VX-HDB-KIT, VX-HDB-TX, VX-HDB-RX, VX-HDB2-KIT, VX-HDB2-TX, VX-HDB-RX

CATX HDMI VIDEO EXTENDERS

UPDATE B ⌐ | ⌐ UPDATE A
CTRL

UPDATE B ⌐ | ⌐ UPDATE A
CTRL

BLACK BOX

OVERVIEW

INTRODUCTION

The 4K CATx HDMI Video Extender Kit, 70 m, PoH, IR, RS-232 consists of a transmitter and a receiver. It extends an 1080p/4K HDMI signal over CAT5e/CAT6a cable up to 229 feet (70 meters). It also supports CEC, bidirectional RS-232 and IR control, and bidirectional PoH.

The HDMI 2.0 4K 60Hz 4:4:4 HDR CATx Video Extender, PoC IR, RS-232 consists of a transmitter and a receiver. It extends an 1080p/4K HDMI signal over CAT5e/CAT6a cable up to 229 feet (70 meters) or 131 feet (40 meters) using PoC. It also enables IR and RS-232 passthrough to control a source or display device remotely. The extender uses visually lossless video compression technology (VLC) to ensure the HD lossless transmission of HDR and 4K @ 60 Hz/4:4:4 over CAT5e/CAT6a cable.

FEATURES: VX-HDB-KIT

- **SUPPORTS FULL HD: DELIVERS A HIGH-RESOLUTION IMAGE (1080P @ 60 HZ @ 48 B/PIXELS/3D/4K X 2K**
- **MAXIMUM TRANSMISSION DISTANCE IS UP TO 131 FEET (40 METERS) FOR 4K X 2K AND UP TO 229 FEET (70 METERS) FOR 1080P OVER A SINGLE CAT5E/CAT6A CABLE**
- **HIGH-BANDWIDTH: 10.2 GBPS**
- **HDTV COMPATIBLE**
- **HDMI 1.4 AND HDCP 2.2 COMPLIANT**
- **SUPPORTS BIDIRECTIONAL POH**
- **USES CATX TECHNOLOGY**
- **LED INDICATORS SHOW WORK STATUS**
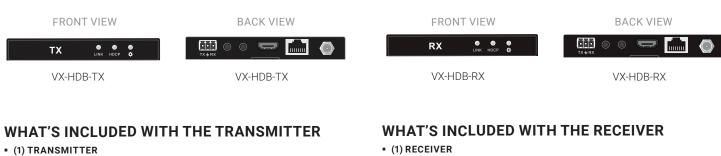
FEATURES: VX-HDB2-KIT

- **SUPPORTS 4K/UHD/60 HZ/4:4:4**
- **SUPPORTS HDMI 2.0 AND HDCP 2.2 AND IS BACKWARDS-COMPATIBLE TO THE PREVIOUS VERSIONS**
- **MAXIMUM TRANSMISSION DISTANCE IS UP TO 131 FEET (40 METERS) FOR 4K X 2K AND UP TO 229 FEET (70 METERS) FOR 1080P**
- **USES CEC, IR, AND RS-232 PASSTHROUGH FOR LONG-DISTANCE CONTROL**
- **INCLUDES BI-DIRECTIONAL POC FOR SIMPLIED WIRING**
- **SUPPORTS HDR**
- **INCLUDES A DIP SWITCH FOR CONTROL, UPDATE A, AND UPDATE B**

