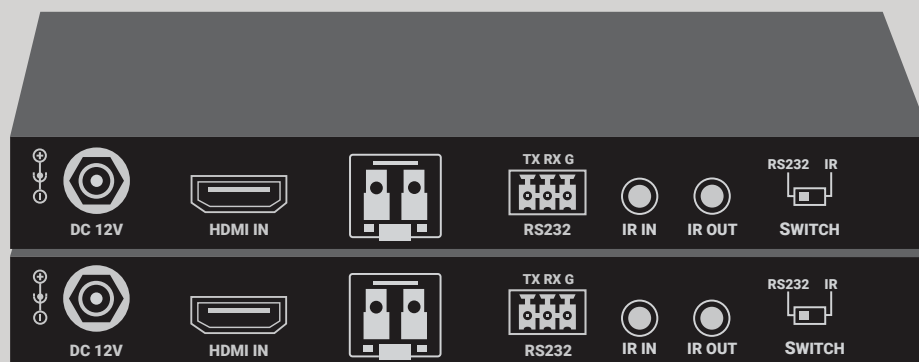


DATA SHEET

AVX-HDMI2-HDB, AVX-HDMI2-FO-HDB

HDMI 2.0 EXTENDER OVER CATX OR FIBER

24/7 TECHNICAL SUPPORT AT 877.877.2269 OR VISIT BLACKBOX.COM



OVERVIEW

HDMI 2.0 EXTENDER OVER CATX OR FIBER DATA SHEET

INTRODUCTION

The HDMI 2.0 HDBaseT Extender (CATx or Fiber) supports 4K @ 60 4:4:4 resolution and complies with HDR and HDCP 2.2 standards. The CATx version distributes uncompressed UHD video, audio, power, and IR together up to 328 feet (100 meters) over a single CATx cable. The Fiber version drives these signals up to 1000 feet (300 meters) over duplex fiber optic cable.

The extender supports Dolby and DTS HD audio and bi-directional IR control in a low-profile box. You can configure the ARC channel feed for a TV (with ARC support) or an auxiliary S/PDIF Input port via an audio output DIP switch on the receiver.

Bi-directional RS-232 or IR ports enable you to control AV devices, easy to choose by the slide switch on the rear panels. Sources and displays can be controlled from either the transmitter or receiver end using either RS-232 or IR signals.

The copper version also supports PoH technology, allowing the receiver to be powered by the transmitter.

LEDs show power and signal status for established connections between devices.

FEATURES

- 4K/UHD CAPABILITY @ 60 HZ WITH 4:4:4 CHROMA SAMPLING, PLUS SUPPORT FOR HDR FORMATS
- HDCP 2.2 AND 1.4 COMPLIANT
- COPPER VERSION SUPPORTS SIGNAL TRANSMISSION UP TO 100 METERS AT HD RESOLUTIONS USING CAT5E/6 CABLE AND 4K RESOLUTIONS USING CAT6A/7 CABLE
- TRANSMITS 4K @ 60 4:4:4 SIGNALS UP TO 1000 FT. (300 M) VIA MM OM3 CABLE WITH 10 GBPS MULTIMODE SFP+ MODULES
- VISUALLY LOSSLESS COMPRESSION ENABLES 4K @ 60 HZ HDR EXTENSION OVER HDBASET
- RECEIVER TO TRANSMITTER AUDIO RETURN VIA ARC OR DIGITAL COAX PATHWAY
- EXTENDS RS-232, IR AND ETHERNET CONTROL SIGNALS
- COPPER ONLY: STANDARD ONE WAY POH (TRANSMITTER POWER TO RECEIVER)
- AUTOMATIC EDID MANAGEMENT
- VISUAL LED INDICATION
- SUPPORTS BI-DIRECTIONAL IR OR RS-232 PASSTHROUGH (SELECT VIA THE DIP SWITCH ON THE REAR PANEL)
- MULTICHANNEL AUDIO SUPPORTS UP TO PCM 7.1, DTS MASTER HD AND DOLBY TRUE HD
- LOCKING DC POWER PLUGS
- VISUAL LED INDICATION FOR POWER SUPPLY TO UNITS, HDCP PRESENCE IN SIGNAL, UNIT'S STATUS AND FIBER OPTIC CABLE LINK

