AC-EX100-444-KIT

User Manual

Uncompressed 18Gbps 4K60 4:4:4 100M HDMI via HDBaseT Extender Kit

Contents

Important Safety Instructions

Before installing, configuring, and operating the devices and other vendor equipment, AVPro Edge strongly recommends that each dealer, integrator, installer, and all other necessary personnel access and read all the required technical documentation, which can be located by visiting AVProEdge.com.

Read and understand all safety instructions, cautions, and warnings in this document and the labels on the equipment.

Safety Classifications in this Document

▪	Note:	Provides special information for installing, configuring, and operating the devices and equipment.
☼	Tip:	Provides suggestions and considerations for installing, configuring, and operating the devices and equipment.
▲	Important:	Provides special information that is critical for installing, configuring, and operating the devices and equipment.
▲	Caution:	Provides special information for avoiding situations that may cause damage to the devices and equipment.
▲	Warning:	Provides special information for avoiding situations that may cause physical danger to the installer, end user, etc.

Electrical Shock Prevention

▲	Electric Shock:	Provides special information that is critical for installing, configuring, and operating the devices and equipment.
▲	Electrical Disconnect:	Provides special information for avoiding situations that may cause damage to the devices and equipment.

Weight Injury Prevention

▲	Weight Injury:	Installing some of the devices and equipment requires two installers to ensure safe handling during installation. Failure to use two installers may result in injury.

Safety Statements

Follow all of the safety instructions listed below and apply them accordingly. Additional safety information will be included where applicable.

1   Read and keep these instructions.

2   Heed and follow all warnings.

3   Clean devices and equipment only with a dry cloth.

4   Do not use the devices near water or expose them to rain and moisture.

5   Do not block any ventilation openings.

6   The devices and their accessories should never be exposed to open flames or excessive heat.

7   Only use attachments and accessories specified by the manufacturer.

8   Install in accordance with the manufacturer's instructions.

9   Do not install near any heat sources, such as radiators, heat registers, stoves, or other apparatus that produce heat.

10 Do not defeat the safety purpose of the polarized / grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade, or third prong, are provided for your safety.

11 Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the devices.

12 Unplug the devices during lightning storms or when unused for long periods of time.

13 To reduce the risk of electrical shock or damage to the devices and their operators, never handle or touch the devices and power cord with damp or wet hands.

14 To reduce the risk of injury, some of the devices and equipment may require two installers to ensure safe handling during installation. Failure to use two installers may result in injury.

15 Refer all servicing to qualified service personnel. Servicing is required when the devices have been damaged in any way, such as the power cord or plug is damaged, liquid has been spilled, objects have fallen into the devices, the devices have been exposed to rain or moisture, do not operate normally, or have been dropped.

Introduction

The AC-EX100-444-KIT is a pair of PoH (Power over HDBaseT) powered Transmitter (AC-EX100-444-T3) and Receiver (AC-EX100-444-R3) modules that extend uncompressed 4K HDMI signals at 18Gbps up to 70M (230 ft) over Category 6A cabling, along with the option to extend 4K signals up to 100M (328 ft) at 10.2 Gbps by using ICT Mode for installations limited in bandwidth. HDBaseT Spec 3.0 enhancements also include 1Gbps Ethernet extension along with ARC/eARC support. The AC-EX100-444-KIT is the complete solution for delivering 4K HDMI signals with HDCP 2.3 support, bidirectional IR & RS-232, USB 2.0 (350 Mbps) for KVM functionality, and 1 gigabit Ethernet up to distances of 100 meters (328ft) over a single Category 6A cable.

