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## KDS-17EN Quick Start Guide

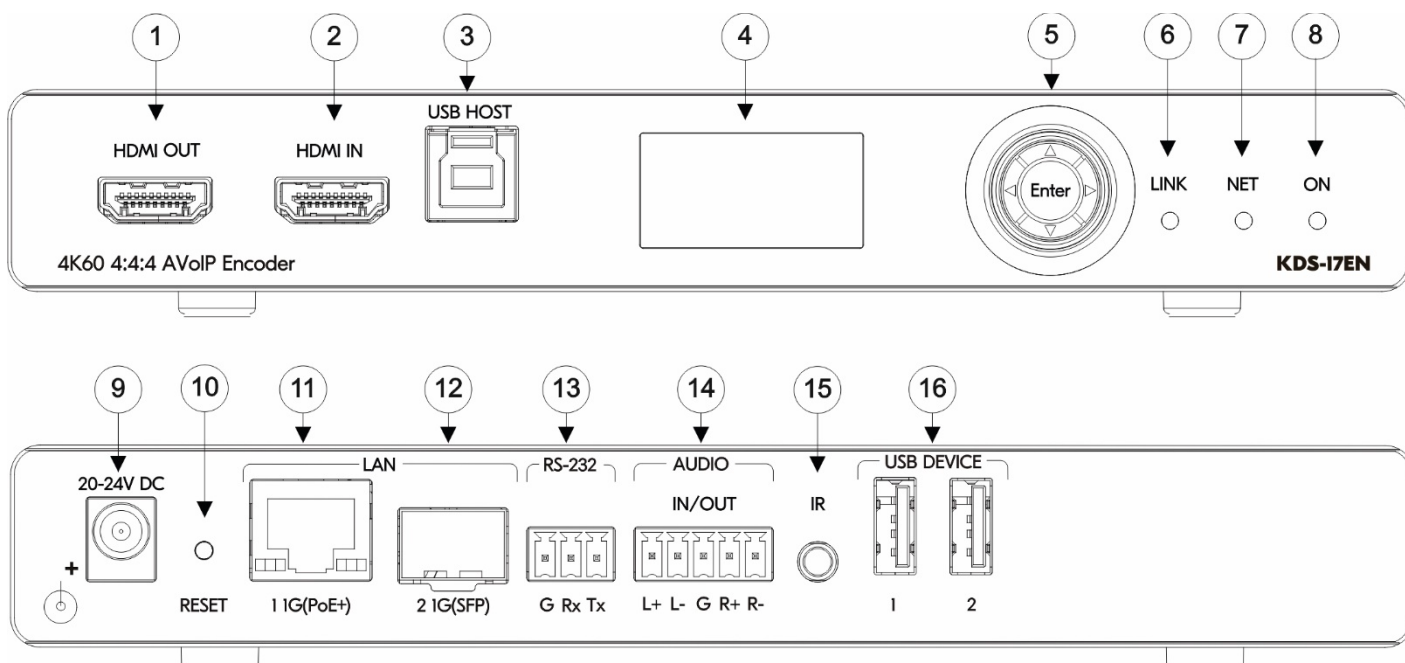
This guide helps you install and use your KDS-17EN for the first time.

Go to [www.kramerav.com/downloads/KDS-17EN](http://www.kramerav.com/downloads/KDS-17EN) to download the latest user manual and check if firmware upgrades are available.

### Step 1: Check what's in the box

- ✓ KDS-17EN 4K60 4:4:4 AVoIP Encoder
- ✓ 1 Bracket set for each product
- ✓ 1 Quick start guide

### Step 2: Get to know your KDS-17EN



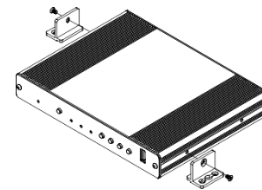
#	Feature	Function	
1	HDMI OUT Connector	Connect to loop the signal.	
2	HDMI IN Connector	Connect to an HDMI source.	
3	HOST USB Type B Port	Connect to a USB host, for example, a PC for KVM/USB support.	
4	LCD Display	Use for device configuration such as unique channel/AV stream setting.	
5	Menu Navigation Button	◀	Press to return to the previous menu.
		▶	Press to go to the next menu.
		▲	Press to move up to the next configuration parameter.
		▼	Press to move down to the next configuration parameter.
		Enter	Press to enter the menu and to accept changes.
6	LINK LED	Lights Green	A link is established from KDS-17EN to KDS-17DEC and is transmitting A/V signals.
		Flashes Green	HDMI input is detected, but no valid AV signal is detected.
		Off	No HDMI input is detected.
7	NET LED	Off	No IP address is acquired.
		Lights Green	A valid IP address has been acquired.
		Flashes Green Very Fast	When a device identification command is received (Find me), it flashes for 60 seconds.
		Lights Yellow	No DHCP found, device falls back to an IP address in the subnet range 192.168.0.0/16.
		Lights Red	Security is blocking IP access.

