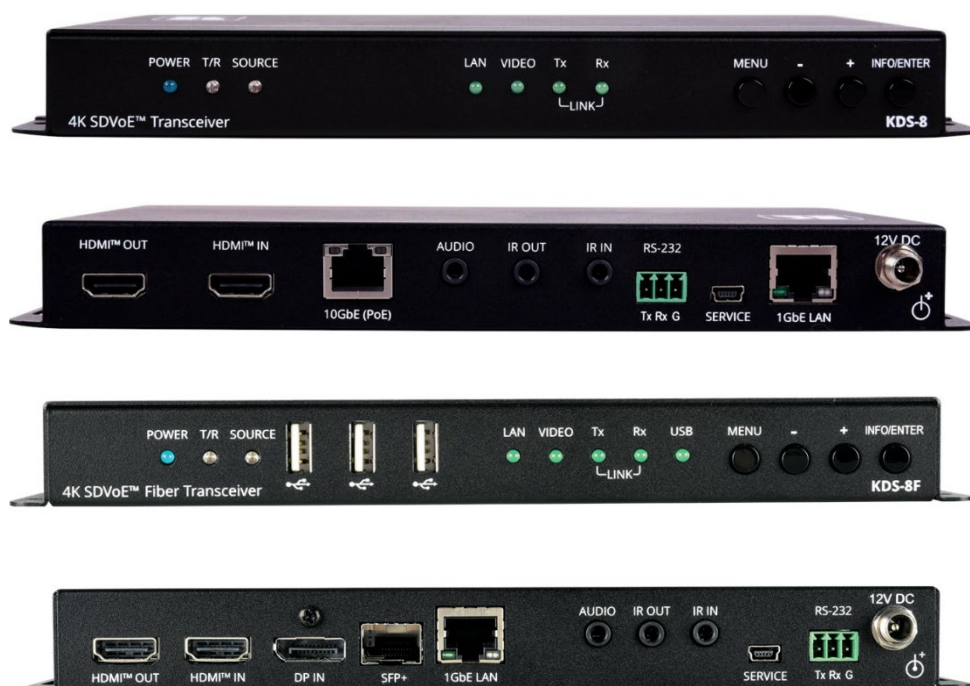


## USER MANUAL

### MODEL:

### KDS-8, KDS-8F SDVoE Streaming Transceivers



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# Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

---

## Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment.
- Review the contents of this user manual.



Go to [www.kramerav.com/downloads/KDS-8](http://www.kramerav.com/downloads/KDS-8) to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

## Achieving Best Performance

- Use only good quality connection cables (we recommend Kramer high-performance, high-resolution cables) to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables).
- Do not secure the cables in tight bundles or roll the slack into tight coils.
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality.
- Position your Kramer **KDS-8** away from moisture, excessive sunlight and dust.



This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.

## Safety Instructions



### Caution:

- This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.
- For products with relay terminals and GPIO ports, please refer to the permitted rating for an external connection, located next to the terminal or in the User Manual.
- There are no operator serviceable parts inside the unit.



### Warning:

- Use only the power cord that is supplied with the unit.
- To ensure continuous risk protection, replace fuses only according to the rating specified on the product label which located on the bottom of the unit.

## Recycling Kramer Products

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer's recycling arrangements in your particular country go to our recycling pages at [www.kramerav.com/support/recycling](http://www.kramerav.com/support/recycling).

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## Overview



Unless otherwise noted, when **KDS-8** is mentioned in this manual it refers to both **KDS-8** and **KDS-8F**.

Congratulations on purchasing your Kramer **KDS-8 SDVoE Streaming Transceiver**. **KDS-8** is a high-performance, zero latency, 4K@60Hz (4:4:4) video transceiver via Ethernet. **KDS-8** streams over copper cable and **KDS-8F** streams over fiber optic cable. **KDS-8** can be set as either an encoder or decoder. As an encoder, it encodes and streams the HDMI™ or DisplayPort (**KDS-8F** only) input along with IR, RS-232, analog audio, and USB (**KDS-8F** only) over an IP network. As a decoder, it receives the encoded signal and decodes it for output.

## Benefits and Features

- High-Performance Video Streaming Transceiver – Streams up to 4K@60Hz (4:4:4) resolution signals over a 10G network interface, providing lossless compression.
- Maximum Compatibility – Fully standard and compliant SDVoE™ codec, enables compatibility with other software and hardware streaming platforms.
- HDCP 2.2 Compliant, HDR Support, Genlock and FastSwitch Support.
- High-Speed 10G Network Switch – Managed switch provides: multicast, jumbo frames, IGMP snooping and fast-leave.
- Analog Audio Embedding – Provides an unbalanced analog audio port for embedding audio into the streaming signal.
- USB Interface Extension (**KDS-8F** only) – Create a point-to-point USB interface extension between two transceivers where USB interface devices connected to one transceiver can communicate with a host computer connected to the other transceiver.
- Bi-directional IR and RS-232 over IP – Control an IR or serial device located on the decoder side from the encoder and vice versa.
- Video Wall Support.
- Multiview Support.
- Easy, Cost-Effective Maintenance – LED indicators for main power, Tx/Rx mode setting, HDMI video source detection, USB communication (**KDS-8F** only) and Tx/Rx transmission enable easy local maintenance and troubleshooting.

- Simple System Management – Remote system management support to enable quick and efficient remote system and device life-cycle management.

## **Typical Applications**

**KDS-8** is ideal for the following typical applications:

- Medical facilities and hospitals
- Government facilities
- Live entertainment
- Control centers
- Large scale matrixes

# Defining KDS-8 SDVoE Streaming Transceiver

This section defines **KDS-8** and **KDS-8F**.