The diagram below shows the basic office KVM application of the AC-EX100-444-KIT.
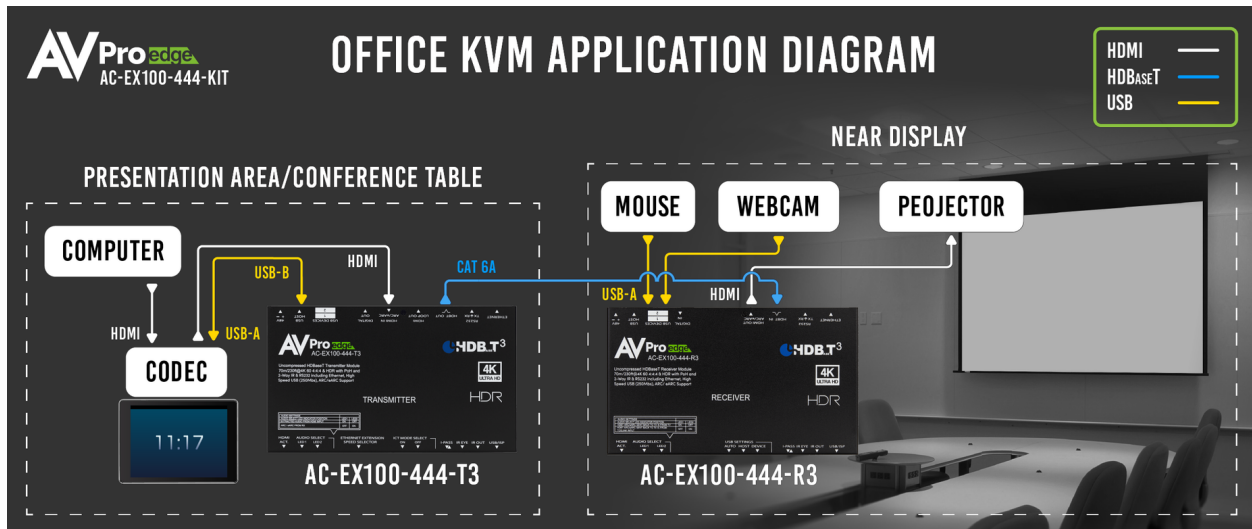
Features

- HDBaseT Spec 3.0 Technology for uncompressed video and audio with near-zero latency

- Extends 4K HDMI signals up to a distance of 100m over Category 6A cable using ICT Mode

- Extends uncompressed 4K60 4:4:4 video with HDR up to 70 meters over Category 6A cable

- Supports VESA resolutions up to DCI 4K (4096 x 2160)

- Supports HDR formats at 4:2:0, 4:2:2, 4:4:4 (10- and 12-bit deep color) HDR10, HDR10+, Dolby Vision (24/30 fps), and HLG

- Supports HDMI audio formats including Dolby Digital, DTS 5.1, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio, DTS:X, Dolby Atmos

- Supports ARC and eARC over HDMI and TOSLINK

- USB 2.0 Support (350 Mbps)

- I-PASS feature for control system "pass-through"

- Bidirectional RS-232 Transport

- LED Status, Link, and Power indicator lights

Product Overview

Box Contents

(1x) AC-EX100-444-T3 (Transmitter)
(1x) AC-EX100-444-R3 (Receiver)
(1x) 48V Power Supply
(2x) 3-Pin Terminal Block Connector for RS-232 Ports
(1x) 3.5mm Mono IR Emitter
(1x) 3.5mm Stereo IR Eye
(4x) Mounting Brackets
(8x) Mounting Screws

Technical Specifications

| Video	
Video Resolutions	Up to 4K 60Hz 4:4:4
VESA Resolutions	Up to DCI 4K (4096 x 2160)
HDR Formats/Resolutions	4:2:0, 4:2:2, 4:4:4 (10- and 12-bit deep color)
Color Space	YUV (Component), RGB (CSC: Rec. 601, Rec. 709, BT.2020, DCI, P3-D65)
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0 Supported
Deep Color	Up to 16-bit (1080p), up to 12-bit (4K)
Downscaling	4K (and HDR10) down to 1080p
Audio	
Audio Formats Supported (HDMI)	PCM 2.0 Ch, LPCM 5.1 & 7.1, Dolby Digital, DTS 5.1, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio, DTS:X, Dolby Atmos
Audio Formats Supported (Extracted TOSLINK Tx only)	PCM 2.0 Ch, LPCM 5.1 & 7.1, Dolby Digital, DTS 5.1, Dolby Digital Plus, Dolby TrueHD
ARC/$_e$ARC	
Audio Formats Supported (HDMI ARC/eARC Out Tx)	PCM 2.0 Ch, LPCM 5.1 & 7.1, Dolby Digital, DTS 5.1, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio, DTS:X, Dolby Atmos
Audio Formats Supported (Extracted TOSLINK Tx only)	PCM 2.0 Ch, LPCM 5.1 & 7.1, Dolby Digital, DTS 5.1, Dolby Digital Plus, Dolby TrueHD
Distance	
HDBaseT (CAT) Uncompressed	70 meters (230ft) Category 6A
HDBaseT (CAT) ICT Compression	100 meters (330ft) Category 6A
HDMI Lead In/Out (4K60 4:4:4)	Up to 50ft (using Bullet Train HDMI cable)
HDMI Lead In/Out (4K60 4:4:4) w/ AOC cable	Up to 130ft (using Bullet Train AOC)
Other	
Bandwidth	18 Gbps Uncompressed (ICT Mode off) 10.2 Gbps (ICT Mode on)
HDCP	HDCP 2.3 and previous versions
USB Selectable Host	
Version	USB 2.0
Tx Port	USB Host = USB Type B (x1) USB Type A (x2)
Rx Port	USB Host = USB Type B (x1) USB Type A (x2)
Ports	
HDMI (Tx and Rx)	Type A
HDBaseT	RJ45 with PoH for HDBaseT Receivers

