

# HDX-XT

## USER MANUAL

4K Video and USB 2.0 KVM Extender



**Smart-AVI**  
SMART AUDIO VIDEO INNOVATION

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## WHATS IN THE BOX?

Model Number	Description
HDX-XT-S	(1) HDX-XT 4K Extender with USB 2.0 Transmitter and Receiver Unit(s); Quickstart Guide
PS12VDC1A	(2) Power Supply DC 12V@1A



### NOTICE:

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# INTRODUCTION

Thank you for purchasing this product. For optimum performance and safety, please read the instruction carefully before connecting, operating or adjusting this product. Please keep the manual for future reference.

The HDMI USB KVM (Keyboard, Video, Mouse) Extender is a tool which can extend your HDMI signal over 328ft./100meters to a compatible display. It is designed to convert HDMI signal to standard, extended signal which can be transmitted by CAT5e/CAT6/CAT7 cable. It also supports Transfer Bidirectional Infrared control signal and RS232 control signal. The HDX-XT also supports the connection of a USB host and 2 USB device ports.

## FEATURES:

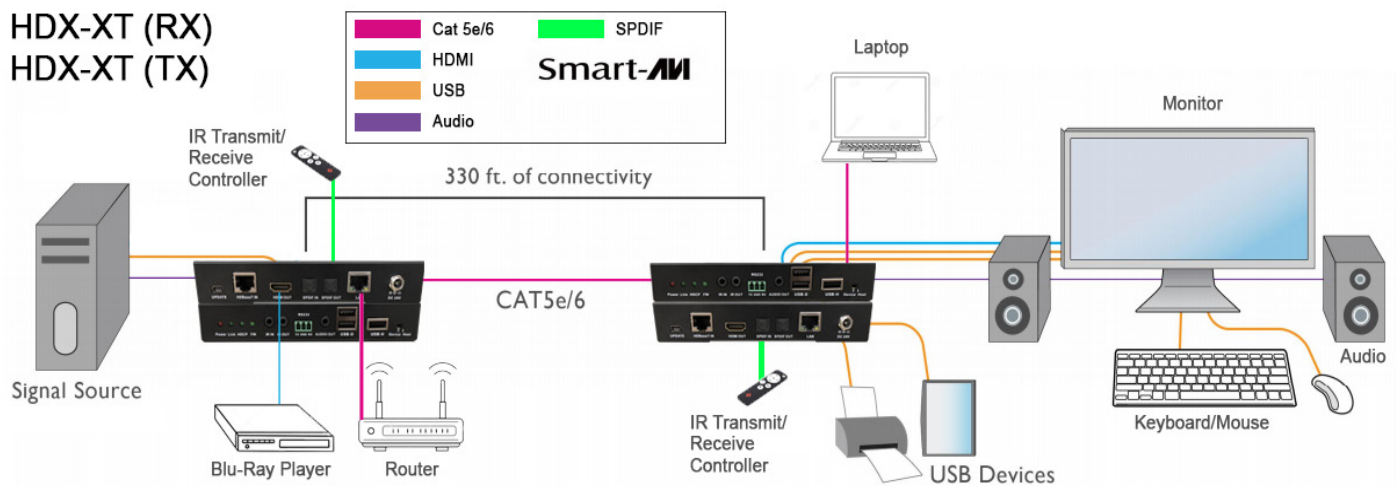
- Zero pixel loss with TMDS signal correction
- Fully compliant with HDMI 1.4, and compatible with HDMI 2.0 (4K2K@60Hz with YCbCr 4:2:0 ).
- HDCP2.2 and DVI compatible.
- Supports Extender 2.0 specification over a single CAT5e/6/7 cable up to 100m/328ft.
- Supports pass-through of HD audio formats: LPCM2/5.1/7.1 CH, Dolby Digital, DTS, Dolby TrueHD, DTS-HD Master Audio and more.
- POE function support, either TX or RX powered 24V@1A,
- Full HD support: 1080p@60Hz@24/36/48bit/pixels.
- Supports USB 2.0 control.
- Supports external Bi-Directional SPDIF IN/OUT and available for multichannel audio.
- Supports stereo audio with PCM 2CH.
- Transfer Bidirectional Infrared control signal together with the HDMI signal.
- Transfer Bidirectional RS232 control signal together with the HDMI signal.



