

Installation Guide

SY-UHD-FM

4K HDMI Fibre Extender Set with USB KVM and RS232

This 4K HDMI Fibre Extender offers a range of solutions from being simply a 4K HDMI fibre extender for digital signage applications to being a complete KVM solution for use in education establishments and data centres.

Distances up to 1.4 km can be realised using two single-mode fibre cables, giving full 4K (3840 x 2160 @ 30Hz) resolution with USB Keyboard and mouse or touch screen, and with bi-directional RS232 support.

Features

- Supports all HDMI resolutions up to 3840 x 2160 @ 30Hz.
- USB Keyboard and Mouse support
- USB Touch screen support
- RS232 support
- Light weight, low power design

Connectors and Controls

Front Panel



Name	Description
Power LED	Lit when the product is powered up
USB Type A Sockets	USB sockets for computer keyboard and mouse

Rear Panel



Name	Description
PC USB Type B Socket	USB Connection to PC
RS232	RS232 Rx, Tx and ground signals
HDMI	Transmitter: HDMI Input Receiver: HDMI Output
SFP+	LC connector for twin single-mode fibre cable
12V DC	12V DC power input

Using the SY-UHD-FM Fibre Extender Set

1. Connect an HDMI source to the HDMI input on the SY-UHD-FM-T.
2. Connect an HDMI display device to the HDMI output on the SY-UHD-FM-R.
3. Attach the USB keyboard and mouse, or the touch screen USB to the Type-A USB connectors on the SY-UHD-FM-R.
4. Connect the PC to the Type-B USB connector on the SY-UHD-FM-T.
5. Connect a dual-core LC-terminated fibre cable between SY-UHD-FM-T and SY-UHD-FM-R.
6. Power up both units and the HDMI output of the PC will be visible on the display at the location of the SY-UHD-FM-R. Full keyboard/mouse and, if connected, touch screen control is also possible.
7. If needed, RS232 Tx and Rx signals may also be connected to the extender units. The factory default baud rate is set to 9600 bps.

Usage of Hotkeys

To use the hotkey commands, the USB keyboard must be plugged into the transmitter or receiver as required.

Hotkey for the SY-UHD-FM-T Transmitter

The SY-UHD-FM-T can toggle remote access control to prevent or allow operation from the SY-UHD-FM-R.

<Scroll-Lock><Scroll-Lock>L<Enter> Toggle Lock/Unlock for remote access

Hotkey for the SY-UHD-FM-R Receiver

When there is a PC connected at both the transmitter and receiver ends, the control direction can be changed using the appropriate hotkey sequence as given below.

<Scroll-Lock><Scroll-Lock>R Switch to PC connected to the SY-UHD-FM-R

<Scroll-Lock><Scroll-Lock>T Switch to PC connected to the SY-UHD-FM-T

Scroll Lock LED Operation

After pressing the <Scroll Lock> button twice, the Scroll Lock LED on the keyboard will flash to indicate that the unit is in hotkey mode. While in this mode, the Num Lock and Caps Lock keys will not function until the hotkey command has been completed.

While the SY-UHD-FM-T is in remote lock mode, the Scroll Lock LED on the keyboard will keep flashing until the remote access is unlocked. While in the remote lock mode, the Num Lock and Caps Lock keys will behave normally.