## KDS-8

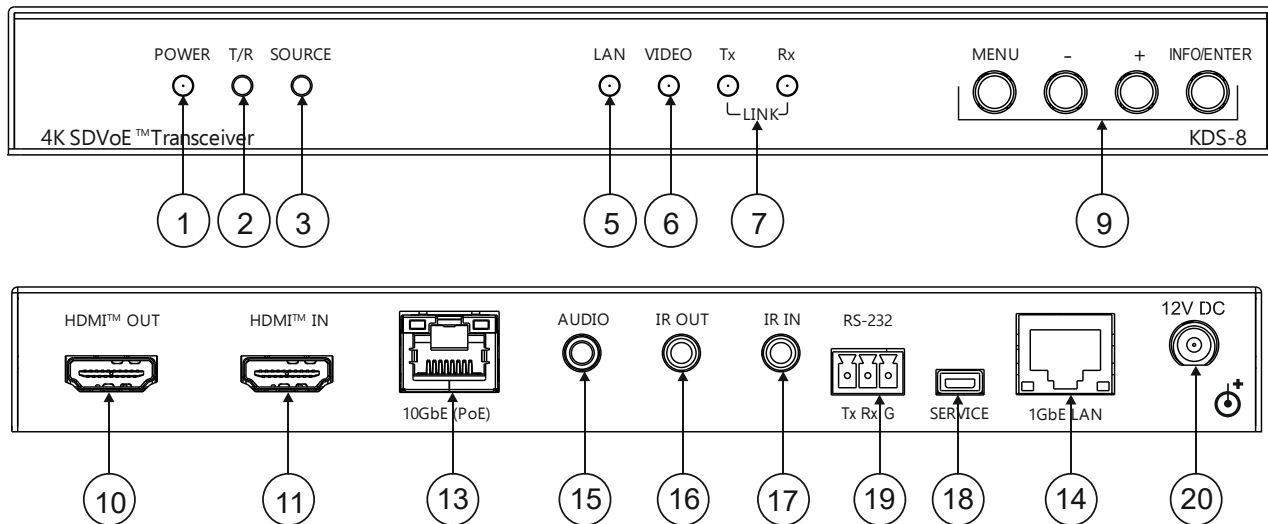
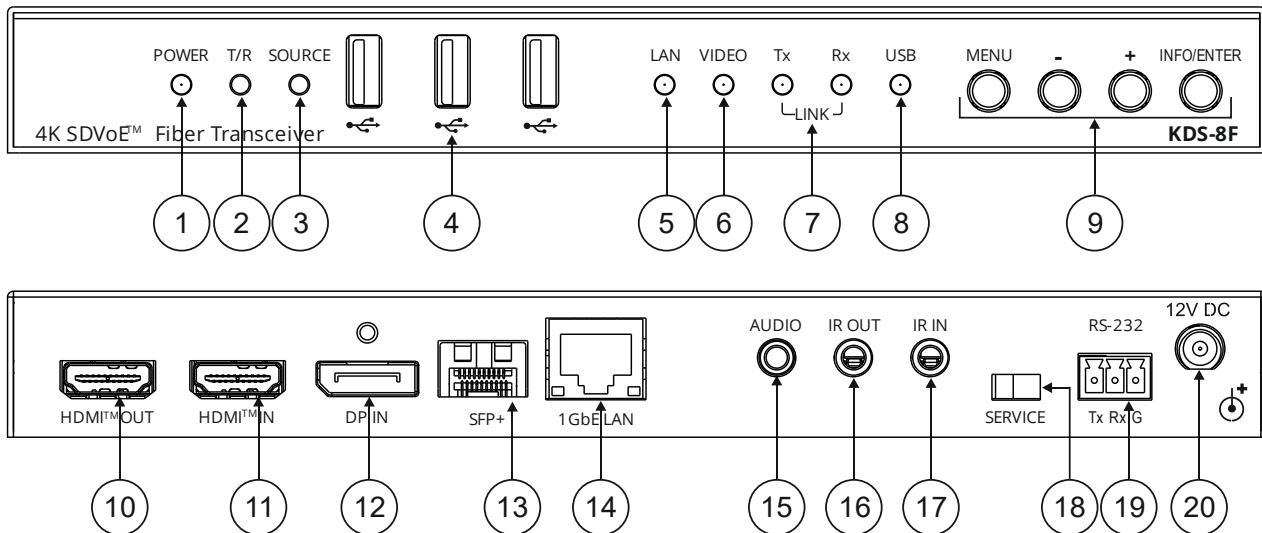


Figure 1: KDS-8 SDVoE Streaming Transceiver

#	Feature		Function	
①	POWER LED		Lights when the device is powered ON.	
②	T/R LED		<ul style="list-style-type: none"><li>Encoder mode: Lights green.</li><li>Decoder mode: Lights amber.</li></ul>	
③	SOURCE LED		Decoder mode: Lights when the HDMI input is live and selected.	
⑤	LAN LED		Lights when the 1GbE LAN connection is active.	
⑥	VIDEO LED		<ul style="list-style-type: none"><li>Encoder mode: Lights when HDMI input signal is detected.</li><li>Decoder mode:<ul style="list-style-type: none"><li>Genlock mode – Lights when streaming video is detected.</li><li>FastSwitch mode – Lights constantly.</li></ul></li></ul>	
⑦	LINK Tx and Rx LEDs		Lights to indicate data transmission and reception activity over the 10GbE streaming connection.	
⑨	OSD Navigation Buttons	MENU	Press to enter the configuration OSD menu, or to exit menu items.	
		+	When in OSD: Press to move up or adjust selections.	When not in OSD: <ul style="list-style-type: none"><li>Press and hold both buttons simultaneously for 10 seconds to change the mode from encoder to decoder or decoder to encoder.</li><li>Decoder mode: Press one of the buttons to toggle the video source between 10GbE (PoE) and HDMI IN.</li></ul>
		-	When in OSD: Press to move down or adjust selections.	