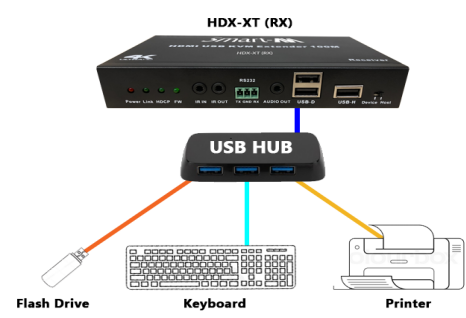
# HARDWARE INSTALLATION

1. Disconnect power from all devices involved with the installation.
2. Connect the display, keyboard, mouse, audio and USB devices to the ports identified for each item on the HDX-XT Receiver Unit.
3. Connect the Computer's Display output and USB port to the ports identified for each item on the HDX-XT Transmitter Unit.
4. Connect the HDX-XT Transmitter Unit to the HDX-XT Receiver Unit with a CAT5/5e/6 cable. For the best quality video use a single CAT5/5e/6 cable to connect the HDX-XT Transmitter to the Receiver. The HDX-XT is not designed to work with Routers, Switches or Hubs.
5. Power on the devices connected to the HDX-XT Receiver Unit.
6. Connect the power supplies provided to the HDX-XT Transmitter and Receiver and connect them both to power.
7. Power on the Computer.

If needed you can force the HDX-XT to re-learn the Monitors EDID settings with the following hot-key combination. Press the Ctrl key twice, press the e key, then press the Enter key. This will cause the USB light on the front of the HDX-XT Transmitter Unit to blink rapidly for 1 second, indicating the EDID settings have been re-learned.

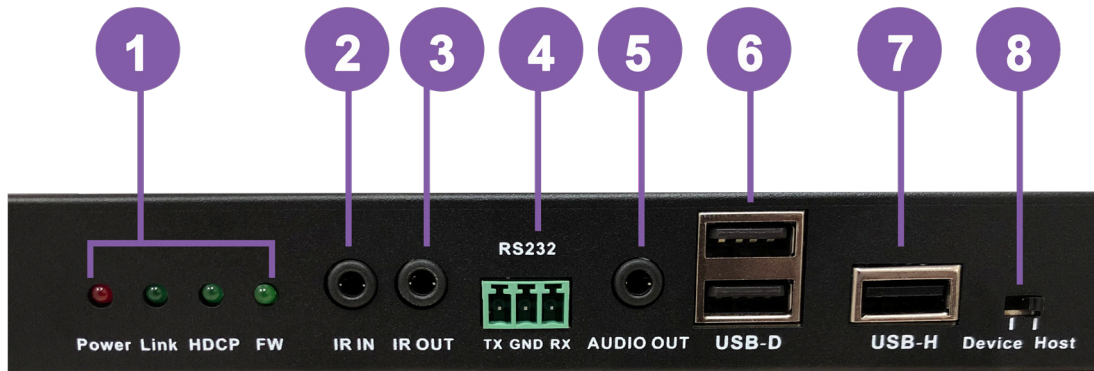


**Connecting more USB devices:**  
If additional devices needed to be connected, connect a USB hub to the USB port of the receiver.



# TRANSMITTER FRONT PANEL CONTROL

Plug in the desired output and inputs, then power on the unit. Press SELECT to alternate between inputs that will be displayed via the output. Press SELECT once more to switch the output.



## Transmitter Front Control Panel

### 1. Indicator LED:

**Power LED:** Illuminates when power has been supplied to the unit.

**Link LED:** The connection status indicating lamp.

**Illuminate:** The Transmitter and Receiver have good connections.

**Flashing:** The Transmitter and Receiver have poor connections.

**Dark:** The Transmitter and Receiver have no connections.

**HDCP LED:** The HDCP status indicating lamp.

**Illuminate:** The HDMI signal with HDCP.

**Flashing:** The HDMI signal without HDCP.

**Dark:** No HDMI signal.

**FW LED:** Light is flashing on behalf of the unit work normally

2. **IR IN:** Channel 1 IR Receiver. Connect with Wideband IR Rx.

3. **IR OUT:** Channel 2 IR Transmitter. Connect with Wideband IR Tx.

4. **RS232 TX/RX:** Connect to a PC or Laptop with 3-pin Relay cable for the transmission of RS-232 commands.

5. **AUDIO IN:** Connect to a PC or Laptop stereo output port via 3.5mm audio cable.

6. **USB-D:** Connect to USB peripheral devices such as printer, keyboard, mouse, flash drive, etc.