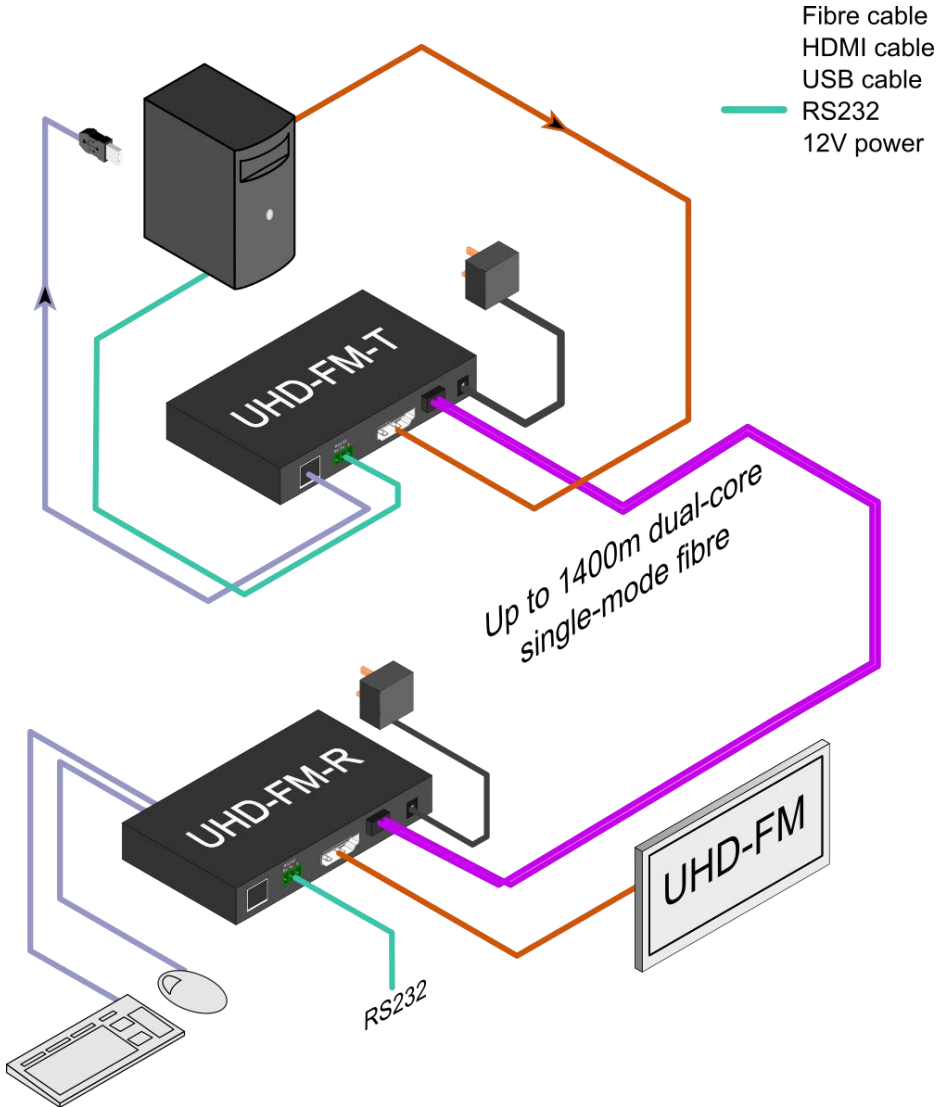


Figure 1 - HDMI Fibre Extender Application Example

Specifications

General

HDMI Resolutions	Up to 3840 x 2160 @ 30 Hz
HDMI Standard	1.4
USB PC ports	1
USB Device Ports	4
EDID Management	Transparent
Fibre Connector	LC
Fibre Cable Type	Dual-core single-mode
Fibre Distance	Up to 1.4 km
RS232 Baud rates (factory default = 9600)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
Max RS232 Throughput	4 kbps with a 50ms delay
Power Supply	12V @ 1A
Power Consumption	4W

Environmental

Operating Temperature	0 to 70 °C
Storage Temperature	-40 to 100 °C
Humidity	0 ~ 80% non-condensing
USB Device Ports	4

Physical

Dimensions (W x H x D)	150 x 28 x 110 mm
Weight	407 g

Safety Instructions

To ensure reliable operation of these 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 supplies provided. If an alternate supply is required, check Voltage, polarity and that it has sufficient power to supply the device it is connected to.
2. Do not operate either of these products outside the specified temperature and humidity range given in the above specifications.
3. Ensure there is adequate ventilation, as these products generate heat while operating.
4. Repair of the equipment should only be carried out by qualified professionals as these products contain sensitive devices that may be damaged by any mistreatment.
5. Ensure that these products operate in a dry environment. Do not allow any liquids or harmful chemicals to come into contact with these products.

After Sales Service

1. Should you experience any problems while using these products, 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. These products have a two year standard warranty, beginning from the date of purchase as stated on the sales invoice. Online registration of these products is required to activate the full three year extended warranty. 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.

