

# AC-EX40-444-PLUS-KIT

## QUICK START GUIDE



### UNCOMPRESSED 18Gbps 4K60 4:4:4 40M HDMI VIA HDBaseT EXTENDER KIT

The AC-EX40-444-PLUS-KIT is a pair of PoH (Power-over-HDBaseT) powered transmitter (AC-EX40-444-PLUS-T2) and receiver modules that extend uncompressed 4K HDMI signals at 18Gbps up to 40M (131ft) over Category 6A cabling, along with option 4K to extend 4K signals up to 70M (230ft) at 10.2 Gbps by using ICT Mode for installations limited in bandwidth. HDBaseT Spec 3.0 enhancements also include ARC and eARC support. The AC-EX40-444-PLUS-KIT is the complete solution for delivering 4K HDMI signals with HDCP 2.3 support, bidirectional IR & RS-232, and High Speed USB 2.0 (350 Mbps) for KVM functionality up to distances of 40 meters (131 feet) over a single Category 6A cable.



## CONNECTING THE DEVICES

- 1 Connect the HDMI source device to the Transmitter's HDMI IN port.
- 2 Connect the HDMI output device to the Receiver's HDMI OUT port.
- 3 Connect a Cat6A cable between the HDBT OUT port on the Transmitter to the HDBT IN port on the Receiver.
- 4 Connect the 48V power supply to the 2-pin power connector port on either the Transmitter or Receiver.
- 5 Power on the HDMI source and output devices.

## EDID SETTINGS

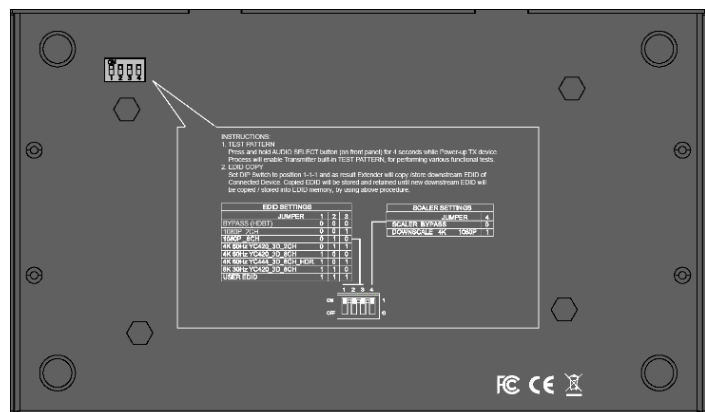
EDID is managed by using the dipswitches located on the bottom panel of the Transmitter. Select an EDID from the list and flip the dipswitches to the selected EDID setting.

1 = Up (on)  
0 = Down (off)



#### EDID JUMPER SETTINGS

	1	2	3
BYPASS (HDBT)	0	0	0
1080P 2CH	0	0	1
1080P 8CH	0	1	0
4K 60Hz YCC420 3D 2CH	0	1	1
4K 60Hz YCC420 3D 8CH	1	0	0
4K 60Hz YCC420 3D 8CH HDR	1	0	1
8K 30Hz YCC420 3D 8CH	1	1	0
USER EDID	1	1	1



To copy the EDID from the connected device, ensure the downstream device is powered on, then set the EDID dipswitches to the USER EDID setting 111 (all up) on the Transmitter. This will copy and store the connected device's EDID to the USER EDID slot.

#### NOTE:

The extenders will retain only one copied EDID at a time on the USER EDID setting. If a new EDID is copied by using the EDID dipswitches or API commands, it will overwrite the previously copied USER EDID setting. Powering the extenders off/on or using one of the other different EDID presets will not overwrite the USER EDID setting.

# SCALER SETTINGS

Incoming 4K signals can be downscaled to 1080p on the Transmitter by using the dipswitches located on the bottom panel of the Transmitter.

1 = Up (on)  
0 = Down (off)

1 2 3 4

ON OFF

1 0

4

SCALER JUMPER SETTINGS	
SCALER BYPASS	0
DOWNSCALE 4K TO 1080P	1

# ICT MODE SELECT

The AC-EX40-444-PLUS-KIT is designed for up to 18Gbps uncompressed video transport. If existing wiring infrastructure proves insufficient for passing 18Gbps, the ICT MODE SELECT toggle button can be used to enable ICT MODE to reduce the output bandwidth to 10.2 Gbps on the extenders.



# IR CONTROL

IR can be used in three ways:

- 1 FROM RACK (CONTROL SYSTEM DIRECT):** Connect a 3.5mm mono jack (TS) cable into an emitter port of any control system directly into the I-PASS port on the transmitter to pass IR signals directly to the remote end.
- 2 FROM RACK (USING IR-EYE):** Connect the provided IR receiver eye cable into the IR-EYE port of the transmitter to pass infrared signals generated from a device or IR remote.
- 3 FROM REMOTE END:** Connect the provided IR receiver eye cable into the IR OUT port on the receiver in order to send IR signals back to the rack and out of the transmitter's IR OUT port with an emitter.

# USB EXTENSION

Use the USB SETTINGS toggle button on the Receiver to select a USB setting, indicated by a blue LED:

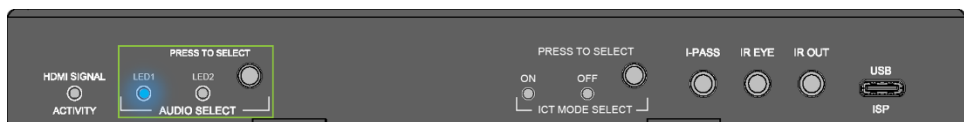
**AUTO:** Bidirectional USB extension is automatically negotiated for device and host. It is recommended to set the USB configuration mode into HOST or DEVICE mode. If extending devices to a host in AUTO mode (both up and downstream) dropouts may occur as the extension direction switches.