#	Feature	Function	
8	ON LED	Lights Green	Device power is on.
		Flashes Green Fast	Firmware is downloaded in the background.
		Flashes Green Very Fast	A device identification command is sent (Flag me), and flashes for 60 seconds.
		Lights Yellow	Device falls back to the default IP address (192.168.1.39).
		Lights Red	Security is blocking IP access.
		Flashes Red	On fallback address acquiring, flashes continuously in a slow 0.5/10sec cadence.
9	20-24V DC Connector	Connect the optional 20-24V DC power adapter (purchased separately).	
10	RESET Recessed Button	Press and hold for 10 seconds to reset the device to factory default values. All LEDs flash.	
11	LAN 1: 1G(PoE+) RJ-45 Port	Connect to the LAN. <b>KDS-17EN</b> is powered by PoE+ (power over Ethernet) delivered through the LAN PoE+ port, unless the optional 20-24V DC power adapter is attached. Unicast: Connect for streaming either directly to a decoder or via LAN. Multicast: Connect to multiple decoders.	
12	LAN 2: SFP OUT IN Connector	Plug in an SFP (Small Form Factor Pluggable) optical or copper transceiver for streaming over cable.	
13	RS-232 3-pin Terminal Block Connector	Connect to an RS-232 device to use as a Gateway and bi-directional signal extension (even when no AV signal is extended).	
14	AUDIO IN/OUT 5-pin Terminal Block Connector	Connect to a balanced analog stereo audio source/acceptor.	
15	IR 3.5 Mini Jack	Connect to an IR sensor or emitter for bi-directional signal extension (even when no AV signal is extended). Expected voltage for IR receiver - (3.3V).	
16	USB Type A Charging Ports (1 and 2)	Connect to USB devices, for example, to a speakerphone and webcam.	

## Step 3: Mount KDS-17EN

Install **KDS-17EN** using one of the following methods:

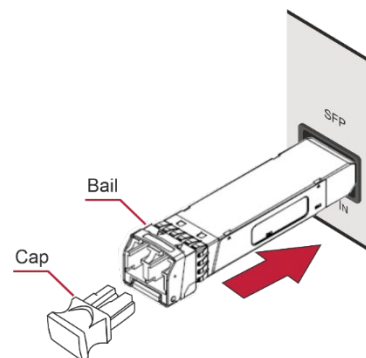
- Attach the rubber feet and place the unit on a flat surface.
- Fasten a bracket (included) on each side of the unit and attach it to a flat surface (see [www.kramerav.com/downloads/KDS-17EN](http://www.kramerav.com/downloads/KDS-17EN)).
- Mount the unit in a rack using the recommended rack adapter (see [www.kramerav.com/product/KDS-17EN](http://www.kramerav.com/product/KDS-17EN)).



- 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.

### To install the SFP MM/SFP SM Kramer recommended transceiver:


1. Pull the bail out and remove the currently installed transceiver, insert the protective cap and store in a safe place.
2. Make sure the bail of the new transceiver is pushed up, in the closed position.
3. Insert the new transceiver into the relevant optical device SFP slot and push it in until it clicks.
4. Remove the protective cap and store it in a safe place for future use.



**Warning:** Connecting the SFP connector to an LC(APC) fiber connector may cause poor performance and damage the connector!

