



INSTRUCTION MANUAL

DXLITE 4K60 TRANSMITTER

DXL-TX-4K60



IMPORTANT SAFETY INSTRUCTIONS

1. READ these instructions.
2. KEEP these instructions.
3. HEED all warnings.
4. FOLLOW all instructions.
5. DO NOT use this apparatus near water.
6. CLEAN ONLY with dry cloth.
7. DO NOT block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. DO NOT install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. DO NOT defeat the safety purpose of the polarized or 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 wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. PROTECT the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. ONLY USE attachments/accessories specified by the manufacturer.



12. USE ONLY with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. UNPLUG this apparatus during lightning storms or when unused for long periods of time.
14. REFER all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. DO NOT expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
17. Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
18. DO NOT overload wall outlets or extension cords beyond their rated capacity as this can cause electric shock or fire.



The exclamation point, within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



ESD Warning: The icon to the left indicates text regarding potential danger associated with the discharge of static electricity from an outside source (such as human hands) into an integrated circuit, often resulting in damage to the circuit.

WARNING: To reduce the risk of fire or electrical shock, do not expose this apparatus to rain or moisture.

WARNING: No naked flame sources - such as candles - should be placed on the product.

WARNING: Equipment shall be connected to a MAINS socket outlet with a protective earthing connection.

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AMX WARRANTY AND RETURN POLICY

The AMX Warranty and Return Policy and related documents can be viewed/downloaded at www.amx.com.

ESD WARNING



To avoid ESD (Electrostatic Discharge) damage to sensitive components, make sure you are properly grounded before touching any internal materials.

When working with any equipment manufactured with electronic devices, proper ESD grounding procedures must be followed to make sure people, products, and tools are as free of static charges as possible. Grounding straps, conductive smocks, and conductive work mats are specifically designed for this purpose. These items should not be manufactured locally, since they are generally composed of highly resistive conductive materials to safely drain static discharges, without increasing an electrocution risk in the event of an accident.

Anyone performing field maintenance on AMX equipment should use an appropriate ESD field service kit complete with at least a dissipative work mat with a ground cord and a UL listed adjustable wrist strap with another ground cord.



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



WARNING: Do Not Open! Risk of Electrical Shock. Voltages in this equipment are hazardous to life. No user-serviceable parts inside. Refer all servicing to qualified service personnel.

Place the equipment near a main power supply outlet and make sure that you can easily access the power breaker switch.

WARNING: This product is intended to be operated ONLY from the voltages listed on the back panel or the recommended, or included, power supply of the product. Operation from other voltages other than those indicated may cause irreversible damage to the product and void the products warranty. The use of AC Plug Adapters is cautioned because it can allow the product to be plugged into voltages in which the product was not designed to operate. If the product is equipped with a detachable power cord, use only the type provided with your product or by your local distributor and/or retailer. If you are unsure of the correct operational voltage, please contact your local distributor and/or retailer.

WARNING: Avoid exposure to extreme heat or cold.

FCC AND CANADA EMC COMPLIANCE INFORMATION:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

EU COMPLIANCE INFORMATION:

Eligible to bear the CE mark; Conforms to European Union Low Voltage Directive 2014/35/EU; European Union EMC Directive 2004/108/EC; European Union Restriction of Hazardous Substances Recast (RoHS2) Directive 2011/65/EU; European Union WEEE (recast) Directive 2012/19/EU; European Union Eco-Design Directive 2009/125/EC; European Union Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Directive 2006/121/EC

You may obtain a free copy of the Declaration of Conformity by visiting <http://www.amx.com/techcenter/certifications.asp>.

WEEE NOTICE:



This appliance is labeled in accordance with European Directive 2012/19/EU concerning waste of electrical and electronic equipment (WEEE). This label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.

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Overview

The AMX DXLite transmitters and receivers leverage HDBaseT technology to distribute audio, video, and USB 2.0 over a single category cable. AMX DXLite supports 4K60 4:4:4, HDCP 2.2, and HDR video, providing compatibility with the latest source devices and displays.