Extracted Audio (Tx only, Rx is an audio input)	TOSLINK
IR Send (Tx and Rx)	3.5mm mono jack
IR Receive (Tx and Rx)	3.5mm stereo jack
RS-232 (Tx and Rx)	3-Pin Terminal Block Connector
Power (Tx and Rx)	2-Pin Terminal Block Connector
Ethernet (Tx and Rx)	RJ45 Connector (10/100)
Environmental	
Operating Temperature	23°F (-5°C) to 125°F (51°C)
Storage Temperature	-4°F (-20°C) to 140°F (60°C)
Humidity Range	5% to 90% RH (no condensation)
Power	
Power Consumption (total)	12 Watts maximum
Power Supply – Matrix	Input: AC 100-240V ~ 50/60Hz Output: DC 48V 0.5A
Dimensions	
Height x Width x Depth (Single Unit)	Millimeters: 196.85 x 103.12 x 25.4 Inches: 7.75 x 4.06 x 1
Height x Width x Depth (Packaged Kit)	Millimeters: 314.45 x 184.15 x 77.98 Inches: 12.38 x 7.25 x 3.07
Weight (Single Unit)	1.4 lbs (0.64 kg)
Weight (Packaged Kit)	3.8 lbs (1.7 kg)
*Specifications are subject to change without notice. Mass and dimensions are approximate.	

Transmitter Front and Rear Panel Overview

AC-EX100-444-T3 (Transmitter) – Front Panel
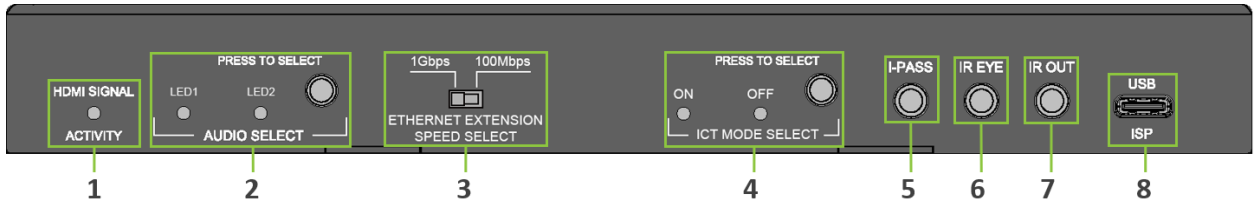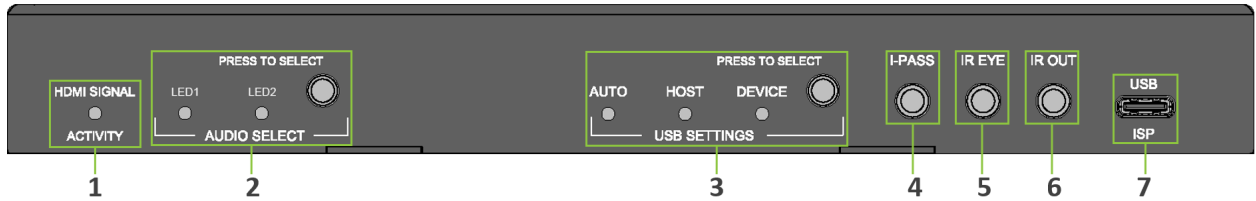

AC-EX100-444-T3 (Transmitter) – Rear Panel
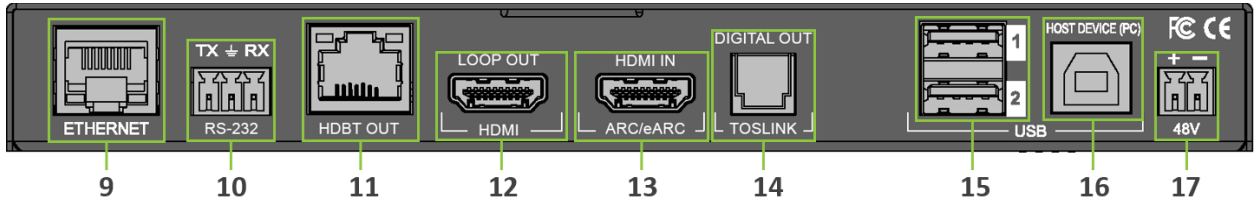
1	HDMI SIGNAL ACTIVITY	• Blue LED status indicator light • Illuminates once an active signal is detected on the HDMI output