COMPARISON CHART

SPECIFICATION COMPARISON CHART			
	VX-HDB-TX	VX-HDB-RX	VX-HDB2-TX	VX-HDB2-RX
RESOLUTION	640 X 480 @ 60 HZ, 4K X 2K @ 30 HZ	640 X 480 @ 60 HZ, 4K X 2K @ 30 HZ	UP TO 4K X 2K @ 60 HZ 4: 4:4	UP TO 4K X 2K @ 60 HZ 4: 4:4
INPUT	(1) HDMI, (1) IR, (1) RS-232	(1) CATX, (1) IR, (1) RS-232	(1) HDMI, (1) IR, (1) RS-232	(1) CATX, (1) IR, (1) RS-232
OUTPUT	(1) CATX, (1) IR, (1) RS-232	(1) HDMI, (1) IR, (1) RS-232	(1) CATX, (1) IR, (1) RS-232	(1) HDMI, (1) IR, (1) RS-232
HDMI STANDARD	HDMI 1.4 AMD HDCP 2.2	HDMI 1.4 AMD HDCP 2.2	HDMI 2.0 AMD HDCP 2.2	HDMI 2.0 AMD HDCP 2.2
BANDWIDTH	10.2 GBPS		18 GBPS	
POWER SUPPLY	INPUT: 100 TO 240 VAC, 50/60 HZ, EXTERNAL POWER SUPPLY; OUTPUT: 24 VDC, 1.25 A		INPUT: 100 TO 240 VAC, 50/60 HZ, EXTERNAL POWER SUPPLY; OUTPUT: 12 VDC, 2 A	
TRANSMISSION MODE AND DISTANCE	CATX: 1080P < OR = 229 FT. (70 M); 4K X 2K < = 131 FT. (40 M)			
AUDIO	DIGITAL AUDIO, TRANSMIT THROUGH HDMI AUDIO		DIGITAL AUDIO, TRANSMIT THROUGH HDMI 2.0 AUDIO	

1.877.877.2269   **BLACKBOX.COM**

SPECIFICATIONS

CATX HDMI VIDEO EXTENDERS (VX-HDB-KIT)

FRONT VIEW	BACK VIEW	FRONT VIEW	BACK VIEW
VX-HDB-TX	VX-HDB-TX	VX-HDB-RX	VX-HDB-RX

WHAT'S INCLUDED WITH THE TRANSMITTER

- **(1) TRANSMITTER**
- **(2) MOUNTING EARS WITH (4) SCREWS**
- **(4) PLASTIC CUSHIONS**
- **(1) RS-232 CABLE**
- **(1) 24-VDC, 1.25-A POWER SUPPLY**

WHAT'S INCLUDED WITH THE RECEIVER

- **(1) RECEIVER**
- **(2) MOUNTING EARS WITH (4) SCREWS**
- **(4) PLASTIC CUSHIONS**
- **(1) RS-232 CABLE**

4K CATX HDMI VIDEO EXTENDER KIT, 70 M, POH, IR, RS-232 (VX-HDB-KIT, VX-HDB-TX, VX-HDB-RX)	
TRANSMITTER	
INPUT	(1) HDMI, (1) IR, (1) RS-232
INPUT CONNECTOR	(1) HDMI female, (1) 3.5-mm mini jack, (1) 3p captive screw connector
AUDIO	Digital audio, transmit through HDMI audio
OUTPUT	(1) CATx, (1) IR, (1) RS-232
OUTPUT CONNECTOR	(1) RJ-45, (1) 3.5-mm mini jack, (1) 3p captive screw connector
RECEIVER	
INPUT	(1) CATx, (1) IR, (1) RS-232
INPUT CONNECTOR	(1) 3.5-mm mini jack, (1) RJ-45, (1) 3p captive screw connector
AUDIO	Digital audio, transmit through HDMI audio
OUTPUT	(1) HDMI, (1) IR, (1) RS-232
OUTPUT CONNECTOR	(1) HDMI female, (1) 3.5-mm mini jack, (1) 3p captive screw connector
GENERAL	
TRANSMISSION MODE	CATx
TRANSMISSION DISTANCE	1080p < or = 229 ft. (70 m); 4K x 2K < = 131 ft. (40 m)
RESOLUTION	640 x 480 @ 60 Hz, 4K x 2K @ 30 Hz
BANDWIDTH	10.2 Gbps
HDMI STANDARD	HDMI 1.4 and HDCP 2.2
IMPEDANCE	75 ohms
POWER SUPPLY	Input: 100 to 240 VAC, 50/60 Hz, external power supply; Output: 24 VDC, 1.25 A
POWER CONSUMPTION	14 W (max.)
OPERATING TEMPERATURE	32 to 122° F (0 to 50° C)
HUMIDITY	10 to 90% relative humidity
DIMENSIONS	0.6" H x 4.5" W x 4.3" D (1.6 x 11.5 x 10.9 cm)
WEIGHT	Transmitter: 0.425 lb. (0.193 kg): Receiver: 0.432 lb. (.0.196 kg)

NOTE: ALL NOMINAL LEVELS ARE AT ±10%.