DXLite can be used point-to-point (with a transmitter connected directly to a receiver over a single cable) or be used for distant transport in conjunction with an AMX Incite All-in-One Presentation Switcher.

The onboard USB 2.0 available on the DXLite allows for easy distribution of USB signals between the transmitter and receiver.

A USB device, such as an AMX Acendo Vibe conferencing soundbar, can be mounted at the display and connected to a DXLite receiver. A laptop can then connect to the transmitter at the table, with USB and video distributed over category cable.

Common Applications

Ideal for supporting cost-effective conferencing in BYOD meeting environments.

Features

4K60 4:4:4 and HDCP 2.2 Support over HDBaseT with Display Stream Compression (DSC) – Visually lossless compression and future-proof support

Power over HDBaseT – Can be powered from HDBaseT inputs which means there is no need for an additional power source at the table

USB 2.0 Transmission – Connect devices such as cameras, keyboard, mouse and other USB devices

Compatible – With the AMX Incite presentation switcher and DXLite RX

Package Contents

- 1 x DXL-TX-4K60 Transmitter
- 1 x 12V 2A Power Adapter (with UK, US and Euro plugs)
- 1 x Phoenix Male Connector (3.5 mm, 3 Pins)
- 1 x Phoenix Male Connector (3.5 mm, 2 Pins)
- 1 x Broadband IR Receiver (30-50KHz)
- 2 x Mounting Brackets (with screws)

Specifications

DCL-TX-4K60 Specifications	
General	
Dimensions	1 11/16" x 19" x 14" (4.4 cm x 48.3 cm x 35.6 cm)
Weight	TBD
Shipping Weight	TBA
Mounting Options	TBA
Approvals: Regulatory Compliance	CE, FCC, NRTL, RoHS, WEEE
Airflow	Convection (openings on top, sides and bottom of case)
Included Accessories	2 x 3P-3.5MM Phoenix Connectors 1 x 2P-3.5MM Phoenix Connectors 1 x 12V/2A Power Adapter 1 x IR Receiver 1 x US exchangeable adapters 1 x EU exchangeable adapters 1 x UK exchangeable adapters 2 x mounting ear 4 x M2.5 screw (for mounting ears)
AMX Products Compatible with DXLink RX	<ul style="list-style-type: none"> • (1) Power Cord, Universal • (2) Front Rack Mounting Brackets • (4) Rubber feet • Other TBA
MTBF	TBD
Twisted Pair Cable Type	Shielded Cat6, Cat6A and Cat7 / Shielded Cat6A and Cat7
Twisted Pair Cable Length	Up to 262 ft. (80 m) for full 4K signal support Up to 328 ft. (100 m) for 1080p and below
HDBaseT	
HDBaseT Layer Throughput (Max)	10.2 Gbps
Important Notice	DXLink/DXLite twisted pair cable runs for DXLink/DXLite equipment shall only be run within a common building.
Note	Specifications are subject to change
Power Supply	
External, Included	12 VDC 2A Max Output; 100-240V 50/60Hz AC Input
Active Power Requirements	
Voltage, DC (Typical)	12 VDC
Power Consumption	6.3w
Power Connector	Screw down locking power connector
HDBaseT Power	Power Supplied from a HDBaseT Receiving Device if Available
Environmental	
Temperature (Operating)	32° F to 122° F (0° C to 50° C)
Temperature (Storage)	14° to 140° F (-10° to 60° C)
Humidity (Operating)	10% to 90% RH (non-condensing)
Humidity (Storage)	10% to 90% RH (non-condensing)
Thermal Dissipation	12 BTU/hr

