.4.

Features

- Supports HDMI 1.4 up to 4K30 and HDCP1.4
- Supports HDCP 1.4
- Simplex LC-LC optical fibre connection
- Power and Link status LED indicators
- USB powered
- Transmits up to 300m with Single-mode or Multi-mode fibre
- Tx & Rx units plug directly into Source and Display HDMI ports
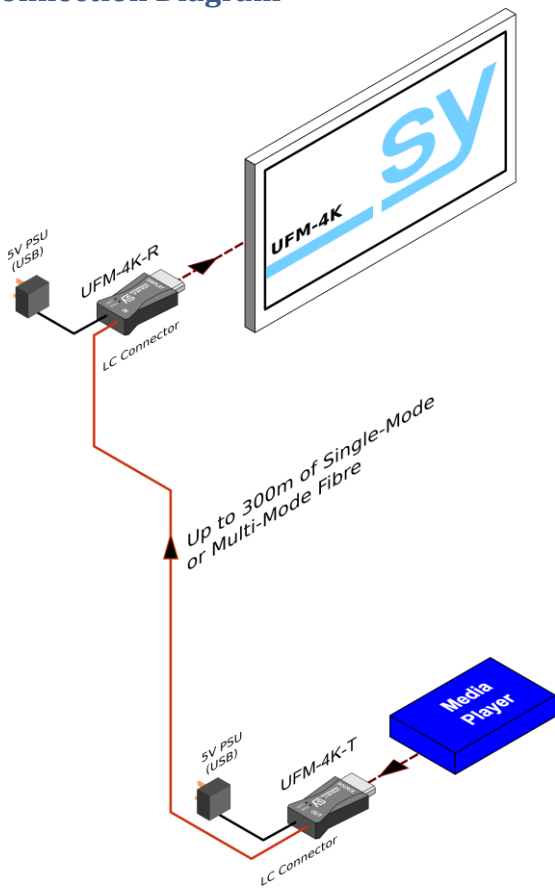
Connections

Transmitter

Receiver

Name	Transmitter – SY-UFM-4K-T	Receiver – SY-UFM-4K-R
HDMI Connector	HDMI input from SOURCE	HDMI output to DISPLAY
Fibre Connector (LC)	Output to Fibre optic cable	Input from Fibre optic cable
LINK LED	Lit when the fibre cable is passing the data signal.	
PWR LED	Lit when the 5V USB power is present	
+5V	Micro, USB +5V DC power input	

Connection Procedure

- Connect the UFM-4K-T (Transmitter) to the source equipment HDMI output.
- Connect the UFM-4K-R (Receiver) to the display equipment HDMI input.
- Connect the Fibre cable (LC-LC) between the Transmitter and Receiver units.
- Connect +5V DC power supplies to the micro USB connectors on both the Transmitter and Receiver units.
- Confirm that the PWR and LINK LEDs are lit on both the Transmitter and Receiver units.

Connection Diagram

5V PSU (USB)

UFM-4K-R

LC Connector

UFM-4K

Up to 300m of Single-Mode or Multi-Mode Fibre

5V PSU (USB)

UFM-4K-T

LC Connector

Media Player

Specifications

General

Description	UFM-4K-T	UFM-4K-R
HDMI Video Input	VESA and SMPTE 480p to 2160p with 3D. All HDMI resolutions to 3840x2160p 60Hz 4:2:0 / 3840x2160p 30Hz 4:4:4 480p@60Hz 576p@50Hz 720p@60Hz 1080p@24Hz 1080p@50Hz 1080p@60Hz 4K@24Hz 4K@30Hz 4K@60Hz 4:2:0 All PC resolutions to 1920x1200 @60Hz (Max Bandwidth of 10.2G)	
HDMI Version	Up to HDMI 1.4b	
HDCP Version	HDCP 1.4	
HDMI Audio Format	All audio formats including PCM, Dolby Digital®, DTS and DTS-HD®	
Input Connectors	1x HDMI 1x Micro USB 5V DC	1x LC Optical Fibre port 1x Micro USB 5V DC
Output Connectors	1x LC Optical Fibre port	1x HDMI
Transmission distance	300m using Multi-mode fibre (50/125μ) 300m using Single-mode fibre (9/125μ) 2000m using Single-mode fibre – (9/125μ – No HDCP support)	
Power Supply	5V DC @ 1A max. (USB Micro-B)	
Power Consumption	2.5W max.	2.3W max.

Environmental

Operating Temperature	-10 to +40°C (+14 to +104°F)
Operating Humidity	10 to 90 % RH (non-condensing)

Physical

Dimensions (WxHxD)	60 x 10 x 22 mm
Case Material	Aluminium housing
Weight	26g

Part Number

SY-UFM-4K-T	UHD HDMI-Fibre Transmitter
SY-UFM-4K-R	UHD HDMI-Fibre Receiver

Troubleshooting

Symptoms	Causes	Solutions
Losing colour Fuzzy or double image	Poor quality HDMI cable	Use a higher quality cable or connect directly to the HDMI connectors on the source and display devices.
Power LED is off	No power	Power up the unit.
	Poor contact to USB port	Ensure the Micro USB is fully inserted.
No output on the display	Source or Display not powered	Turn on both the HDMI source and the display.
	Incorrect input selected	Ensure that the correct HDMI input is selected.
	Poor contact of HDMI ports	Ensure that the HDMI connector is fully inserted at the HDMI source device and the HDMI display device.

Packing List

1	SY-UFM-4K-T
1	SY-UFM-4K-R
2	5V USB Power Supplies (5V 1A)
1	User Manual

Safety Instructions

To ensure reliable operation of this product as well as protecting the safety of any person using or handling these devices while powered, please observe the following instructions.

1. Use the power supply provided. If an alternate supply is required, check the voltage, polarity and that it has sufficient power to supply the device it is connected to.

2. Do not operate this product outside the specified temperature and humidity range given in the above specifications.

3. Ensure there is **adequate ventilation** to allow this product to operate efficiently.

4. Repair of this equipment should only be carried out by qualified professionals as this product contains sensitive devices that may be damaged by any mistreatment.

5. Only use this product in a dry environment. Do not allow any liquids or harmful chemicals to come into contact with this product.

After Sales Service

1. Should you experience any problems while using this product, firstly refer to the Troubleshooting section in this manual before contacting SY Technical Support.

2. When calling SY Technical Support, the following information should be provided:
   - Product name and model number
   - Product serial number
   - Details of the fault and any conditions under which the fault occurs.

3. This product has a two year standard warranty, beginning from the date of purchase as stated on the sales invoice. For full details please refer to our Terms and Conditions.

4. SY Product warranty is automatically void under any of the following conditions:
   - The product is already outside of its warranty period
   - Damage to the product due to incorrect usage or storage
   - Damage caused by unauthorised repairs
   - Damage caused by mistreatment of the product

5. Please direct any questions or problems you may have to your local dealer before contacting SY Electronics.