2	AUDIO SELECT	• PRESS TO SELECT button toggles LED1 and LED2 audio settings

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

3	ETHERNET EXTENSION SPEED SELECT	• Toggle switch for selecting Ethernet speeds of 1Gbps or 100Mbps

4	ICT MODE SELECT	• Toggle switch for enabling ICT Mode at 10.2Gbps (ON) or uncompressed 18Gbps (OFF)

5	I-PASS	• 3.5mm stereo jack (TRS) IR receiver port • Sends IR signals via a direct connection from a control system processor to the IR output of the specified endpoint(s)

6	IR EYE	• 3.5mm stereo jack (TRS) IR receiver port • Supports IR eye input to capture IR signals from a control system processor or third-party remote to send IR signals to the IR output of the specified endpoint(s)

7	IR OUT	• 3.5mm mono jack (TS) IR transmitter port • Sends IR signals downstream to the specified endpoint(s)

8	USB ISP	• USB Type C female connector port • Proprietary servicing port for AVPro Edge technical assistance

9	ETHERNET	• 8-pin RJ-45 female, 10/100 Ethernet connection port • Supports standard PoH (Power over HDBaseT)
10	RS-232	• 3-pin terminal block connector port • Control port for serial RS-232 connection
11	HDBT OUT	• 8-pin RJ-45 female connector port • Long-range HDBaseT extension for Category 6A connection • Power over HDBaseT (PoH), only one endpoint device requires local power
12	LOOP OUT HDMI	• 19-pin HDMI Type A female connector port • HDMI connection for endpoint device signal output
13	HDMI IN ARC/eARC	• 19-pin HDMI Type A female connector port • Source device input for HDMI connection • Supports ARC and eARC to
14	DIGITAL OUT TOSLINK	• Extracted audio for optical fiber connection • Supported audio includes PCM 2.0 Ch, LPCM 5.1 & 7.1, Dolby Digital, DTS 5.1, Dolby Digital Plus, Dolby TrueHD • Supports ARC and eARC
15	USB1 and USB2	• (2x) USB 2.0 Type A female connector ports • Supports routing USB 2.0 signals to a designated USB host device
16	USB HOST DEVICE (PC)	• USB 2.0 Type B female connector port • USB extension for connecting to a computer or other USB 2.0 device • Supports KVM routing and hosting
17	48V POWER	• 48V 0.5A 2-pin terminal block connector to locally power Transmitter

Receiver Front and Rear Panel Overview

AC-EX100-444-R3 (Receiver) – Front Panel

AC-EX100-444-R3 (Receiver) – Rear Panel

1	HDMI SIGNAL ACTIVITY	• Blue LED status indicator light • Illuminates once an active signal is detected on the HDMI input
2	AUDIO SELECT	• PRESS TO SELECT button toggles LED1 and LED2 audio settings

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

3	USB Settings	• PRESS TO SELECT button toggles LEDs for AUTO, HOST, and DEVICE
4	I-PASS	• 3.5mm stereo jack (TRS) IR receiver port • Sends IR signals via a direct connection from a control system processor to the IR output of the specified endpoint(s)
5	IR EYE	• 3.5mm stereo jack (TRS) IR receiver port • Supports IR eye input to capture IR signals from a control system processor or third-party remote to send IR signals to the IR output of the specified endpoint(s)
6	IR OUT	• 3.5mm mono jack (TS) IR transmitter port • Sends IR signals downstream to the specified endpoint(s)
7	USB ISP	• USB Type C female connector port • Proprietary servicing port for AVPro Edge technical assistance
8	ETHERNET	• 8-pin RJ-45 female, 10/100 Ethernet connection port • Supports standard PoH (Power over HDBaseT)