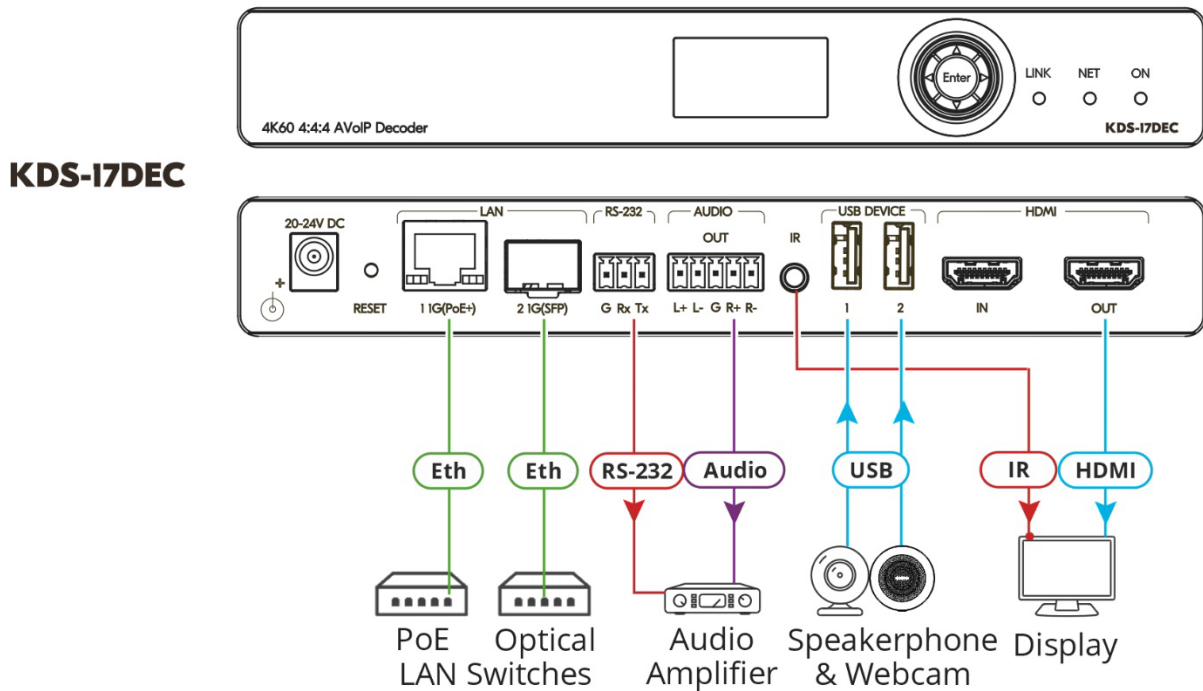
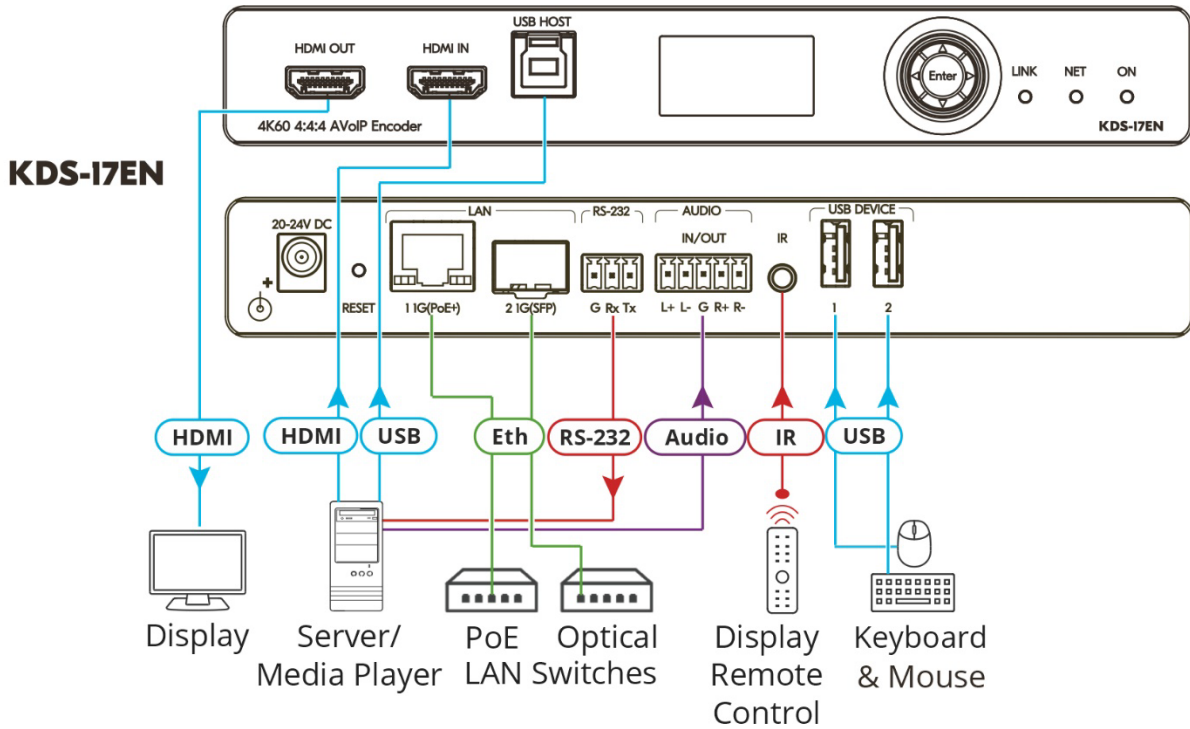
### Warning: Class 1 Laser Product

- Invisible laser radiation present.
- Avoid long-term viewing of laser.
- Avoid the use of magnifying viewing aids or instruments (such as binoculars, telescopes, microscopes and magnifying lenses, but not spectacles or contact lenses).
- Avoid placing optical devices in the emitted beam that could cause the concentration of the laser radiation to be increased.