#	Feature		Function
		INFO/ENTER	When in OSD: Press to confirm a selection or to go deeper into a menu item. Not in a menu: Press to activate the information OSD (see <a href="#">Configuring Information OSD</a> on page 15).
⑩	HDMI OUT Connector		<ul style="list-style-type: none"> <li>Encoder mode: Connect to a video acceptor for local viewing of the video source connected to HDMI IN.</li> <li>Decoder mode: Connect to a video acceptor for viewing the video streamed from the encoder.</li> </ul>
⑪	HDMI IN Connector		<ul style="list-style-type: none"> <li>Encoder mode: Connect to a video source for streaming.</li> <li>Decoder mode: Connect to a video source for a local video input.</li> </ul>
⑬	10GbE (PoE) RJ-45 Connector		Connect to another SDVoE™ unit or to another device for streaming video.
⑭	1GbE LAN RJ-45 Connector		Connect to a 1G device.
⑮	AUDIO 3.5mm Jack		<ul style="list-style-type: none"> <li>Encoder mode: Connect to an unbalanced analog audio source for embedding audio in the streaming signal.</li> <li>Decoder mode: Connect to an unbalanced analog audio acceptor for de-embedding audio from the streaming signal.</li> </ul>
⑯	IR OUT 3.5mm Jack		Connect to a 38kHz IR transmitter for transmitting the IR signal that was extended via the streaming line. For example, connect to an IR transmitter to control a display.
⑰	IR IN 3.5mm Jack		Connect to a 38kHz IR sensor for extending the IR signal via the streaming line.
⑱	SERVICE Mini USB Connector		For internal use.
⑲	RS-232 3-Pin Terminal Block		Connect to a serial controller or controlled device for extending the serial control signal via the streaming line to an external device.
⑳	12V DC Connector		Connect to the power adapter.

**KDS-8F**Figure 2: **KDS-8F** SDVoE Streaming Transceiver over Fiber Optic

#	Feature		Function
①	POWER LED		Lights when the device is powered ON.
②	T/R LED		<ul style="list-style-type: none"> <li>Encoder mode: Lights green.</li> <li>Decoder mode: Lights amber.</li> </ul>
③	SOURCE LED		<ul style="list-style-type: none"> <li>Encoder/Decoder mode: <ul style="list-style-type: none"> <li>Lights green when the HDMI input is selected.</li> <li>Lights orange when the DP input is selected.</li> </ul> </li> <li>Decoder mode: Light is off when SFP+ source is selected.</li> </ul>
④	USB Connectors		Connect to keyboard, camera, and mouse (KVM) to communicate with a host computer connected to another <b>KDS-8F</b> transceiver.
⑤	LAN LED		Lights when the 1GbE LAN connection is active.
⑥	VIDEO LED		<ul style="list-style-type: none"> <li>Encoder mode: Lights when HDMI input signal is detected.</li> <li>Decoder mode: <ul style="list-style-type: none"> <li>Genlock mode – Lights when streaming video is detected.</li> <li>FastSwitch mode – Lights constantly.</li> </ul> </li> </ul>
⑦	LINK Tx and Rx LEDs		Lights to indicate data transmission and reception activity over the SFP+ 10GbE streaming connection.
⑧	USB LED		Lights constantly when USB connection is active and synced.
⑨	OSD Navigation Buttons	MENU	Press to enter the OSD menu, or to exit menu items.
		+	When in OSD: Press to move up or adjust selections.
		-	When in OSD: Press to move down or adjust selections.
		INFO/ENTER	<ul style="list-style-type: none"> <li>When in OSD: Press to confirm a selection or to go deeper into a menu item.</li> <li>When not in OSD: Press to activate the Information OSD (see <a href="#">Configuring Information OSD</a> on page 15).</li> </ul>



#	Feature	Function
⑩	HDMI OUT Connector	<ul style="list-style-type: none"> <li>Encoder mode: Connect to a video acceptor for local viewing of the video source connected to HDMI IN.</li> <li>Decoder mode: Connect to a video acceptor for viewing the video streamed from the encoder.</li> </ul>
⑪	HDMI IN Connector	<ul style="list-style-type: none"> <li>Encoder mode: Connect to a video source for streaming.</li> <li>Decoder mode: Connect to a video source for a local video input.</li> </ul>
⑫	DP IN Connector	<ul style="list-style-type: none"> <li>Encoder mode: Connect to a DisplayPort video source for streaming.</li> <li>Decoder mode: Connect to a DisplayPort video source for a local video input.</li> </ul>
⑬	SFP+ Connector	Connect to a fiber switch or directly to another SDVoE™ device for streaming video.
⑭	1GbE LAN RJ-45 Connector	Connect to a 1G device for device configuration.
⑮	AUDIO 3.5mm Jack	<ul style="list-style-type: none"> <li>Encoder mode: Connect to an unbalanced analog audio source for embedding audio in the streaming signal.</li> <li>Decoder mode: Connect to an unbalanced analog audio acceptor for de-embedding audio from the streaming signal.</li> </ul>
⑯	IR OUT 3.5mm Jack	Connect to a 38kHz IR transmitter for transmitting the IR signal that was extended via the streaming line. For example, connect to an IR transmitter to control a display.
⑰	IR IN 3.5mm Jack	Connect to a 38kHz IR sensor for extending the IR signal via the streaming line.
⑱	SERVICE Mini USB Connector	Connect to a host (PC) for communicating with USB devices connected to another <b>KDS-8F</b> transceiver.
⑲	RS-232 3-Pin Terminal Block	Connect to a serial controller or serial controlled device for extending the serial control signal via the streaming line to control an external device.
⑳	12V DC Connector	Connect to the power adapter.