Specifications

DCL-TX-4K60 Specifications (cont.)	
Rear Connectors	
Local Power	Screw Down Locking Power Connector
HDBaseT output Serial	RJ-45
Serial	3 Position 3.5mm Pluggable Phoenix Terminal
HDMI Input	HDMI Type A Female
USB 2.0 HDBaseT Pass-through	(4) USB Type A Connectors for USB Peripheral Devices (1) USB 2.0 Type B Connector For Host Device Either Host or Peripheral Devices Active Based on Front USB Switch Selection
IR RX	3.5 mm Mini-Stereo Jack
IR TX	3.5 mm Pluggable Phoenix Terminal Block
Front Indicators	
Power Indicator	Green LED, Solid ON when power is applied
Status	Green LED, Blinking
HDCP Indicator	Yellow LED, Blinking when Non-HDCP, Solid ON when HDCP
Link	Green LED, Solid ON when linked to HDBaseT Transmission Source
Controls and Indicators	
USB Mode Selection	Settable USB Directional Control - Enables USB Host Device or Peripheral Device For USB 2.0 Pass-through Over HDBaseT
HDMI	
Compatible Formats	HDMI, HDCP, DVI (DVI requires conversion cable)
Signal Type Support	HDMI, DVI-D (Single Link with DVI-HDMI Cable Adapter) DisplayPort++ (input only with HDMI cable adapter)
Input Signal Type	HDMI, HDCP, DVI
Data Rate (Max)	18 Gbp
Pixel Clock (Max)	Up to 600 Mhz
Progressive Resolution Support	480p up to 4096 x 2160@ 60 Hz*
HDR Support	HDR 10 Dolby Vision (with data rate under 10.2 Gbps) if supported by RX device
Color Space Support	RGB 4:4:4 , YCbCr 4:4:4, 4:2:2, and 4:2:0
HDBaseT 4K Format Support	3840x2160p@24/25/30/60 Hz, 4:4:4 4096x2160p@24/25/30 3840x2160p@50/60 Hz, 4:2:0 4096x2160p@50/60 Hz, 4:2:0
Audio Format Support	Dolby TrueHD, Dolby Digital, DTS-HD Master Audio, DTS, 2 CH L-PCM, 6 CH L-PCM, 8 CH L-PCM Dolby Digital and DTS support up to 48kHz, 5.1 channel
HDCP Support	Yes HDCP 1.4, 2.2

Specifications

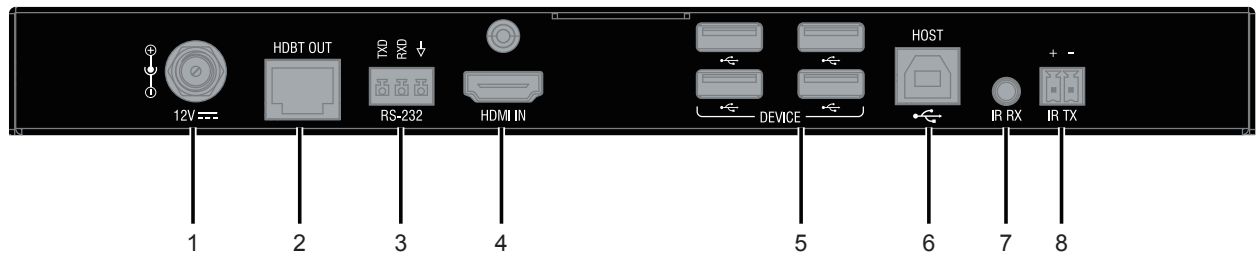
DCL-TX-4K60 Specifications (cont.)	
Signal Transport - HDBaseT	
Connector	(1) RJ-45
Supported Signal Styles	Digital video, audio, bidirectional control, USB 2.0 and power
Transport Layer Throughput (Max)	10.2 Gbps
Input Formats	Supports 4K60 4:4:4 HDMI 2.0, HDCP 2.2., embedded audio, power, bidirectional control and USB 2.0 pass-through
Twisted Pair Cable Type	Shielded Cat6, Cat6A and Cat7 HDBaseT cable runs for equipment shall only be run within a common building where common building is defined as: The walls of the structure(s) are physically connected and the structure(s) share a single ground reference

Front Panel Description



No.	Name	Description
1	USB Mode Switch	Switch to USB Host (default setting) or USB Device mode.
2	POWER LED (Green)	On: DXL-TX-4K60 is powered on. Off: DXL-TX-4K60 is powered off.
3	STATUS LED (Green)	Blinking: DXL-TX-4K60 is working properly. Off: DXL-TX-4K60 is not working properly.
4	HDCP LED (Yellow)	On: HDCP-protected content is being transmitted. Blinking: Non-HDCP protected content is being transmitted. Off: No content is being transmitted.
5	LINK LED (Green)	On: DXL-TX-4K60 and other receiver are linked. Blinking/Off: Link error or no link.
6	RS232	<p>PROGRAM (Only used for firmware upgrade)</p> <ul style="list-style-type: none"> • DXL-TX-4K60 can be upgraded. • RS232 signal cannot be passed through. <p>PASS THROUGH (Default Setting)</p> <ul style="list-style-type: none"> • RS232 signal can be passed through. • DXL-TX-4K60 cannot be upgraded.

