EX-HT2-701-10

NETVIO

70M (231FT) HDMI EXTENDER OVER HDBASET, 4K60, HDR, ARC, ETHERNET, CONTROL





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Safety Information

Do not attempt to remove the product casing, as this may result in electrical shock. Repairs should not be attempted by anyone other than qualified personnel. For any service or repair needs, please contact Netvio Ltd or an authorized reseller to follow the proper service procedures. Any unauthorized repairs or the use of non-approved components will void the product warranty. For complete warranty terms and conditions, please visit: www.netvio.co.uk.

Netvio EX-HT2-701-10 is a high-performance HDBaseT extender designed for 4K60 HDR transmission up to 70 meters, and 1080p up to 100 meters, all over a single Cat5e/6/7 cable. Supporting HDMI 2.0b and HDCP 2.2, it delivers uncompressed video with zero latency, ideal for demanding AV environments.

With full 5-Play functionality, it integrates HDMI, audio, Ethernet Pass-True, control extension, and PoC into one streamlined solution.

ARC (Audio Return Channel) support allows audio to be sent from the display back to the transmitter, enabling simplified connectivity to central audio systems. Bi-directional IR and RS-232 ensure full control integration between source and display.

CABLE & CONNECTIONS

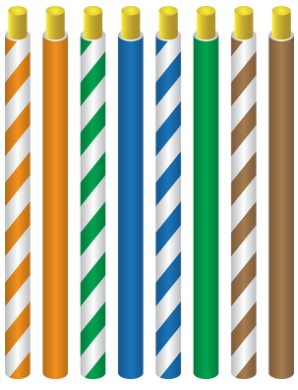
- **Important Notice on Cable Installation and Performance**
- Advertised cable distances are for reference only. Transmission distances can be influenced by various factors, including cable construction, quality, installation standards, patch panels, faceplates, and external elements such as electromagnetic interference (EMI).
- This product is designed to operate over unshielded twisted pair (UTP) Cat5e, Cat6, and Cat7 cables. When using shielded (STP) category cables, ensure that all drain wires and shielding are properly grounded.
- **RJ45 Termination Standards:**
- Follow the EIA/TIA-568-B termination standard. Do not simply wire pin-to-pin (e.g., Pin 1-1, Pin 2-2). The 568-B standard requires splitting the green pair between Pins 3 and 6.
- Maintain the twists in the Cat5e/Cat6/Cat7 cable pairs as close as possible to the point of termination.
- **Cable Installation Guidelines:**
- Avoid sharp bends or twists. Use gradual bends, with a minimum bend radius of 25mm wherever possible.
- Ensure that cables are not pulled too tightly or stretched. Excess tension can damage the cable. The maximum pulling force should not exceed 11kgf.
- Dress the cable with moderate to low pressure, ensuring the cable jacket is not pinched.
- Never splice, join, or bridge the cable, as this can cause significant transmission issues.
- **Electromagnetic Interference (EMI):**
- Keep category cables at least 300mm away from sources of EMI, such as electrical cables, transformers, and light fixtures. If necessary, cross electrical cables at right angles to minimize interference.
- **Testing and Certification:**
- After installation, ensure that the cable is thoroughly tested. A basic continuity check may not be sufficient to identify issues or certify performance.
- Finally, always verify compliance with local building and fire codes before installation.

WARRANTY

- Standard 5-Year warranty. Details available at www.netvio.co.uk/warranty

IN-THE-BOX

- EX-HT2 Series Extender
- Regionalized PSU
- IR Emitter Cable (1.5m)
- IR Receiver Cable (1.5m)
- Wall mount brackets
- 3-Pin (RS-232) connectors