# Mounting KDS-8

This section provides instructions for mounting **KDS-8**. Before installing, verify that the environment is within the recommended range:



- Operation temperature – 0° to 40°C (32 to 104°F).
- Storage temperature – -40° to +70°C (-40 to +158°F).
- Humidity – 10% to 90%, RHL non-condensing.



- **KDS-8** must be placed upright in the correct horizontal position.



**Caution:**

- Mount **KDS-8** before connecting any cables or power.



**Warning:**

- Ensure that the environment (e.g., maximum ambient temperature & air flow) is compatible for the device.
- Avoid uneven mechanical loading.
- Appropriate consideration of equipment nameplate ratings should be used for avoiding overloading of the circuits.
- Reliable earthing of rack-mounted equipment should be maintained.

**You can install KDS-8 using one of the following methods:**

- Mount to a flat surface using the attached mounting brackets.
- Place on a flat surface.

# Connecting KDS-8



Always switch off the power to each device before connecting it to your **KDS-8**. After connecting your **KDS-8**, connect its power and then switch on the power of the device.

## Connecting KDS-8

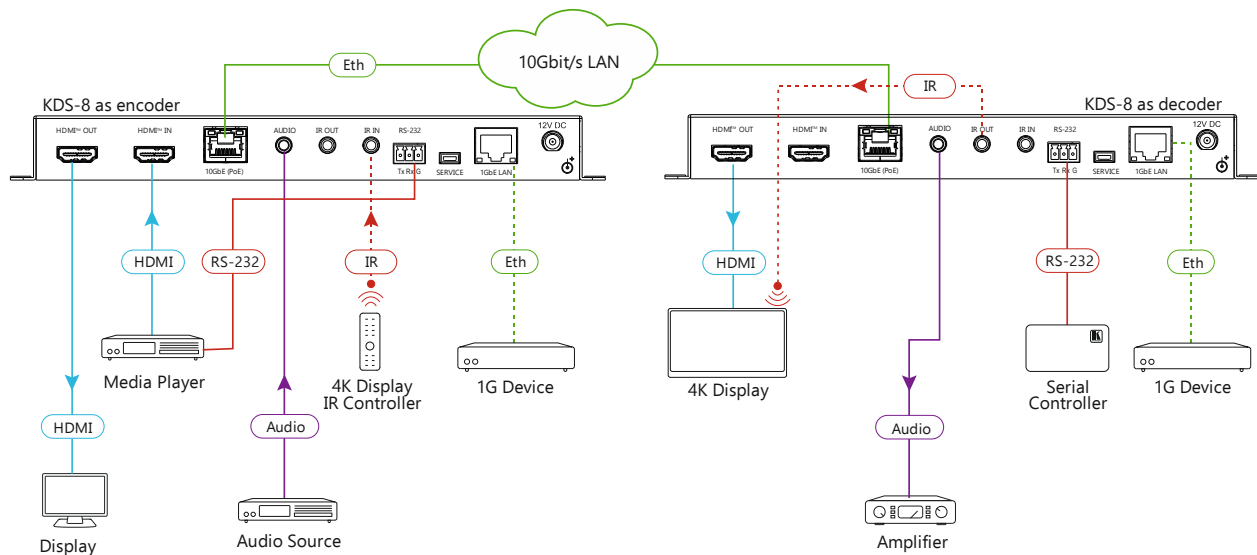


Figure 3: Connecting a **KDS-8** in Encoder Mode to Another **KDS-8** in Decoder Mode



To change the encoder/decoder mode of a unit see [Changing Encoder/Decoder Mode – Front Panel](#) on page 12.

To connect **KDS-8** as illustrated in [Figure 3](#):

1. Connect the 10GbE (PoE) RJ-45 Connector (13) on each unit to the LAN.
2. Connect the **KDS-8** configured as an encoder:
  - a. Connect an HDMI video source (for example, media player) to:
    - HDMI IN Connector (11).
    - RS-232 3-Pin Terminal Block (19) for controlling the video source via a serial controller on the decoder side.
  - b. Connect the AUDIO 3.5mm Jack (15) to an unbalanced analog audio source.
  - c. Connect the 1GbE LAN RJ-45 Connector (14) to a 1G device.
  - d. Connect the HDMI OUT Connector (10) to a display.
3. Connect the **KDS-8** configured as an decoder:
  - a. Connect the HDMI OUT Connector (10) to a video acceptor (for example, 4K display).
  - b. Connect the AUDIO 3.5mm Jack (15) to an audio amplifier.
  - c. Connect the RS-232 3-Pin Terminal Block (19) to a serial controller to control a serial device on the encoder side.

- d. Connect the 1GbE LAN RJ-45 Connector (14) to a 1G device.
4. If PoE is not available, connect a 12V power supply (not included) to the DC 12V Connector (20) on each unit.

## Connecting KDS-8F



USB extension can only be used when the transceivers are connected point-to-point.