Rear Panel Description



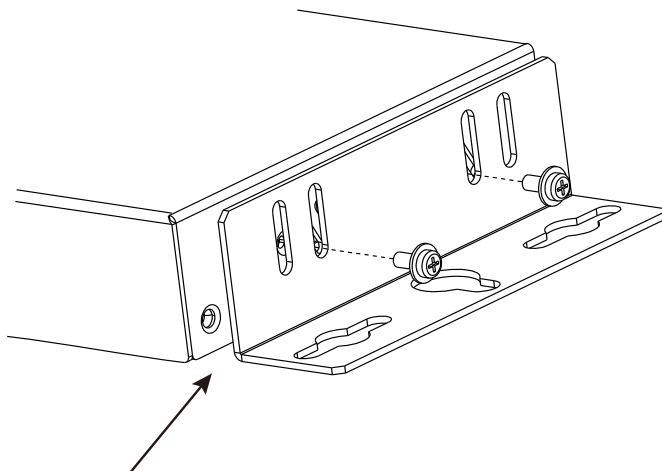
No.	Name	Description
1	DC 12V	Connect the power adapter provided.
2	HDBT OUT	Connect to the HDBT IN of an HDBT receiver with a Cat 5e/6/7 cable.
3	RS232	For RS232 pass-through
4	HDMI IN	Connect to an HDMI source using an HDMI cable.
5	USB Device	Connect to USB devices (e.g. keyboard, mouse, interactive whiteboard). Note: Ensure the USB Mode Switch on front panel is set to "USB DEVICE" position.
6	USB HOST	Connect to a USB-host device (e.g. PC). Note: Ensure the USB Mode Switch on front panel is set to "USB HOST" position.
7	IR RX	Connect the broadband IR receiver provided.
8	IR TX	Connect an IR emitter with the 2-pin phoenix male connector provided.

Installation

Note: Before installation, ensure the device is disconnected from the power source.

To install the DXL in a suitable location:

1. Position and install the mounting brackets with the four mounting screws provided.
2. Mount and secure the device to a surface or a suitable location with the mounting screws.