9	RS-232	• 3-pin terminal block connector port • Control port for serial RS-232 connection
10	HDBT in	• 8-pin RJ-45 female connector port • HDBaseT extension for Category 6A connection • Power over HDBaseT (PoH), only one endpoint device requires local power
11	HDMI Out ARC/eARC	• 19-pin HDMI Type A female connector port • HDMI connection for endpoint device signal output • Supports ARC and eARC connections
12	DIGITAL In TOSLINK	• Digital audio input for optical fiber connection • Supported audio includes PCM 2.0 Ch, LPCM 5.1 & 7.1, Dolby Digital, DTS 5.1, Dolby Digital Plus, Dolby TrueHD • Supports ARC and eARC
13	USB1 and USB2	• (2x) USB 2.0 Type A female connector ports • Supports routing USB 2.0 signals to a designated USB host device
14	USB HOST DEVICE (PC)	• USB 2.0 Type B female connector port • USB extension for connecting to a computer or other USB 2.0 device • Supports KVM routing and hosting
15	48V POWER	• 48V 0.5A 2-pin terminal block connector to locally power Receiver

Wiring and Connections

HDMI Cables

The AC-EX100-444-KIT uses the standard 19-pin HDMI female connector port for the inputs and outputs.

	Note:	Ensure all HDMI cables and devices can support the signal being sent. For maximum performance, a Premium High Speed HDMI cable rated for 18Gbps will be more than sufficient for signal transport if every device in the system can handle the signal.
	Tip:	Ensure your HDMI cable is the correct length. The current HDMI specification calls for cables to be between 2 to 10 meters (6.6 to 33 feet). Smaller wire cables may be unable to transmit higher bandwidth signals like 4K60 over distances of even 5 meters (16 feet).

HDB~ase~T Link Wiring

The HDBT input and output ports on both the Transmitter and Receiver utilize HDBaseT 5Play™ Technology and feature PoH (Power over HDBaseT) for supplying power to either the Transmitter or Receiver. For maximum performance, the recommended cabling is Category 6A or Category 7 STP, all other performances cannot be guaranteed.

The recommended termination is based on TIA/EIA T568A or T568B standards for the wiring of the twisted pair cables.

T568A

PIN 1: green/white
PIN 2: green
PIN 3: orange/white
PIN 4: blue
PIN 5: blue/white
PIN 6: orange
PIN 7: brown/white
PIN 8: brown

T568B

PIN 1: orange/white
PIN 2: orange
PIN 3: green/white
PIN 4: blue
PIN 5: blue/white
PIN 6: green
PIN 7: brown/white
PIN 8: brown
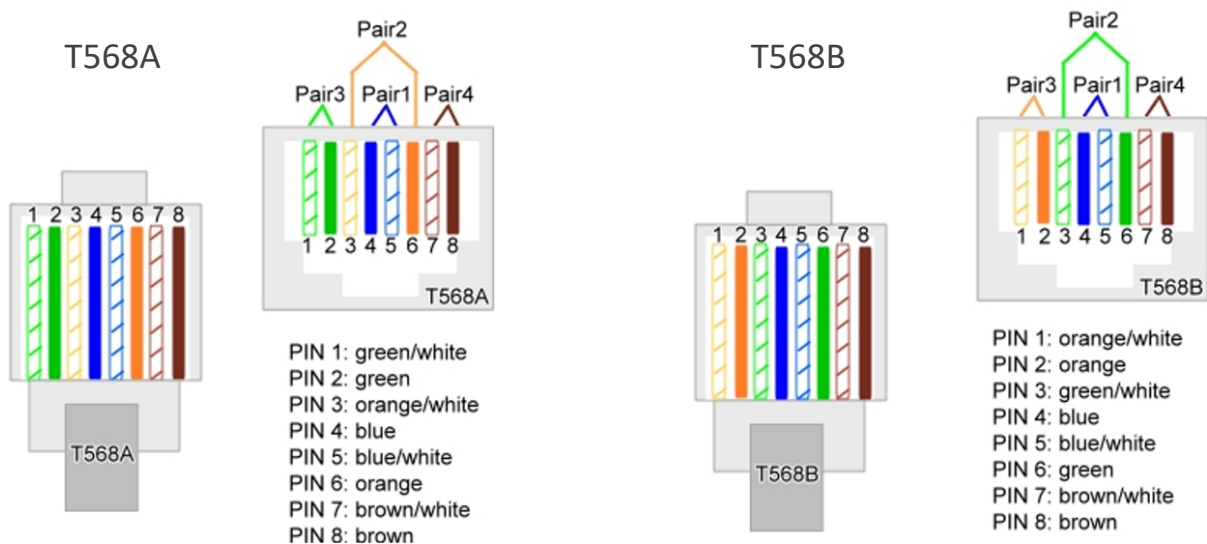
USB Ports

The USB ports allow USB 2.0 extension (350 Mbps). Both the Transmitter and Receiver each have two USB 2.0 Type A ports and one USB 2.0 Type B port.