SPECIFICATIONS

CATX HDMI 2.0 VIDEO EXTENDERS (VX-HDB2-KIT)

FRONT VIEW

VX-HDB2-TX

BACK VIEW

VX-HDB2-TX

FRONT VIEW

VX-HDB2-RX

BACK VIEW

VX-HDB2-RX

WHAT'S INCLUDED WITH THE TRANSMITTER

- **(1) TRANSMITTER**
- **(4) MOUNTING EARS WITH (4) SCREWS**
- **(1) RS-232 CABLE**
- **(1) 12-VDC, 2-A POWER SUPPLY**

WHAT'S INCLUDED WITH THE RECEIVER

- **(1) RECEIVER**
- **(8) PLASTIC CUSHIONS**
- **(1) 3-PIN PHOENIX CONNECTOR**

HDMI 2.0 4K 60 HZ 4:4:4 HDR CATX VIDEO EXTENDER KIT, POC IR, RS-232 (VX-HDB2-KIT, VX-HDB2-TX, VX-HDB2-RX)	
TRANSMITTER	
INPUT	HDMI IN
OUTPUT	CATx OUT
CONTROL PORTS	IR IN, IR OUT, RS-232
RECEIVER	
INPUT	CATx IN
OUTPUT	CATx OUT
CONTROL PORTS	IR IN, IR OUT, RS-232
GENERAL	
TRANSMISSION MODE AND DISTANCE	CATx: 1080p < or = 229 ft. (70 m); 4K x 2K < = 131 ft. (40 m)
RESOLUTION	Up to 4K x 2K @ 60 Hz 4: 4:4
BANDWIDTH	18 Gbps
HDMI STANDARD	HDMI 2.0 and HDCP 2.2
POWER SUPPLY	Input: 100 to 240 VAC, 50/60 Hz, external power supply; Output: 12 VDC, 2 A
POWER CONSUMPTION	14 W (max.)
OPERATING TEMPERATURE	32 to 104° F (0 to 40° C)
STORAGE TEMPERATURE	+14 to +122° F (-10 to +50° C)
HUMIDITY	0 to 90% relative humidity
DIMENSIONS	0.6" H x 4.5" W x 3.3" D (1.6 x 11.5 x 8.4 cm)
WEIGHT	Transmitter: 0.330 lb. (0.150 kg): Receiver: 0.337 lb. (.0.153 kg)

ORDERING INFORMATION

ITEM	CODE
4K CATx HDMI Video Extender Kit, 70 m, PoH, IR, RS-232	
Transmitter	**VX-HDB-TX**
Receiver	**VX-HDB-RX**
Kit (Includes one transmitter and one receiver)	**VX-HDB-KIT**
HDMI 2.0 4K 60 Hz 4:4:4 HDR CATx Video Extenders, PoC, IR, RS-232	
Transmitter	**VX-HDB2-TX**
Receiver	**VX-HDB2-RX**
Kit (Includes one transmitter and one receiver)	**VX-HDB2-KIT**
NOTE: Kits contain (1) Transmitter and (1) Receiver	

ABOUT BLACK BOX

Black Box is a world leading technology solutions provider specializing in complete high-performance KVM, professional A/V signal distribution and extension and switching solutions for mission-critical applications. Black Box is dedicated to delivering superior project engineering, technical support, and 24/7 customer service you can rely on for your most critical operations.

Every day, our customers trust us to design, integrate, and maintain reliable control room solutions for broadcasting, post-production, stadiums & arenas, medical, air traffic control, oil & gas, government & military, and utility industries. Leave the tech to us and our comprehensive technology solutions will deliver secure connections, fast-response times, real-time collaboration and more.

NOTES