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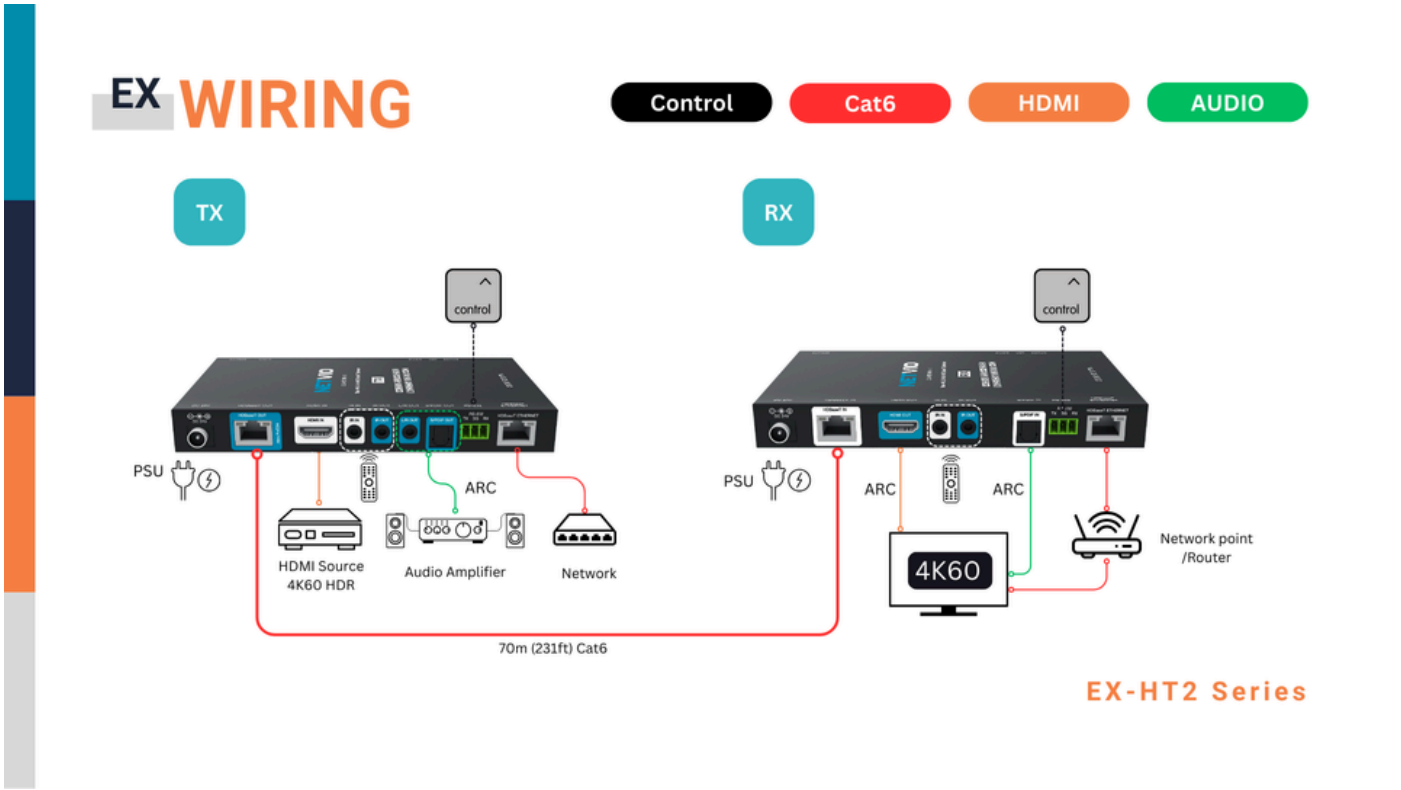
EX-HT2-701-10

FEATURES

- Supports resolutions up to 4K@60Hz 4:4:4 and HDR
- Transmits 4K up to 40m, 1080p up to 100m over a single Cat5e/6/7 cable
- HDMI 2.0b and HDCP 2.2 compliant
- 5-Play support: video, audio, control, Ethernet, and PoC
- ARC (Audio Return Channel) for audio return from display to source
- Supports Dolby Digital, Dolby TrueHD, DTS, and DTS-HD audio formats
- HDBaseT Ethernet pass-through for network connectivity at the display
- Bi-directional IR and RS-232 for seamless control integration
- Bi-directional Power over Cable (PoC) for flexible powering options
- 5-Year Warranty (2-Year advanced warranty)