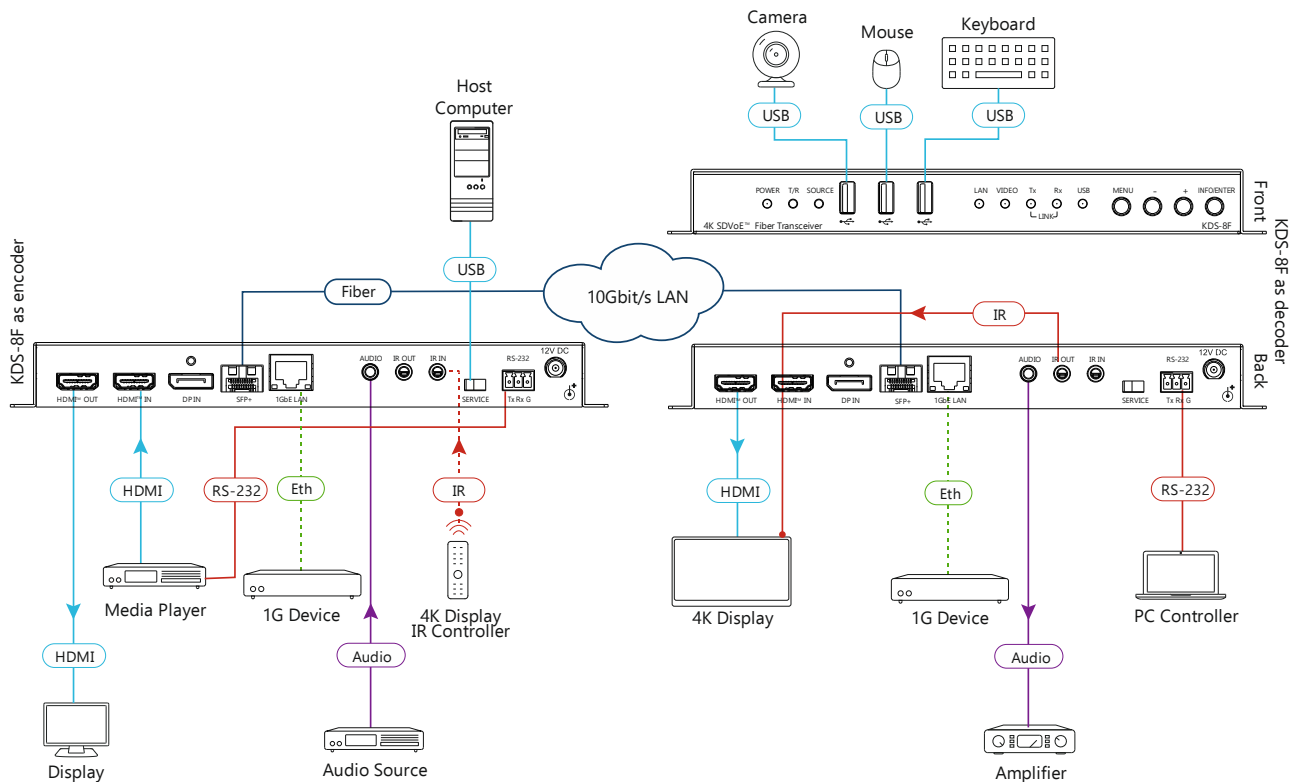


Figure 4: Connecting a KDS-8F in Encoder Mode to Another KDS-8F in Decoder Mode

To connect KDS-8F as illustrated in [Figure 3](#):

1. Connect the SFP+ Connector (13) on each unit to the LAN.
2. Connect the KDS-8F configured as an encoder:
  - a. Connect the HDMI IN Connector (11) to an HDMI video source (for example, media player).
  - b. Connect the RS-232 3-Pin Terminal Block (19) to the HDMI video source for controlling the video source via a serial controller on the decoder side.
  - c. Connect the AUDIO 3.5mm Jack (15) to an unbalanced analog audio source.
  - d. Connect the 1GbE LAN RJ-45 Connector (14) to a 1G device.
  - e. Connect the HDMI OUT Connector (10) to a display.
  - f. Connect a host computer to the SERVICE Mini USB Connector (18) for extension to USB devices connected to the other KDS-8F transceiver.

3. Connect the **KDS-8F** configured as a decoder:
  - a. Connect the HDMI OUT Connector (10) to a video acceptor (for example, 4K display).
  - b. Connect the AUDIO 3.5mm Jack (15) to an audio amplifier.
  - c. Connect the RS-232 3-Pin Terminal Block (19) to a serial controller to control a serial device on the encoder side.
  - d. Connect the 1GbE LAN RJ-45 Connector (14) to a 1G device.
  - e. Connect a camera, mouse, and keyboard to the USB connectors (4) on the front panel for USB interface extension to a host computer connected to the other **KDS-8F** transceiver.
4. Connect a 12V power supply (not included) to the DC 12V Connector (20) on each unit.

# Operating KDS-8

Configure and control your **KDS-8** using any of the following methods:

- Kramer Network Enterprise Management Platform (version 2.2 or higher – go to [www.kramerav.com/product/KDS-8](http://www.kramerav.com/product/KDS-8) for more information).
- Via the front panel buttons (see [Changing Encoder/Decoder Mode – Front Panel](#) on page [12](#)).
- Via the configuration OSD (see [Configuring Settings – OSD](#) on page [13](#)).

---


## Changing Encoder/Decoder Mode – Front Panel

By default, **KDS-8** is defined to operate in encoder mode. You can easily change the encoder/decoder mode using the front panel buttons.





To change the encoder/decoder mode from the configuration OSD, see [Changing Encoder/Decoder Mode – OSD](#) on page [18](#).

**To change the mode from encoder to decoder or vice versa:**

- Press and hold the + (plus) and – (minus) buttons  simultaneously for about 10 seconds.

The device reboots and the encoder / decoder mode changes.



Press the INFO/ENTER button  to display the encoder/decoder mode status (TX = encoder, RX = decoder) on the display connected to the HDMI OUT Connector .

## Configuring Settings – OSD

The configuration OSD enables you to configure **KDS-8**. When using the menu, it appears as an overlay on top of any image that appears on the display. The menu is operated using the front panel buttons.



