# HDMI Digital KVM Extender over Fiber/Cat5 (KFH163S)

# User Manual

## Call us for support

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GMT+8 Standard Time

## User Notice

This manual contains instructions for setting up the product and operating it. If the equipment is damaged due to inappropriate operation, the buyer (instead of the manufacturer, its distributor or dealer) will assume the entire cost of all necessary repairs.

The manufacturer reserves the right to change specifications, functions or circuitry of the series described here without notice. Information in this manual can be changed, expanded, or deleted without notice. You can find the current version of the manual in the download area of our website.

**Make sure that the voltage setting is correct before use.**

## Product Description

KFH163S HDMI high-definition digital KVM extender is a KVM signal extension device that can transmit 1-channel video, mouse, keyboard, USB2.0 and other signals of the PC host through optical fiber or network cable.

A complete set of KFH163S equipment consists of two parts, namely the transmitter (KFH163S_TX) and the receiver (KFH163S_RX). The transmitter connects to the signal source that needs to be transmitted, such as PC or Blu-ray devices, and the receiver will connect to the display, keyboard, mouse, U disk, audio player and other devices.

KFH163S HDMI high-definition digital KVM extender uses optical fiber or network cable for connection, supporting single-mode and multi-mode optical fibers. The maximum transmission distance of single-mode is 80km, the maximum transmission distance of multi-mode is 300m, and the maximum transmission distance of network cable is 150m. It supports the transmission of 1-channel high-quality HDMI signals and can be widely used on many scenarios.

*__Note: The bandwidth of the optical module must reach 1.25Gbit/sec or above.__

## Product Features

- Private video encoding protocol (JPEG-like) lossless compression, the transmission quality is visually lossless.
- Low latency, 1 frame delay (16ms @ 60fps).
- HDMI high-definition video transmission, up to 3840x2160@30Hz, 1920*1080@60Hz recommended.
- Typical transmission bandwidth is 200M~300Mbit/s.
- Supports 1000M LAN local area network interface.
- Supports optical fiber transmission. The optical interface SFP (LC) optical attenuation is -3db, (optional FC interface) -3db.
- The maximum transmission distance is 150m for point-to-point connection using network cable
- Supports USB 2.0 transparent transmission. Can connect to 4 USB peripherals, such as: U disk, USB printer, fingerprint recognition module, face recognition module, etc.
- Supports 1 channel asynchronous serial port transmission.
- Supports analog audio microphone.
- Supports point-to-point dial-up connection with Gigabit network switches.

● Built-in ESD protection circuit can prevent static electricity.

## KFH163S Transmitter (TX)
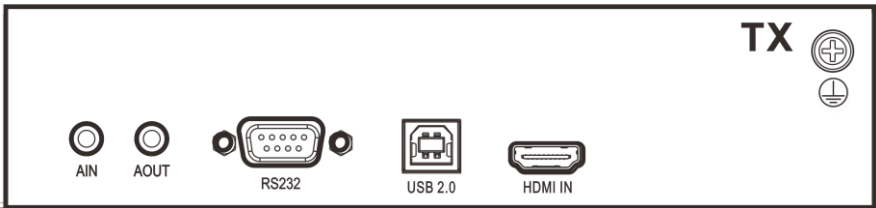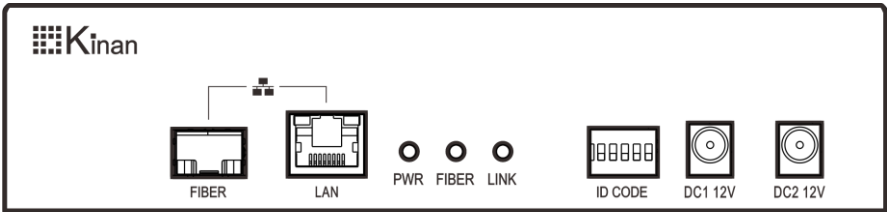


| No. | Interface | | Description |
|-----|-----------|------|-------------|
| 1 | FIBER | | Fiber interface |
| 2 | LAN | | LAN interface |
| 3 | LED | PWR | Power indicator |
| | | FIBER | Connection indicator of FIBER |
| | | LINK | Connection indicator |
| 4 | ID CODE | | Dip switch, used for point-to-point dial-up connection |
| 5 | DC1 ,DC2 | | Connect to the 12V power supply |
| 6 | AIN | | Audio input |
| 7 | AOUT | | MIC output |
| 8 | RS232 | | Serial Port |
| 9 | USB2.0 | | USB-B, connect to PC or server |
| 10 | HDMI IN | | HDMI video input |
| 11 | ⏚ | | Ground the device |