Attach the brackets provided to side panels of the device

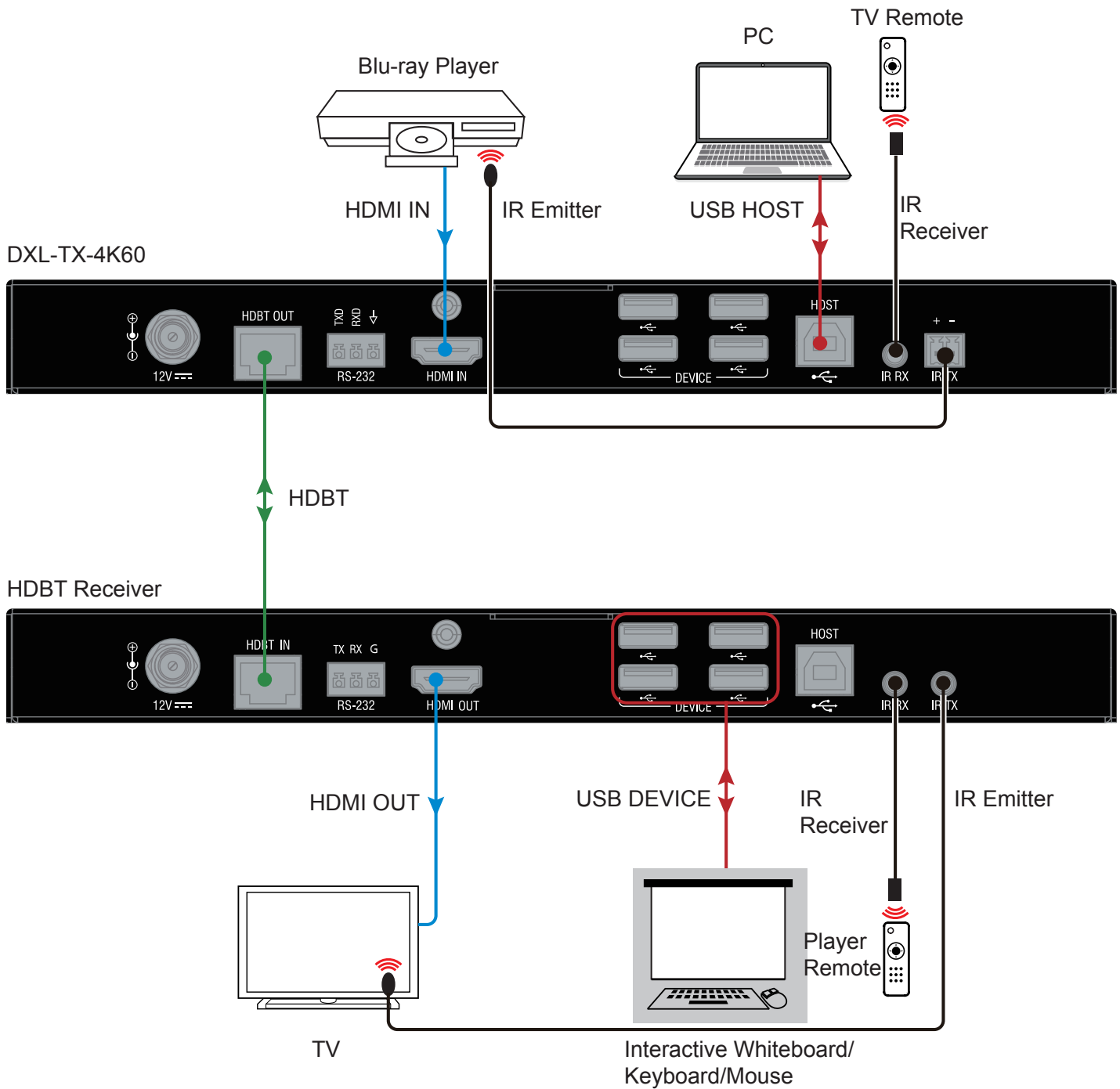
Wiring

Warning: Before wiring, disconnect the power from all devices. During wiring, connect and disconnect the cables with care.

Steps for device wiring:

1. **Connect HDMI IN**
Connect an HDMI source device to HDMI IN of the transmitter using a high-quality HDMI cable (e.g. PC, Blu-ray player, Apple TV, STB, etc.).
2. **Connect HDMI OUT**
Connect an HDMI display device to HDMI OUT of an HDBT receiver (e.g. TV, projector, LCD/LED display, etc.).
3. **Connect HDBT OUT**
Connect HDBT OUT of the transmitter to HDBT IN of the receiver with Cat 5e/6/6a/7 cable.
4. **Connect for IR Control (Only one IR receiver cable is provided)**
 - To control the source at the receiver side with the source's IR remote: Connect an IR emitter with the 2-pin phoenix male connector provided to IR TX of the transmitter DXL. Connect the IR receiver provided to IR RX of the HDBT receiver.
 - To control the display at the transmitter side with the display's IR remote: Connect the IR Receiver provided to IR RX of the transmitter DXL and an IR emitter to IR TX of the HDBT receiver.
5. **Connect USB Host/Device**
 - Switch to "USB HOST" mode on transmitter's front panel (ensure the connected receiver is switched to "USB DEVICE" mode): Connect a USB host device to HOST port of the transmitter and USB devices to USB DEVICE port of the receiver for remote KVM control.
 - Switch to "USB DEVICE" mode on transmitter's front panel (ensure the connected receiver is switched to "USB HOST" mode): Connect USB devices to DEVICE port of the transmitter and a USB host device to USB HOST of the receiver for remote KVM control.
6. **Connect RS232**
Refer to RS232 Operation section for instruction.
7. **Connect the Power Adapter provided to the transmitter.**
Note: The transmitter DXL includes a PD module and can be powered by the connected receiver with the PSE module included.
8. **Power on all attached Devices**
When all devices are connected, powered ON and set to the correct status, check if all LED indicators on the transmitter DXL are normal to ensure a successful installation. For LED indication, refer to the Panel Description section.