**HOST:** Select this if you are connecting to a PC or laptop to the USB Type B HOST port on the Receiver.

**DEVICE:** Select this if you are connecting a keyboard, mouse, webcam, or other USB device into the Transmitter.

# TEST PATTERN

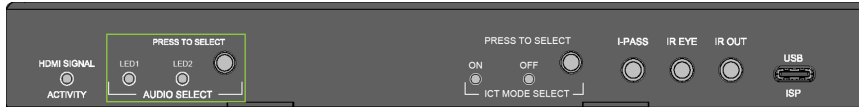
Press the AUDIO SELECT button on the Transmitter until LED1 is lit, then press and hold the AUDIO SELECT button again for 4 seconds until both LED1 and LED2 alternate flashing blue. This enables the Transmitter's built-in test pattern for performing various functional tests. To disable it, press and hold the AUDIO SELECT button again for 4 seconds.



# AUDIO EXTRACTION/EXTENSION

This feature extracts up to 8-channel audio from the source device and sends it to a separate amplifier or AVR. Both the Transmitter and Receiver have the AUDIO SELECT toggle button that is used in conjunction with LED1 and LED2 located on the front panel. Use this toggle button to select where the source of the audio is coming from.

## AC-EX40-444-T3 (TRANSMITTER) – FRONT PANEL



## AC-EX40-444-R3 (RECEIVER) – FRONT PANEL



### NOTE:

You can extract audio at the Transmitter via the TOSLINK port. The source of the audio can either be HDMI (ARC) or you can input via the TOSLINK port on the Receiver.

## TRANSMITTER AUDIO SETTINGS

TRANSMITTER AUDIO SETTINGS		
AUDIO SELECT LED INDICATOR POSITION	LED1	LED2
EXTRACTED AUDIO FROM HDMI INPUT	ON	OFF
ARC/eARC FROM RX	OFF	ON

**EXTRACT AUDIO FROM HDMI INPUT (TOSLINK OUTPUT ONLY):** If the audio is coming from the Transmitter's HDMI IN port, press the AUDIO SELECT toggle button on the Transmitter until LED1 is illuminated.

**EXTRACT AUDIO FROM RECEIVER (TOSLINK AND ARC/eARC HDMI OUTPUT):** If the audio is coming from the Receiver's HDMI OUT ARC/eARC port, press the AUDIO SELECT toggle button on the Transmitter until LED2 is illuminated. If the Receiver does not have an active ARC/eARC or digital audio input, no audio will be played.

**EXTEND HDMI ARC/eARC FROM RECEIVER:** Press the AUDIO SELECT toggle button on the Receiver until LED1 is illuminated. An active ARC/eARC signal must be received by the Receiver's HDMI Output connection from the display's ARC/eARC port.

## RECEIVER AUDIO SETTINGS

RECEIVER AUDIO SETTINGS		
AUDIO SELECT LED INDICATOR POSITION	LED1	LED2
HDBT ARC/eARC SENT BACK TO TX IS FROM TV	ON	OFF
HDBT ARC/eARC SENT BACK TO TX IS FROM TOSLINK INPUT	OFF	ON

**SEND AUDIO TO TRANSMITTER FROM RECEIVER'S HDMI ARC/eARC:** If the audio is coming from the Receiver's HDMI OUT ARC/eARC port, press the AUDIO SELECT toggle button on the Receiver until LED1 is illuminated. An active ARC/eARC signal must be received by the HDMI Output connection from the display's ARC/eARC port.

**EXTRACT AUDIO FROM RECEIVER (TOSLINK AND ARC/eARC HDMI OUTPUT):** If the audio is coming from the Receiver's TOSLINK port, press the AUDIO SELECT toggle button on the Receiver until LED2 is illuminated.

### NOTE:

Both connected devices must support ARC/eARC. Ensure the port you are connecting to is labeled ARC/eARC. Some device may require their ARC/eARC functionality to be enabled. It is recommended to check the device's user manual to verify the ARC/eARC function is on or enabled.

# TROUBLESHOOTING

Having problems? Here are some general troubleshooting tips that may help:

- 1 Try different HDMI cables. A defective HDMI cable can bring the entire system down.
- 2 If using short HDMI cables (0.5m, 1m) try a longer cable. Some short HDMI cables do not sync well.
- 3 Use the built-in Test Pattern to confirm the infrastructure is passing a signal.
- 4 Re-terminate the Category cable (even if a cable tester indicates that the cable is passing signal).
- 5 Avoid using push-through or "EZ" type RJ-45 connectors, as these have exposed copper wiring at the tips that can cause signal interference.
- 6 Use a Category 6A cable, especially when attempting to pass an uncompressed 18Gbps signal.
- 7 Remove any excess Category cable and ensure that it is not twisted or damaged.
- 8 Bypass any patch panels or punch-down blocks.
- 9 If you are powering the Rx with the power supply and the Tx is not getting power, try plugging the power supply into the Tx instead.
- 10 If you are still having issues after troubleshooting, feel free to contact our Tech Support department.



**NOTE:**

The Tx and Rx in each extender kit do have LEDs that can help you troubleshoot each unit. Since each model has a slightly different set of LED indicators, refer to the *Status Indicator Lights* section of the user's manual of the specific model that you are working with.

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**HAVE A QUESTION OR NEED ASSISTANCE?  
DON'T HESITATE TO CONTACT US!**

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