7. **USB-H:** Connect from PC or Laptop for data transmit to or control from the Receiver's USB-D slots.

8. **USB-H/USB-D SELECT:** Select USB host or USB device.



# TRANSMITTER REAR CONTROLS

Plug in the desired output and inputs, then power on the unit. Press SELECT to alternate between inputs that will be displayed via the output. Press SELECT once more to switch the output.



## Transmitter Rear Control Panel

9. UPDATE: Reserved for manufacturer use only.
10. Extender OUT: Standard Extender signal output port. Connect Extender receiver with a Cat5e/6/7 cable.
11. HDMI IN: This slot is where you connect the HDMI source.
12. SPDIF IN (Optical in): Connect to audio source equipment such as DVD or Blu-ray player for audio signal sending to Receiver's SPDIF OUT (Optical out).
13. SPDIF OUT (Optical out): Connect to speaker with coaxial input for audio signal output from Receiver's SPDIF IN (Optical in).
14. LAN: This slot provide Internet signal from receiver or to receiver.
15. DC IN: Plug the 24V DC power supply into the unit.



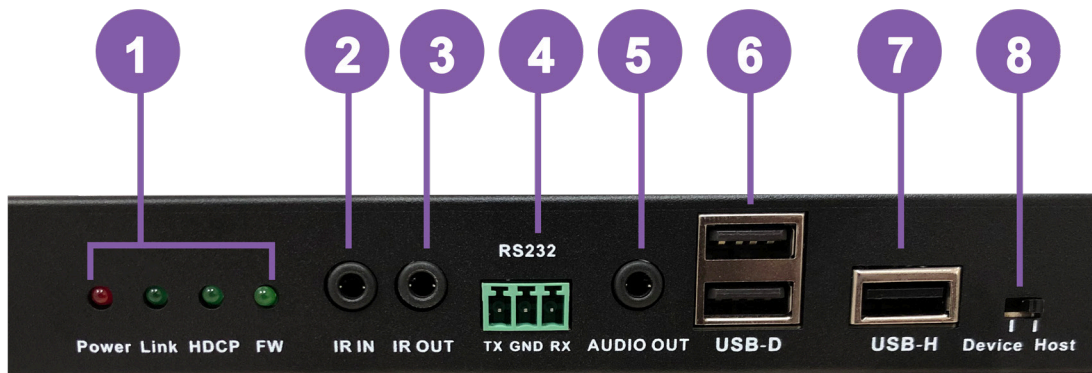
**HDX-XT (TX) Front**



**HDX-XT (TX) Rear**

# RECEIVER FRONT PANEL CONTROL

Plug in the desired output and inputs, then power on the unit. Press SELECT to alternate between inputs that will be displayed via the output. Press SELECT once more to switch the output.



## Receiver Front Control Panel

### 1. Indicator LED:

**Power LED:** illuminates when power has been supplied to the unit.

**Link LED:** The connection status indicating lamp.

**Illuminate:** The Transmitter and Receiver have good connections.

**Flashing:** The Transmitter and Receiver have poor connections.

**Dark:** The Transmitter and Receiver has no connections.

**HDCP LED:** The HDCP status indicating lamp.

**Illuminate:** The HDMI signal with HDCP.

**Flashing:** The HDMI signal without HDCP.

**Dark:** No HDMI signal.

**FW LED:** Light is flashing on behalf of the unit work normally

2. **IR IN:** Chanel 1 IR Receiver. Connect with Wideband IR Rx.

3. **IR OUT:** Chanel 2 IR Transmitter. Connect with Wideband IR Tx.

4. **RS232 TX/RX:** Connect to the devices that are to be controlled via 3-pin Relay cable by RS-232 commands.

5. **AUDIO OUT:** Connect to speaker via 3.5mm audio cable.

6. **USB-D:** Connect to USB peripheral devices such as printer, keyboard, mouse, flash drive, etc.

7. **USB-H:** Connect from PC or Laptop for data transmit to or control from the Receiver's USB-D slots.

8. **USB-H/USB-D SELECT:** Select USB host or USB device.

# RECEIVER REAR CONTROL

Plug in the desired output and inputs, then power on the unit. Press SELECT to alternate between inputs that will be displayed via the output. Press SELECT once more to switch the output.