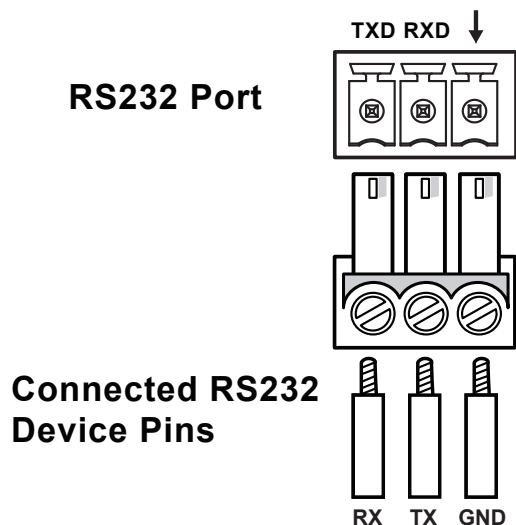
Wiring



RS232 Operation

RS232 Pinout

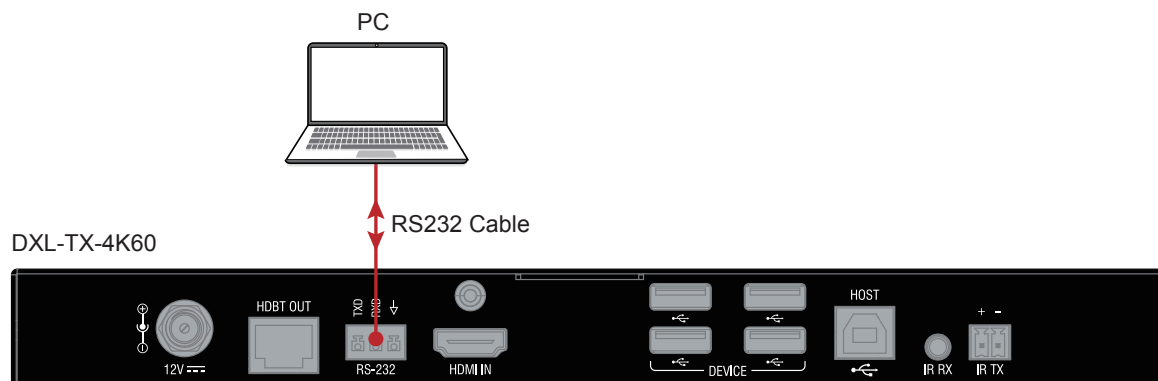
The following figure shows the RS232 pinout. Connect with the phoenix connectors provided.



Firmware Upgrade

The RS232 port of the DXL can be used for firmware upgrading.

1. Download firmware upgrading execution software to your PC.
2. Switch the "RS232" to "PROGRAM" mode on the transmitter's front panel.
3. Connect your PC to RS232 port with a RS232 cable.
4. Click to run the execution software.
5. When the upgrading is complete, power cycle the DXL-TK-4K60 OFF and ON.