Unless otherwise noted, the instructions in this section apply to **KDS-8** and **KDS-8F**.

**KDS-8** configuration OSD enables performing the following:

- [Navigating Configuration OSD](#) on page [13](#).
- [Configuring Information OSD](#) on page [15](#).
- [Defining Configuration OSD Duration](#) on page [16](#).
- [Defining EDID](#) on page [17](#).
- [Defining HDCP](#) on page [17](#).
- [Changing Encoder/Decoder Mode – OSD](#) on page [18](#).
- [Defining Cooling Fan Operation](#) on page [18](#).
- [Selecting Active Input](#) on page [19](#).
- [Setting Overlay Priority](#) on page [20](#).
- [Verifying Device Information](#) on page [21](#).

## Navigating Configuration OSD

Navigate the configuration OSD using the four OSD Navigation Buttons ⑨ on the front panel, as follows:

- MENU button – Open the configuration OSD on your screen or exit a menu option.



When **KDS-8** is in encoder mode the OSD appears on the bottom left of the screen and when it is in decoder mode it appears on the bottom right of the screen.

- + or – buttons – Move up or down in the menu / sub-menu or scroll through parameter options.
- INFO/ENTER button – Open a menu / sub-menu item, activate a menu / sub-menu item to edit it or select the required value.



When a menu item is selected, it turns **green**.

When a menu / sub-menu item is activated and editable, the item turns **red**.

For example, to change the local priority setting:

1. Press the Menu button.

The MAIN MENU appears with OSD selected.

```

RX          MAIN MENU
OSD
EDID
HDCP
DEVICE SETTING
INFORMATION
FACTORY SETTING

```

Figure 5: MAIN MENU with OSD selected

5. Press the – button three times.  
DEVICE SETTING is selected.

```

RX          MAIN MENU
OSD
EDID
HDCP
DEVICE SETTING
INFORMATION
FACTORY SETTING

```

Figure 6: MAIN MENU with DEVICE SETTING selected

6. Press the INFO/ENTER button.  
The DEVICE SETTING menu appears.

```

RX          DEVICE SETTING
STATUS      : RECEIVER
FAN MODE    : FOLLOW TEMP
INPUT       : INPUT 2
LOCAL PRIORITY: OFF

```

Figure 7: DEVICE SETTING Menu

7. Press the + button once.  
LOCAL PRIORITY is selected.

```

RX          DEVICE SETTING
STATUS      : RECEIVER
FAN MODE    : FOLLOW TEMP
INPUT       : INPUT 2
LOCAL PRIORITY: OFF

```

Figure 8: DEVICE SETTING Menu with LOCAL PRIORITY Selected



8. Press the INFO/ENTER button.

LOCAL PRIORITY is activated and editable.

```

RX          DEVICE SETTING
STATUS      : RECEIVER
FAN MODE    : FOLLOW TEMP
INPUT       : INPUT 2
LOCAL PRIORITY: OFF

```

Figure 9: DEVICE SETTING Menu with Editable LOCAL PRIORITY

9. Use the + or – button to toggle ON or OFF.

10. Press the INFO/ENTER button.

The selected value (ON or OFF) is set.

## Configuring Information OSD

When you press the INFO/ENTER button, the following information appears on the connected display:

- Output resolution.
- Encoder/decoder mode status.
- Device IP address.

```

TX
RESOLUTION: 1920X1080P @60 (RGB)
STATUS     : TRANSMITTER
IP         : 169.254.64.180

```

Figure 10: Information OSD

This information OSD, if enabled, also appears automatically when you connect the HDMI cable from the device to the display.

### Enabling/Disabling Automatic Information Display

**To enable/disable the automatic information display upon connection:**

1. In the OSD, go to OSD > DISPLAY INFORMATION.
2. Select ON or OFF.

The automatic information display is enabled.

## Defining Information Display Duration

To define the amount of time the Information display remains on the screen:

1. In the OSD, go to OSD > INFORMATION TIMEOUT.
2. Set the timeout value in seconds.

The information display duration is defined.

## Defining Configuration OSD Duration

When you press the MENU button, the configuration OSD appears on the screen. If no other buttons are pressed, it remains on the screen for a user-defined amount of time.

To define the amount of time the configuration OSD remains on the screen:

1. In the OSD, go to OSD > MENU TIMEOUT.
2. Set the timeout value in seconds.

The configuration OSD duration is defined.

## Changing Configuration OSD Position



This section applies only to **KDS-8F**.

**KDS-8F** enables you to change the horizontal or vertical position of where the configuration OSD appears on the display.



The OSD position defined when in encoder mode is set independently from the OSD position defined when in decoder mode.

To change the configuration OSD horizontal position:

1. In the OSD, go to OSD > MENU H POSITION.
2. Increase or decrease the value as needed.

The OSD configuration menu moves left or right on the display.

To change the configuration OSD vertical position:

1. In the OSD, go to OSD > MENU V POSITION.
2. Increase or decrease the value as needed.

The OSD configuration menu moves up or down on the display.

## Defining EDID

**KDS-8** enables you to manually define the EDID. **KDS-8** provides the following EDID options:

Name	Description
Internal 1	FHD (2Ch): 1920×1080p@60Hz (4.95Gbps), 8-bit color, LPCM 2.0.
Internal 2	FHD (MCh): 1920×1080p@60Hz (4.95Gbps), 8-bit color, LPCM 7.1 & Bitstream.
Internal 3	UHD (2Ch): 3840×2160p@30Hz (10.2Gbps), 12-bit Deep Color, LPCM 2.0.
Internal 4	UHD (MCh): 3840×2160p@30Hz (10.2Gbps), 12-bit Deep Color, LPCM 7.1 & Bitstream.
Internal 5	UHD + (2Ch): 3840×2160p@60Hz (18Gbps), 12-bit Deep Color, LPCM 2.0.
Internal 6	UHD + (MCh): 3840×2160p@60Hz (18Gbps), 12-bit Deep Color, LPCM 7.1 & Bitstream.
External A	Encoder mode: Follows video acceptor connected to Local HDMI OUT. Decoder mode: Follows video acceptor connected to HDMI OUT.
External B (Transmitter Mode only)	Encoder mode for <b>KDS-8F</b> : Follows video acceptor connected to HDMI OUT of Decoder.
User 1	User defined through API.
User 2	User defined through API.