 To achieve specified extension distances, use the recommended Kramer cables available at [www.kramerav.com/product/KDS-17EN](http://www.kramerav.com/product/KDS-17EN). Using third-party cables may cause damage!

## Step 4: Connect inputs and outputs

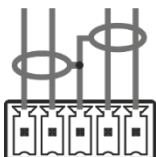
Always switch OFF the power on each device before connecting it to your KDS-17EN.



KDS-17EN can stream 4K video, requiring a gigabit Ethernet switch for high quality performance, since the maximum momentary transfer rate can reach 850Mbps. We recommend using AVoIP Ethernet switches that support IGMP Snooping, IGMP Querier, IGMP Immediate/Fast Leave and Unregistered Multicast Filtering.

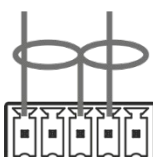
### Connecting the audio input/output

To a balanced stereo audio source/acceptor:



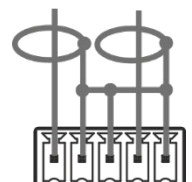
L+ L- G R+ R-

To an unbalanced stereo audio acceptor:



L+ L- G R+ R-

To an unbalanced stereo audio source:



L+ L- G R+ R-

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## Step 5: Connect power

By-default, **KDS-17EN** is powered by PoE+ delivered through LAN 1 (see 11 in Step 2). An optional power adapter can be purchased, to connect the product to mains electricity.



Safety Instructions (See [www.kramerav.com](http://www.kramerav.com) for updated safety information)

### Caution:

- 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.
- Disconnect the power and unplug the unit from the wall before installing.

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## Step 6: Operate KDS-17EN

### Allocating the IP Address

By default, DHCP is enabled, and assigns an IP address to **KDS-17EN**. If a DHCP Server is not available, for example, if the device's LAN 1 (see 11 in Step 2) is connected directly to a laptop, the device gets the default IP address of 192.168.1.39. If this IP address is unavailable, the system searches for a random unique IP in the range of 192.168.X.Y. The allocated IP address can be viewed in the **LCD Display** (see instructions below).

For detailed instructions on connecting LAN 1 directly to a computer's Ethernet connector, see the chapter "Connecting the Ethernet Port Directly to a PC" in the user manual at [https://k.kramerav.com/support/product\\_downloads/kds-17en](https://k.kramerav.com/support/product_downloads/kds-17en).

### To view the allocated IP address on the LCD Display

1. Connect **LAN 1** (see 11 in step 2) to a LAN switch with PoE+ (power over ethernet). The LEDs light white while the device boots and then the **ON** and **NET** LEDs light green or yellow, indicating that the device is on and has a valid IP address.
2. Use the **Menu Navigation** button to view the assigned IP address on the LCD screen:  
Click Enter to display the channel number and Enter again, to display the LCD's **MAIN MENU**.
3. Use the navigation arrows to select **DEV STATUS > CONTROL STAT** and the device's IP will be displayed.

### Setting the Channel Number

Each encoder requires a unique channel number, and connected decoders must be tuned to the same channel. You can set the channel number via the LCD Display or the embedded web pages.

#### To set the channel number for KDS-17EN on the LCD Display:

1. Connect LAN 1 (see 11 in step 2) to a LAN switch with PoE+ (power over ethernet). The LEDs light white as the device boots and then the ON and NET LEDs light green or yellow, indicating that the device is on and has a valid IP address.
2. Use the Menu Navigation button to set the channel number with the LCD screen:  
Click Enter to display the channel number and Enter again, to display the LCD's MAIN MENU.
3. Use the arrows to select DEV SETTINGS > CH DEFINE.
4. A cursor will flash under the first digit of the channel number. Use the up/down arrow keys to change the digit and the right arrow to move to the next digit. Press Enter to save your selection.
5. On the connected **KDS-17DEC**, set the same channel number defined on the **KDS-17EN**.

#### To set the channel number with the embedded web pages:

1. Connect LAN 1 (see 11 in step 2) to a LAN switch with PoE+ (power over ethernet). The LEDs light white as the device boots and then the ON and NET LEDs light green or yellow, indicating that the device is on and has a valid IP address.
2. Open the embedded web pages by entering the device's IP address in a web browser connected to the same network (default user/password is admin/admin). To find the allocated IP address, follow the LCD Display instructions above.
3. In the **KDS-17EN** Main page (the **Dashboard**), edit the **Channel ID** to define the channel ID number.
4. On the connected **KDS-17DEC**, set the same channel number defined on the **KDS-17EN**.

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