Both the Transmitter and Receiver also have one USB Type C port. This is a courtesy port that is primarily intended for servicing by AVPro Edge Technicians in the event of troubleshooting.

Type A   Type B   Type
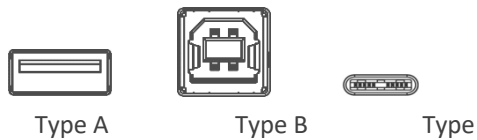
RS-232 Wiring and Control

The RS-232 control ports on both the Transmitter and Receiver are used to pass bidirectional control signals to and from any RS-232 compatible device.

Serial control connections are made using the provided 3-pin terminal block connector. The wire slips into the hole and locks with a screw located on top of the connector.
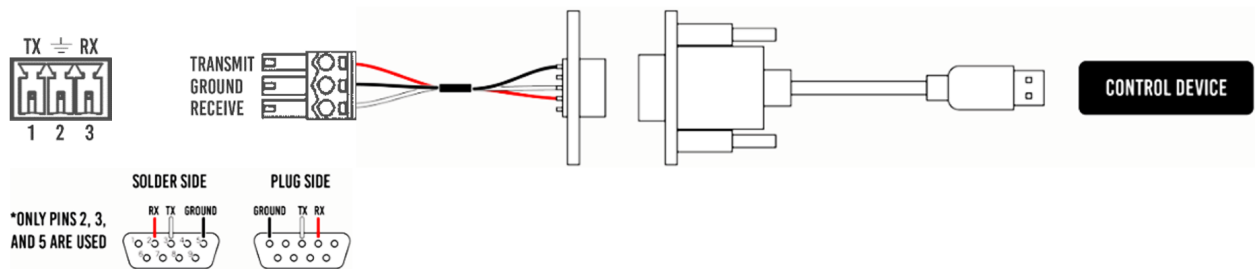
Wiring for this port uses a 3-pin terminal block connector to DB9 where only pins 2, 3, and 5 are used. If the devices do not have a DB9 port, a USB to DB9 adapter may be required.

For RS-232 control, use a null modem serial cable adapter and set the serial communications to: Baud: 57600, no parity, 8 data bits, 1 stop bit, with no handshaking.

Add a carriage return (Enter key) after each command when using direct commands. The unified command list (ASCII) can be located by entering the help command: **H** followed by a carriage return.

IR Wiring

Both the Transmitter and Receiver feature three 3.5mm jack ports for IR control. IR connections are made using the provided 3.5mm IR Emitter and IR Eye.

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 Category 6A 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.

Settings and Functionality

EDID Settings

EDID is managed by using the dipswitches located on the bottom panel of the Transmitter. Select an EDID from the *EDID Settings* 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
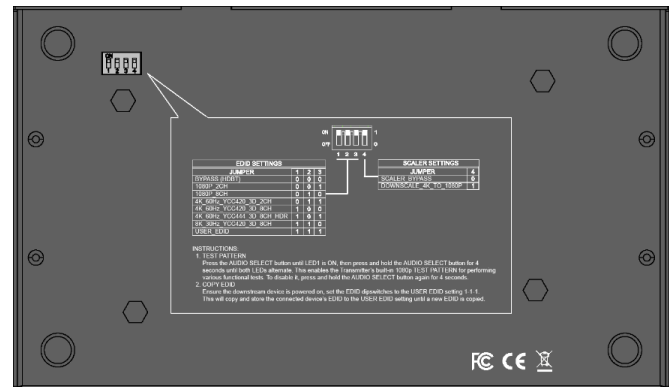
To copy the EDID from the connected device, ensure the downstream device is powered on, then set the EDID dipswitches to the USER EDID setting 111 (all up) on the Transmitter. This will copy and store the connected device's EDID to the USER EDID slot.

■ 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.

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.
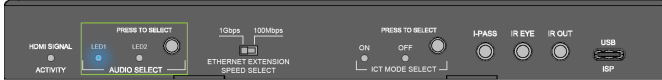
Scaler Settings

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)

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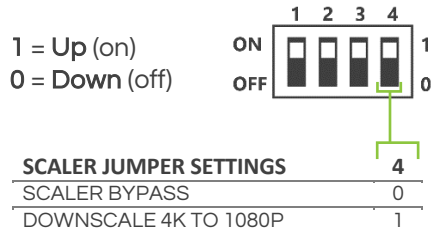
IR Control

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 either the Transmitter or Receiver.

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

ICT Mode Select

The AC-EX100-444-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.