### To define the EDID:

1. In the OSD, go to EDID > EDID SELECT.



For **KDS-8F**, select either HDMI EDID when defining for the HDMI input or DP EDID when defining for the DisplayPort input.

2. Select the required EDID option.

The EDID source is defined.

## Defining HDCP

**KDS-8** enables you to define the HDCP status of the input.

### To define the HDCP status of the input:

1. In the OSD, go to HDCP.
2. Go to one of the following:
  - HDMI HDCP – defines the HDCP status of the HDMI input.
  - DP HDCP – for **KDS-8F** to define the HDCP status of the DisplayPort input.
3. Select one of the following options:
  - Follow In – HDCP follows the input source device.
  - Follow Out – HDCP follows the output acceptor display.
  - Disable – HDCP is disabled.
  - Follow API – Follow the HDCP setting defined by the API.

HDCP status of the device is defined.

## Changing Encoder/Decoder Mode – OSD

By default, **KDS-8** is defined to operate in encoder mode. You can easily change the encoder/decoder mode using the configuration OSD.



To change the encoder/decoder mode using front panel buttons, see [Changing Encoder/Decoder Mode – Front Panel](#) on page [12](#).

**To change the mode from encoder to decoder or vice versa:**

1. In the OSD, go to DEVICE SETTINGS > STATUS.
2. Select TRANSMITTER (encoder) or RECEIVER (decoder).  
The device reboots and the encoder/decoder mode changes.



Press the INFO/ENTER button (9) to display the encoder/decoder mode status (TX = encoder, RX = decoder) on the display connected to the HDMI OUT Connector (10).

## Defining Cooling Fan Operation

**KDS-8** enables you to define when the cooling fan operates. By default, it is set to operate continuously, to ensure proper cooling at all times and you can set it to operate only when it reaches a certain temperature.

**To define when the cooling fan operates:**

1. In the OSD, go to DEVICE SETTINGS > FAN MODE.
2. Select one of the following:
  - FOLLOW TEMP – Fan operates when the device reaches the maximum operating temperature
  - ALWAYS ON – Fan operates continuously

Cooling fan operation is defined.

## Selecting Active Input



This section is only relevant for a device in decoder mode.

When the device is in decoder (receiver) mode, you can select the input to route to the HDMI output.

### To select the active input:

1. In the OSD, go to **DEVICE SETTINGS > INPUT**.
2. Select one of the following:
  - **INPUT 1 – 10G Ethernet**
  - **INPUT 2 – HDMI input**
  - **INPUT 3 – DisplayPort input (for KDS-8F only).**

The active input is selected.

## Setting Up USB Interface Extension



This section applies only to **KDS-8F**.

**KDS-8F** enables you to set up USB extension between one **KDS-8F** transceiver connected to a host computer and another **KDS-8F** transceiver connected to USB interface devices such as a mouse, keyboard, and camera. The two transceivers must be connected point-to-point.

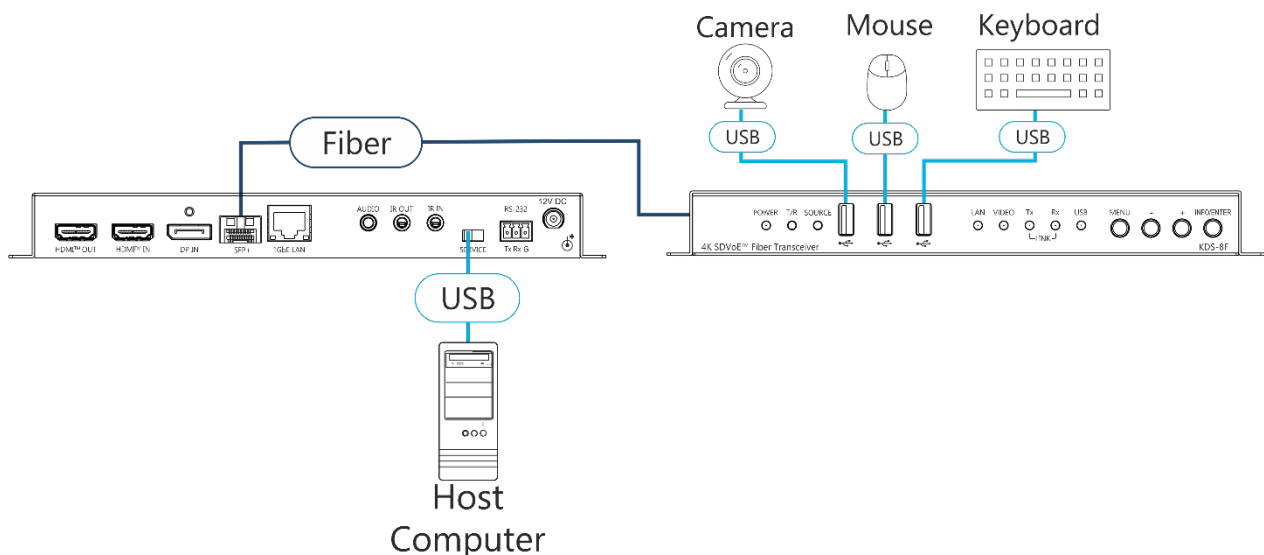


Figure 11: USB Interface Extension

### To set up a USB interface extension:

1. Connect two **KDS-8F** transceivers point-to-point with a fiber cable.
2. Connect a host computer to the SERVICE Mini USB Connector (18) of one **KDS-8F** transceiver.