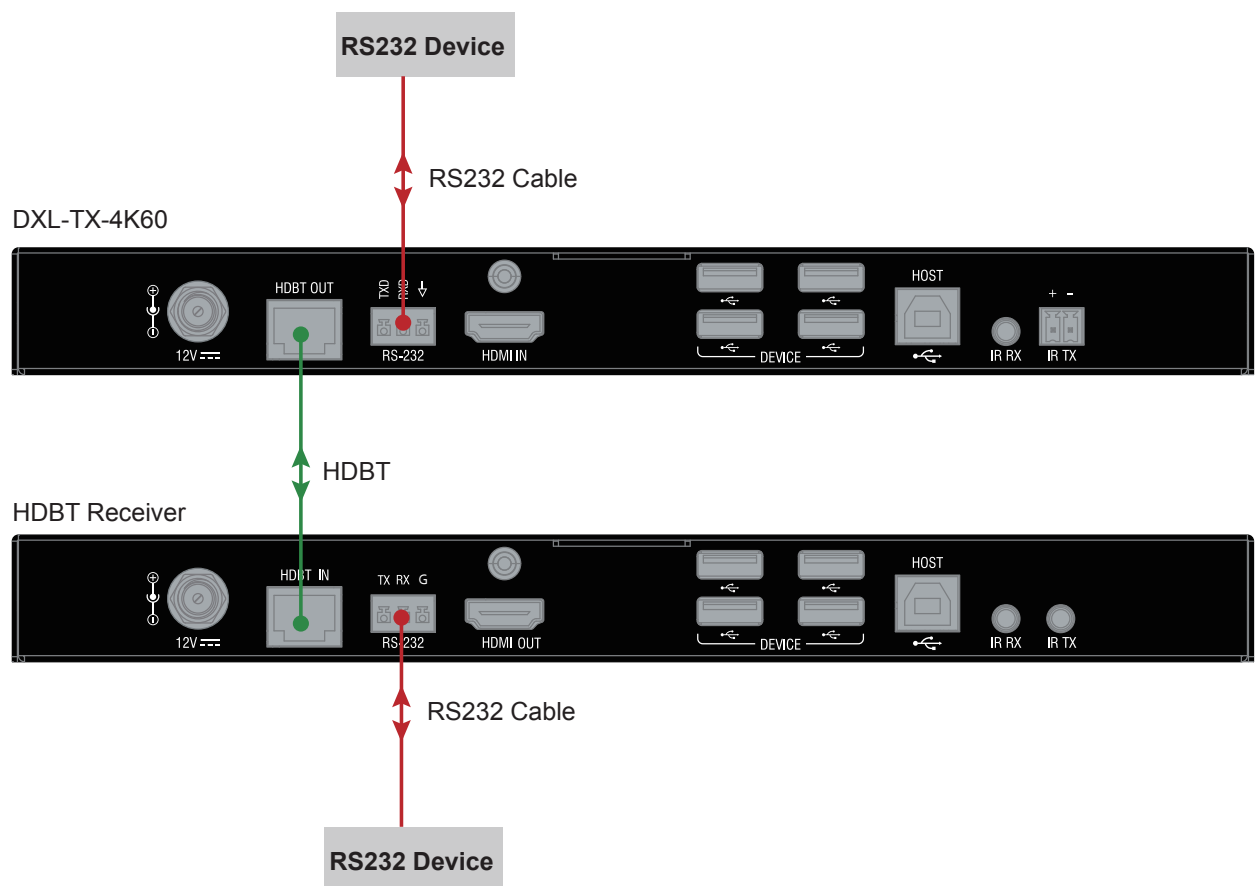
RS232 Pass-through

The RS232 port of DXL can be used for bi-directional RS232 signal pass-through between the DXL and an HDBT receiver.

To set up for RS232 pass-through:

1. Switch the "RS232" to "PASS THROUGH" mode on the transmitter's front panel.
2. Connect an RS232 Master (or Slave) Device to the RS232 port of the DXL with an RS232 cable.
3. Connect an RS232 Slave (or Master) Device to the RS232 port of an HDBT receiver with an RS232 cable.
4. Connect HDBT OUT of the DXL to HDBT IN of the HDBT receiver with a Cat 5e/6/7 cable.

When all settings are complete, an RS232 signal can be passed through bi-directionally between two RS232 devices.



Troubleshooting

Power: Ensure all devices are powered on.

Indicator: Ensure all LED indicators of the DXL are normal according to the User Manual.

Devices: Ensure display picture can be shown normally when directly connecting a source to display device..

Cable: Plug the HDMI/CatX cable in and out or try a different HDMI/CatX cable. Ensure the specific cable length is within the available transmission range according to the Specifications Section.

Compatibility: Test other source and display devices to determine correct compatibility.



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