COMPARISON CHART

| SPECIFICATION COMPARISON CHART | | | | |
|--------------------------------|---------------------------|------------------------|------------------------------|---------------------------|
| | AVX-HDMI2-HDB TRANSMITTER | AVX-HDMI2-HDB RECEIVER | AVX-HDMI2-FO-HDB TRANSMITTER | AVX-HDMI2-FO-HDB RECEIVER |
| INPUT CONNECTOR | (1) HDMI | (1)-HDBASE-T | (1) HDMI | (1)-OPTICAL |
| OUTPUT CONNECTOR | (1) HDBASE-T | (1) HDMI | (1) OPTICAL | (1) HDMI |
| NETWORK PORT | (1) RJ-45 | (1) RJ-45 | (2) LC | (2) LC |
| ARC | YES | YES | NO | NO |
| ETHERNET | YES | YES | NO | NO |
| RS-232 | YES | YES | YES | YES |
| IR | YES | YES | YES | YES |
| 4K | YES | YES | YES | YES |
| HD | YES | YES | YES | YES |
| INTERCONNECT CABLE | CATX | CATX | MULTIMODE FIBER | MULTIMODE FIBER |



PHOTOS/WHAT'S INCLUDED/SPECIFICATIONS

HDMI 2.0 EXTENDER OVER CATX (AVX-HDMI2-HDB)

WHAT'S INCLUDED WITH THE KIT (AVX-HDMI2-HDB)

- 1) TRANSMITTER
- (1) RECEIVER
- (1) POWER ADAPTER (12 VDC, 2 A)
- (2) PHOENIX MALE CONNECTORS (3.5-MM, 3-PIN)
- (1) IR EMITTER CABLE
- (1) IR BROADBAND RECEIVER CABLE (30 KHZ – 50 KHZ)
- (4) MOUNTING BRACKETS

TRANSMITTER



FRONT VIEW



BACK VIEW

RECEIVER



FRONT VIEW



BACK VIEW

SPECIFICATIONS FOR HDMI 2.0 EXTENDER OVER CATX (AVX-HDMI2-HDB)

| GENERAL | |
|---------------------------------|--|
| INPUT/OUTPUT RESOLUTION SUPPORT | 800 x 600, 1024 x 768, 1280 x 720, 1280 x 768, 1280 x 800, 1280 x 960, 1280 x 1024, 1360 x 768, 1366 x 768, 1440 x 900, 1600 x 900, 1600 x 1200, 1680 x 1050, 1920 x 1080, 1920 x 1200, 2560 x 1440, 2560 x 1600, 3840 x 2160P, 4096 x 2160P |
| MAXIMUM DATA RATE | 18 Gbps |
| INPUT VIDEO LEVEL | 0.5 – 1.0 Vp-p |
| INPUT DDC SIGNAL | 5 Vp-p |
| MAXIMUM PIXEL CLOCK | 594 MHz |
| VIDEO IMPEDANCE | 100 ohms |
| ESD PROTECTION | Human-body model: ±8 kV (air-gap discharge)/±4 kV (contact discharge) |
| SURGE PROTECTION | Voltage: ±1 kV |
| ELECTRICAL FAST TRANSIENT/BURST | Data communication cord: 1kV; Power cord: 2 kV |
| APPROVALS | CE, FCC, IC, RCM and VCCI |
| POWER SUPPLY | Each unit: (1) external 12 VDC, 3 A |
| OPERATING TEMPERATURE | 32 to 113° F (0 to 45° C) |
| STORAGE TEMPERATURE | -4 to +158° F (-20 to +70° C) |
| HUMIDITY | 10 to 90% noncondensing |
| DIMENSIONS | Each unit: 0.8" H x 6.8" W x 3.7" D (2.1 x 17.3 x 9.5 cm) |
| WEIGHT | Each unit: 0.9 lb. (0.4 kg) |