## Receiver Rear Control Panel

9. UPDATE: Reserved for manufacturer use only.
10. Extender IN: Standard Extender signal output port. Connect Extender Transmitter with a Cat5e/6/7 cable.
11. HDMI OUT: This slot is where you connect the a HDMI equipped TV/monitor.
12. SPDIF IN (Optical in): Connect to audio source equipment such as DVD or Blu-ray player for audio signal sending to Transmitter's SPDIF OUT(Optical out).
13. SPDIF OUT (Optical out): Connect to speaker with coaxial input for audio signal output from Transmitter's SPDIF IN (Optical in).
14. LAN: This slot provide Internet signal from receiver or to receiver.
15. DC IN: Plug the 24V DC power supply into the unit.



**HDX-XR (RX) Front**



**HDX-XR (RX) Rear**



# TECHNICAL SPECIFICATIONS:

VIDEO	
Format	HDMI
Input Interface (RX)	(1) IR In, (1) Optical (Spdif In), (1) Extender In, (1) USB-H
Output Interface (RX)	(1) HDMI, (1) LAN, (2) USB, (1) IR Out, (1) Audio Out, (1) RS-232, (1) Optical (Spdif out)
Input Interface (TX)	(1) HDMI, (1) LAN, (1) USB-H, (1) IR-IN, (1) RS-232, (1) Optical (Spdif in), (1) Audio In
Output Interface (TX)	(1) IR Out, (1) Optical (Spdif out), (1) Extender Out, (2) USB-D
Resolution	480p, 720p, 1080i, 1080p/60Hz, 4K/30Hz
Max Output Distance	1080p@60 100m (328ft/100m) [CAT5/5e/6] 4K2K (4:2:0 8bit) 80m (264ft) [CAT5/5e/6]
Equalization	Auto
Input TMDS Signal	1.2 Volts [peak-to-peak]
Input DDC Signal	5 Volts [peak-to-peak, TTL]
Video Bandwidth	Single-Link 340 MHz (10.2 Gbps)
AUDIO	
Format	HDMI
Input Interface	3.5 mm Jack Socket (Female)
Output Interface	3.5 mm Jack Socket (Female)
USB	
Format	USB 2.0
Input Interface	1.1 with full emulation
RS-232	
Format	Full duplex TXD, RXD signal
SYSTEM	
Interface	RJ45
Cable Requirements	CAT5/5e/6
Maximum Length	328 ft. (100m)
OTHER	
Approvals	UL, CE, ROHS Compliant
Power	DC 12V 1A
Operating Temperature	32 - 104°F ( 0-40°C)
Storage Temperature	-4 - 140°F (-20 - 60°C)
Humidity	Up to 95%
Dimensions	160 (W) X 97 (D) X 28 (H)
Weight	450g/TX, 450g/RX

## LIMITED WARRANTY STATEMENT

### A. **Extent of limited warranty**

Smart-AVI Technologies, Inc. warrants to the end-user customers that the Smart-AVI product specified above will be free from defects in materials and workmanship for the duration of 1 year, which duration begins on the date of purchase by the customer. Customer is responsible for maintaining proof of date of purchase. Smart-AVI limited warranty covers only those defects which arise as a result of normal use of the product, and do not apply to any:

- a. Improper or inadequate maintenance or modifications*
- b. Operations outside product specifications*
- c. Mechanical abuse and exposure to severe conditions*

If Smart-AVI receives, during applicable warranty period, a notice of defect, Smart-AVI will at its discretion replace or repair defective product. If Smart-AVI is unable to replace or repair defective product covered by the Smart-AVI warranty within reasonable period of time, Smart-AVI shall refund the cost of the product. Smart-AVI shall have no obligation to repair, replace or refund unit until customer returns defective product to Smart-AVI. Any replacement product could be new or like new, provided that it has functionality at least equal to that of the product being replaced. Smart-AVI limited warranty is valid in any country where the covered product is distributed by Smart-AVI.

### B. **Limitations of warranty**

To the extent allowed by local law, neither Smart-AVI nor its third party suppliers make any other warranty or condition of any kind whether expressed or implied with respect to the Smart-AVI product, and specifically disclaim implied warranties or conditions of merchantability, satisfactory quality, and fitness for a particular purpose.

### C. **Limitations of liability**

To the extent allowed by local law the remedies provided in this warranty statement are the customers sole and exclusive remedies. To the extent allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event will Smart-AVI or its third party suppliers be liable for direct, indirect, special, incidental, or consequential damages whether based on contract, tort or any other legal theory and whether advised of the possibility of such damages.

### D. **Local law**

To the extent that this warranty statement is inconsistent with local law, this warranty statement shall be considered modified to be consistent with the law.

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