3. Connect a camera, mouse, and keyboard to the USB connectors ④ on the front panel of the other **KDS-8F** transceiver.
  4. In the OSD of the transceiver connected to the host computer, go to **DEVICE SETTINGS > USB CONTROL MODE** and select **DEVICE**.
  5. In **DEVICE SETTINGS > USB VIRTUAL HUB**, select **ON**.
  6. In the OSD of the transceiver that is connected to USB devices, go to **DEVICE SETTINGS > USB CONTROL MODE** and select **HOST**.
  7. In **DEVICE SETTINGS > USB VIRTUAL HUB** and select **OFF**.
- USB interface extension is set up and ready to use.

## Setting Overlay Priority



This section is only relevant for a device in decoder mode.

### To set on-screen display overlay priority:

1. In the OSD, go to **DEVICE SETTINGS > LOCAL PRIORITY**.
2. Select **ON** or **OFF**.

Overlay display priority is set.

## Resetting Unit

Resetting the device to factory default settings can be accomplished by using:

- Kramer Network Enterprise Management Platform (version 2.2 or higher – go to [www.kramerav.com/product/KDS-8](http://www.kramerav.com/product/KDS-8) for more information).
- OSD

### To reset a unit using the OSD:

1. Go to **FACTORY SETTING**.  
A confirmation message appears.



Figure 12: Factory Reset Confirmation Message

2. Select **YES**.  
The device reboots and resets to the factory default settings.

## Verifying Device Information

**KDS-8** enables you to display and verify the following information:

- Output resolution.
- Whether the device is defined as an encoder or decoder.
- FW Version.
- IP Address.
- MAC address.
- Serial Number.
- Fan Operation Status.

**To verify information about KDS-8:**

- In the OSD, go to INFORMATION.  
Device information is displayed.

# Technical Specifications

<b>KDS-8</b>		
Inputs	1 HDMI	On a female HDMI connector
	1 IR	On a 3.5mm mini jack
Outputs	1 HDMI	On a female HDMI connector
	1 IR	On a 3.5mm mini jack
Ports	1 10GbE Ethernet	On an RJ-45 connector
	1 Unbalanced Stereo Audio	On a 3.5mm mini jack
	1 1GbE Ethernet	On an RJ-45 connector
	1 RS-232	On a 3-pin terminal block connector
<b>KDS-8F</b>		
Inputs	1 HDMI	On a female HDMI connector
	1 DisplayPort	On a female DisplayPort connector
	1 IR	On a 3.5mm mini jack
Outputs	1 HDMI	On a female HDMI connector
	1 IR	On a 3.5mm mini jack
Ports	1 SFP+ Fiber	On LC connector(s) for 10GbE Ethernet
	1 Unbalanced Stereo Audio	On a 3.5mm mini jack
	1 1GbE Ethernet	On an RJ-45 connector
	1 RS-232	On a 3-pin terminal block connector
	3 USB	On USB type A connectors
	1 Host Computer	On a mini-USB connector
<b>General</b>		
Video	Standards Compliance	10/12-bit HDR (Point-to-Point and Genlock mode only), HDCP 2.2 & 1.4, DVI 1.0,
Extension Line	Signal Compression	Ultra-light compression, lossless for most content
	Maximum Range in Point-to-Point Mode	<b>KDS-8</b> Up to 100m (328ft)
		<b>KDS-8F</b> Using OM3 multi-mode fiber — 300m (980ft) Using OM4 multi-mode fiber — 550m (1800ft) Using single-mode fiber — 30km (18.6 miles)
Audio	Standards Compliance	Supports pass-through of audio formats including LPCM 2.0/5.1/7.1, Bitstream and HD Bitstream from HDMI sources
Power	Source	12V DC
	Consumption	<b>KDS-8:</b> 3A, <b>KDS-8F:</b> 1A
Accessories	Included	Power adapter, multimode SFP+ transceiver module ( <b>KDS-8F</b> only), rubber feet
	Optional	Single-mode SFP+ transceiver module ( <b>KDS-8F</b> only)
Environmental Conditions	Operating Temperature	0° to + 40°C (32°F – 104°F)
	Storage Temperature	–20° to +60°C (–4°F to + 140 °F)
	Humidity	10% to 90%, non-condensing
Physical <b>KDS-8</b>	Product Dimension	23.10cm x 11.60cm x 2.50cm (9.09" x 4.57" x 0.98") W, D, H
	Product Weight	0.5kg (1.1lbs) approx.
	Shipping Dimension	35.10cm x 21.20cm x 7.20cm (13.82" x 8.35" x 2.83") W, D, H
	Shipping Weight	1.2kg (2.6lbs) approx.



<b>Physical KDS-8F</b>	Product Dimension	20.00cm x 23.10cm x 2.50cm (7.87" x 9.09" x 0.98") W, D, H
	Product Weight	1.9kg (4.2lbs) approx.
	Shipping Dimension	38.20cm x 20.00cm x 7.00cm (15.04" x 7.87" x 2.76") W, D, H
	Shipping Weight	1.6kg (3.4lbs) approx.
Specifications are subject to change without notice at <a href="http://www.kramerav.com">www.kramerav.com</a>		





P/N:



2900-301167

Rev:



4



## SAFETY WARNING

Disconnect the unit from the power supply before opening and servicing

For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found.

We welcome your questions, comments, and feedback.

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