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.

▪ **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.

Ethernet Extension

Ethernet usage is very straightforward, it is designed for driving network communication over the HDBaseT link. The purpose of these ports is to act as a "hub", meaning if one port is plugged into a router then the other port on either the Transmitter or Receiver will have access to the network.

Other examples of Ethernet usage include:

- Supplying a hardwired Ethernet connection to video zones for on-device streaming and/or local gaming devices and players.

- Providing server-based content from a server to a remote display.

- Supplying a zone with a hardwired Ethernet connection for a Wi-fi access point in remote zones.

The ports are always active so long as one of the Ethernet ports on either the Transmitter or Receiver is connected to the network—the other port will also have access.

Use the ETHERNET EXTENSION SPEED SELECT toggle switch located on the front panel of the Transmitter to select either 1Gbps or 100Mbps.

Ethernet Indicator Lights
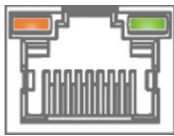
Left LED (Amber)
Indicates a stable Ethernet connection is made. This light should always be a solid amber.

Right LED (Green)
Indicates there is online activity. This light flashes randomly as data is transmitted. If it is not illuminating, then there is no data coming through or the router may need to be reset.

HDBT Status Indicator Lights

The HDBaseT ports feature status indicator LEDs on both the Transmitter and Receiver for showing active connections while troubleshooting.

Left LED (Amber) – Status

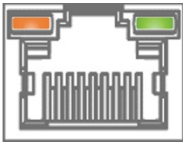Indicates there is power present between the Transmitter and Receiver. Steady blinking amber indicates normal operations. If this LED is not illuminated, check the following:

- Verify cable length is within the maximum distance of 100m (330ft).

- Remove any coils of cable and ensure there is no excess cabling.

- Bypass all patch panels and punch-down blocks.

- Re-terminate connectors ends. Use standard RJ-45 connectors, avoid using push-through or "EZ" type ends, as these have exposed copper wiring at the tips that can cause signal interference.

- Contact AVPro Edge Technical Support if these suggestions do not work.

Right LED (Green) – Link

Indicates there is an active link between the Transmitter and Receiver. Solid green indicates the Transmitter and Receiver have been identified and are communicating with each other. If this LED is not illuminated, check the following:

- Verify cable length is within the maximum distance of 100m (330ft).

- Remove any coils of cable and ensure there is no excess cabling.

- Bypass all patch panels and punch-down blocks.

- Re-terminate connectors ends. Use standard RJ-45 connectors, avoid using push-through or "EZ" type ends, as these have exposed copper wiring at the tips that can cause signal interference.

- Try locally powering the Receiver instead of the Transmitter.

- Contact AVPro Edge if these suggestions do not work.

Troubleshooting

- Verify Power – Check that the power supply is properly connected and is outputting 48V.

- Verify Connections – Check that all cables are properly connected and/or terminated where applicable.

- Verify Terminations – Ensure you are using a minimum of CAT 6A UTP or STP without breaks such as keystones, punch downs, or other interconnectors. Field terminatable plugs are recommended.

- Black Screen When Switching Sources – Use a minimum of a 2 meter (6.6 feet) HDMI cable between the source/sink device and the extender's HDMI port.

- No Picture – Try setting a canned EDID from the Transmitter. See EDID Settings.

- IR Not Passing – Ensure the provided IR cables are being utilized and are connected to the appropriate port. See IR Control.

Maintenance

To ensure reliable operation of these devices as well as protecting the safety of any person using or handling these devices while powered, observe the following instructions:

- Use the provided power supplies. If an alternative power supply is required, check the voltage and polarity to ensure it has sufficient power to supply the device it is connected to.

- Do not operate these devices outside the specified temperature and humidity range given in the above specifications.

- Ensure there is adequate ventilation to allow these devices to operate efficiently.

- Repair of the equipment should only be carried out by qualified professionals as these devices contain sensitive components that may be damaged by any mistreatment.

- Only use these devices in a dry environment. Do not allow any liquids or harmful chemicals to come into contact with these devices.

- Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner, or benzene to clean these devices.

Damage Requiring Service

The devices should be serviced by qualified personnel if:

- The DC power supply cord or AC adapter has been damaged

- Objects or liquids have breached the interior of the devices

- The devices have been exposed to rain or moisture

- The devices do not operate normally or exhibit a marked change in performance

- The devices have been dropped or the housing is damaged

Support

Should you experience any problems using this product, first refer to the Troubleshooting section of this manual before contacting AVPro Technical Support. When calling in, the following information should be provided:

- Product name and model number

- Product serial number

- Details of the issue and any conditions under which the issue is occurring

Warranty

The Basics

AVPro Edge warranties its products that are purchased from all authorized AVPro Edge resellers or direct purchases. Products are guaranteed to be free from manufacturing defects and are of sound physical and electronic condition.