SPECIFICATIONS

HDMI 2.0 EXTENDER OVER CATX (AVX-HDMI2-HDB)

| HDMI 2.0 EXTENDER OVER CATX (AVX-HDMI2-HDB) (CONTINUED) | |
|---|---|
| TRANSMITTER | |
| VIDEO INPUT | (1) HDMI female |
| INPUT SIGNAL TYPE | HDMI with 4K |
| OUTPUT | (1) HDBaseT |
| OUTPUT SIGNAL TYPE | HDBaseT |
| NETWORK CONNECTOR | (1) RJ-45 |
| POWER CONSUMPTION (MAXIMUM) | Receiver powered by transmitter: 18.6 W (1080p) 21.6 W (4K @ 60 Hz YUV 4:4:4) Transmitter and Receiver powered separately: 11.6 W (1080p) 18.96 W (4K @ 60 Hz YUV 4:4:4) |
| RECEIVER | |
| VIDEO INPUT | (1) HDBaseT |
| INPUT SIGNAL TYPE | HDBaseT |
| OUTPUT | (1) HDMI female |
| OUTPUT SIGNAL TYPE | HDMI with 4K |
| NETWORK CONNECTOR | (1) RJ-45 |
| POWER CONSUMPTION (MAXIMUM) | Transmitter and Receiver powered separately: 7.44 W (1080p) 7.2 W (4K @ 60 Hz YUV 4:4:4) |
| POWER CONSUMPTION (MAXIMUM) | Transmitter and Receiver powered separately: 7.44 W (1080p) 7.2 W (4K @ 60 Hz YUV 4:4:4) |

| CATX CABLE SPECIFICATIONS | | |
|---------------------------|-----------------|---|
| CABLE TYPE | RANGE | SUPPORTED VIDEO |
| CAT5E/6 | 328 ft. (100 m) | 1080p @ 60 Hz, 36 bpp |
| CAT5E/6 | 230 ft. (70 m) | 1080p @ 60 Hz, 48 bpp 1080p @ 60 Hz 3D 4K @ 60 Hz YUV 4:4:4 |
| CAT6A/7 | 328 ft. (100 m) | 1080p @ 60 Hz, 48 bpp 1080p @ 60 Hz 3D 4K @ 60 Hz YUV 4:4:4 |



SPECIFICATIONS

HDMI 2.0 EXTENDER OVER FIBER (AVX-HDMI2-FO-HDB)

WHAT'S INCLUDED WITH THE KIT (AVX-HDMI2-FO-HDB)

- (1) TRANSMITTER WITH 10 GBIT/S MM SFP+ MODULE
- (1) RECEIVER WITH 10 GBIT/S MM SFP+ MODULE
- (2) POWER ADAPTERS (12 VDC, 0.5 A)
- (2) PHOENIX MALE CONNECTORS (3.5-MM, 3-PIN)
- (1) IR EMITTER CABLE
- (1) IR BROADBAND RECEIVER CABLE
- (4) MOUNTING BRACKETS

TRANSMITTER



FRONT VIEW



BACK VIEW

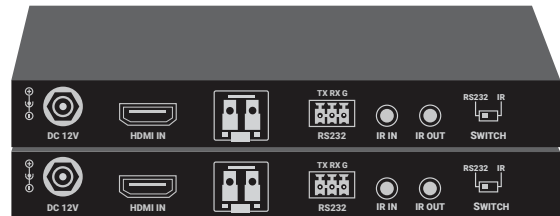
RECEIVER



FRONT VIEW



BACK VIEW



SPECIFICATIONS FOR HDMI 2.0 EXTENDER OVER FIBER (AVX-HDMI2-FO-HDB)