## KFH163S Receiver (RX)
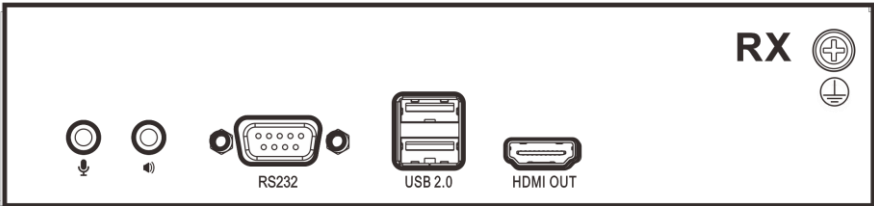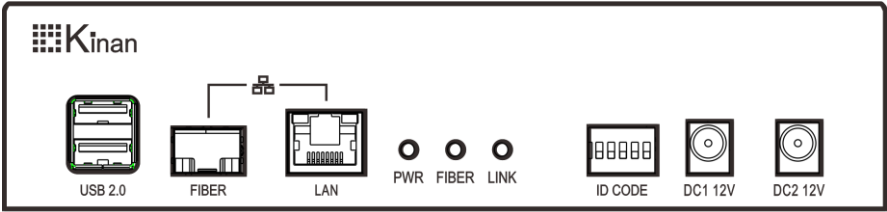


| No. | Interface | | Description |
|-----|-----------|---|-------------|
| 1 | USB2.0 | | Connect to USB2.0 peripherals |
| 2 | FIBER | | Fiber interface |
| 3 | LAN | | LAN interface |
| 4 | LED | PWR | Power indicator |
| | | FIBER | Connection indicator of FIBER |
| | | LINK | Connection indicator |
| 5 | ID CODE | | Dip switch, used for point-to-point dial-up connection |
| 6 | DC1, DC2 | | Connect to the 12V power supply |
| 7 | 🎤 | | MIC input |
| 8 | 🔊 | | Audio output |
| 9 | RS232 | | Serial Port |
| 10 | HDMI OUT | | HDMI video output |
| 11 | ⏚ | | Ground the device |

## Connection Diagram
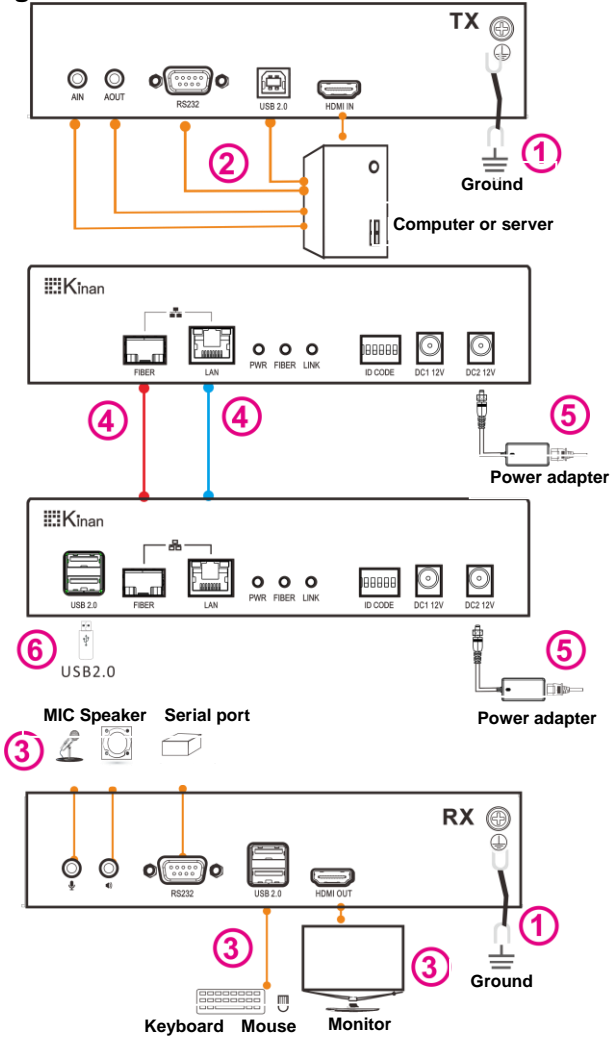


1. Make sure the KVM extenders (TX and RX) are grounded (Figure ①)
2. Connect the transmitter TX to the host video interface, USB, and
audio microphone interface (Figure ②).
3. Connect the receiver RX to the monitor, audio, USB keyboard, and
USB mouse (Figure ③).
4. Connect the transmitter TX and receiver RX interfaces respectively through
optical fiber or network cable (Figure ④).
*Note that the ID CODE dip switch keys on TX and RX must be exactly the same.*
5. Power on the transmitter TX and receiver RX respectively (Figure ⑤).

6. Connect the USB peripherals to the receiver RX (Figure ⑥)

## Specifications

| Specifications | | KFH163S_TX | KFH163S_RX |
|---|---|---|---|
| Connections | HDMI input | 1 | NA |
| | HDMI output | NA | 1 |
| | Power | 12V | 12V |
| | LAN port | RJ45 x 1 | RJ45 x 1 |
| | SFP port | SFP x 1 | SFP x 1 |
| | Mic | 3.5mm Stereo Jack (Pink) | 3.5mm Stereo Jack (Pink) |
| | Speaker | 3.5mm Stereo Jack (Green) | 3.5mm Stereo Jack (Green) |
| | USB Type B | 1 | N/A |
| | USB 2.0 | N/A | USB x 4 |
| Max resolution | | 3840*2160@30Hz | |
| Connection cable | | CAT5/6 or Optical Fiber Cable | |
| Input power supply | | DC12V / 2A | DC12V / 2A |
| Power consumption | | 5W | 5W |
| Operating temperature | | 0–50 ℃ | |
| Storage temperature | | -20–60 ℃ | |
| Humidity | | 0–80% RH, non-condensing | |
| Net weight (kg) | | 0.81kg | 0.81kg |
| Material | | Metal | |
| Product dimension (W×D×H) | | 189×144×44mm | 189×144×44mm |