AVPro Edge has developed a warranty that anyone can get behind. We really wanted to take all the "red tape" out of a warranty and just make it simple. Our 10 Year No BS Warranty hinges on 3 elements:

- If you are having trouble, call us. We will attempt to troubleshoot your issue over the phone.

- If it's broken, we will replace it in advance on our dime and we'll also cover the return shipping. Repair is an option too, but it's YOUR call.

- We know you know what you are doing. We will not make you go through unnecessary steps to troubleshoot an extender.

Coverage Details

AVPro Edge will replace or repair (at customer choice) defective products. If the product is out of stock or on backorder it can be replaced with a comparable product of equal value/feature set (if available) or repaired.

Your warranty begins at receipt of product (as confirmed by shipping firm tracking). If tracking information is unavailable for any reason, the warranty will commence 30 ARO (After Receipt of Order). The coverage continues for 10 years.

Red Tape

AVPro Edge is not responsible for untraceable purchases or those that were made outside of an authorized channel.

If we conclude that a product or serial number has been tampered with as identified by warranty seal or physical examination the warranty will be void. Additionally, excessive physical damage (beyond normal wear & tear) the warranty may be voided or prorated based on the extent of the damage as examined by an AVPro Edge representative.

Damaged caused by "acts of God" are not covered. They include natural disasters, power surges, storms, earthquakes, tornados, sink holes, typhoons, tidal waves, hurricanes, or any other uncontrollable event related to nature.

Damage caused by in correct installation will not be covered. Incorrect power supply, inadequate cooling, improper cabling, inadequate protection, static discharge are examples of this.

Products installed or sold by a third party to AVPro Edge will be serviced by the authorized AVPro Edge reseller. Accessories (IR cables, RS-232, power supplies, etc.) are not included in the warranty. We will make acceptable efforts to source and supply replacements for defective accessories at a discounted rate as needed.

Obtaining an RMA

Dealers, resellers, and installers can request an RMA from an AVPro Edge Technical Support representative or Sales Engineer. Or you may email support@avproedge.com or fill out the general contact form at www.avproedge.com/contact.

End users may not request an RMA directly from AVPro Edge and will be referred back to the dealer, reseller, or installer.

Shipping

For USA (not including Alaska and Hawaii), shipping is covered on advanced replacements for FedEx Ground (some expressed exceptions may apply). Defective product return shipping is covered by AVPro Edge using an emailed return label. Items must be returned within 30 days of receipt of the replacement product, after 40 days the customer will be billed. Other return shipping methods will not be covered.

For international (and Alaska and Hawaii) return shipping costs will be the responsibility of the returnee. Once the unit is scanned for return shipping AVPro Edge will ship the new replacement unit.

Limitation on Liability

The maximum liability of AVPro Global Holdings LLC under this limited warranty shall not exceed the actual purchase price paid for the product. AVPro Global Holdings LLC is not responsible for direct, special, incidental, or consequential damages resulting from any breach of warranty or condition, or under any other legal theory to the maximum extent permitted by law. Taxes, Duties, VAT, and other freight forwarding service charges are not covered or paid for by this warranty.

Obsolescence or incompatibility with newly invented technologies (after manufacture of product) is not covered by this warranty. Obsolescence is defined as:

"Peripherals are rendered obsolete when current technology does not support product repair or re-manufacture. Obsolete products cannot be re-manufactured because advanced technologies supersede original product manufacturer capabilities. Because of performance, price and functionality issues, product re-development is not an option."

Discontinued or out-of-production items will be credited at fair market value towards a current product of equal or comparable capabilities and cost. Fair market value is determined by AVPro Edge.

Exclusive Remedy

To the maximum extent permitted by law, this limited warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies, and conditions, whether oral or written, express or implied. To the maximum extent permitted by law, AVPro Global Holdings LLC specifically disclaims any and all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. If AVPro Global Holdings LLC cannot lawfully disclaim or exclude implied warranties under applicable law, then all implied warranties covering this product, including warranties of merchantability and fitness for a particular purpose, shall apply to this product as provided under applicable law.

This warranty supersedes all other warranties, remedies, and conditions, whether oral or written, express or implied.