| GENERAL | |
|---------------------------------|--|
| INPUT/OUTPUT RESOLUTION SUPPORT | 800 x 600, 1024 x 768, 1280 x 720, 1280 x 768, 1280 x 800, 1280 x 960, 1280 x 1024, 1360 x 768, 1366 x 768, 1440 x 900, 1600 x 900, 1600 x 1200, 1680 x 1050, 1920 x 1080, 1920 x 1200, 2560 x 1440, 2560 x 1600, 3840 x 2160P, 4096 x 2160P |
| MAXIMUM DATA RATE | 18 Gbps |
| INPUT VIDEO LEVEL | 0.5 – 1.0 Vp-p |
| MAXIMUM PIXEL CLOCK | 600 MHz |
| VIDEO IMPEDANCE | 100 ohms |
| ESD PROTECTION | Human-body model: ±8 kV (air-gap discharge)/±4 kV (contact discharge) |
| SURGE PROTECTION | Voltage: ±1 kV |
| ELECTRICAL FAST TRANSIENT/BURST | Data communication cord: 1kV; Power cord: 2 kV |
| APPROVALS | CE, FCC, IC, RCM and VCCI |
| POWER SUPPLY | Power Supply: Each unit: (1) external 12 VDC, 1 A; Consumption: 3.9 W (max.) |
| OPERATING TEMPERATURE | 32 to 113° F (0 to 45° C) |
| STORAGE TEMPERATURE | -4 to +158° F (-20 to +70° C) |
| HUMIDITY | 0 to 90% noncondensing |
| DIMENSIONS | Each unit: 0.8" H x 5.9" W x 2.9" D (2 x 15 x 7.4 cm) |
| WEIGHT | Each unit: 0.7 lb. (0.3 kg) |

SPECIFICATIONS

HDMI 2.0 EXTENDER OVER FIBER (AVX-HDMI2-FO-HDB)

| HDMI 2.0 EXTENDER OVER CATX (AVX-HDMI2-HDB) (CONTINUED) | |
|--|--|
| TRANSMITTER | |
| VIDEO INPUT | (1) HDMI female |
| INPUT SIGNAL TYPE | HDMI 2.0 and HDCP 2.2 |
| OUTPUT | (1) optical output with LC connector |
| OUTPUT FIBER TYPE | MM module standard, SM can be purchased separately |
| FIBER CONNECTOR TYPE | (2) LC |
| MAXIMUM TRANSMISSION DISTANCE | 1000 ft. (300 m) over OM3 cable |
| RECEIVER | |
| VIDEO INPUT | (1) optical input with LC connector |
| INPUT FIBER TYPE | MM module standard, SM can be purchased separately |
| FIBER CONNECTOR TYPE | (2) LC |
| OUTPUT SIGNAL TYPE | HDMI 2.0 and HDCP 2.2 |
| MAXIMUM TRANSMISSION DISTANCE | 1000 ft. (300 m) over OM3 cable |

NOTE: SFPs are included, but you can also use our SM or MM SFP+ modules to replace a lost SFP or to use SM instead of MM. Parts are:

- LSP421, SFP+, 10-Gb, Extended Diagnostics, 850-nm Multimode Fiber, 300-m, LC
- LSP422, SFP+, 10GBASE-SR, 1310-nm Single-Mode, 10 km, Extended Diag, LC



ORDERING INFORMATION

| ITEM | CODE |
|--|-------------------------|
| HDMI 2.0 Extenders | |
| Over CATx | |
| Transmitter and Receiver Kit | AVX-HDMI2-HDB |
| Over Fiber | |
| Transmitter and Receiver Kit | AVX-HDMI2-FO-HDB |
| Compatible SFPs | |
| 10-Gb, 850-nm MM, 300-m, LC | LSP421 |
| 10-Gb, 1310-nm SM, 10 km, LC | LSP422 |
| Locking HDMI Cables | |
| Locking HDMI male to non-locking HDMI male | VCL-HDMIS-00xM |
| Locking HDMI male to DVI male | VCL-HDMIDVI-00xM |
| NOTE: Locking HDMI cables come in 1, 2, 3 and 5 meter lengths. | |

NOTES _____

DISCLAIMER

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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.

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