MECHANICAL

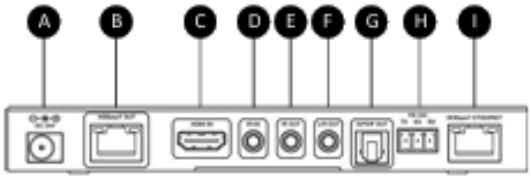
- Weights & Dimensions (each device)
  - H: 16mm | W: 163mm | D: 90mm
  - 170g
- Power Supply
  - DC 24V/1A (US/EU/UK standard, CE/FCC/UL/C-Tick certified)
- Power Consumption
  - 13W (max)
- Operating Temperature
  - 32 - 104°F / 0 - 40°C
- Storage Temperature
  - -4 - 140°F / -20 - 60°C
- Relative Humidity
  - 20 - 90% RH (no condensation)
- Product Certifications
  - CE, UKCA, FCC



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Transmitter Overview



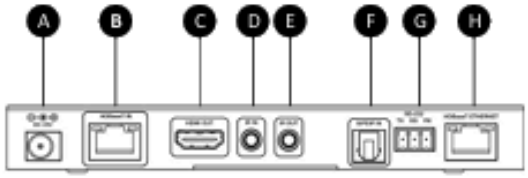


1	Power Status LED
2	ARC Status LED (Active when on)
3	S/PDIF Status LED (Active when on)
4	Audio Toggle Selector switch (press & hold)
5	Firmware update port
A	DC 24V Power Input
B	HDBaseT Output (from source)

C	HDMI (Source) Input
D	IR Capture Port
E	IR Sender Port
F	Stereo Audio Output
G	S/PDIF Output
H	RS-232 Pass Through
I	HDBaseT Ethernet Connection

Receiver Overview



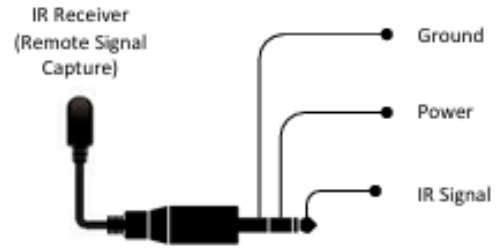


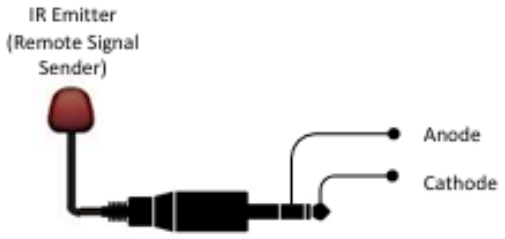
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4	Firmware update port
A	DC 24V Power Input
B	HDBaseT Input (to display)

C	HDMI (Display) Output – ARC Compatible Port
D	IR Capture Port
E	IR Sender Port
F	S/PDIF Input (from Display)
G	RS-232 Pass Through
H	HDBaseT Ethernet Connection

IR Pin Outs

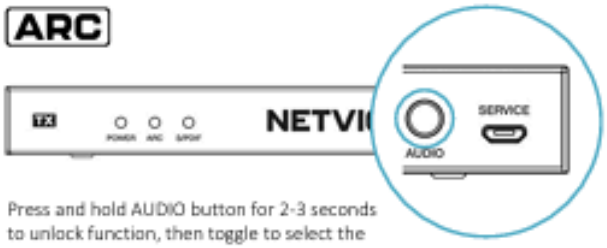
Each Netvio extender kit comes complete with all required accessories to fully maximise product features and functionality. We recommend the use of Netvio approved IR accessories to ensure guaranteed performance and compatibility. In perfect conditions, IR performance is rated at 8m from display to remote control, but understanding this will vary in differing light conditions. It may be necessary to adjust both the capture, sender device positions to achieve best performance, ensuring that remote batteries are in good condition. Should IR ports require connections to a 3rd party device, the following wiring diagrams are provided to ensure successful signal transfer.





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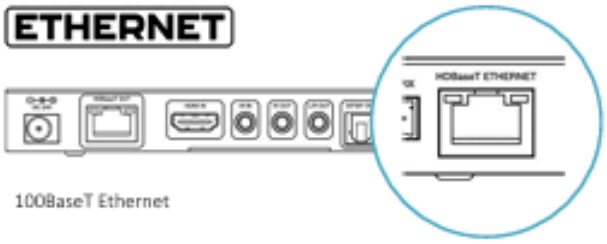
ARC



Press and hold AUDIO button for 2-3 seconds to unlock function, then toggle to select the require audio source from transmitter device.

ARC LED	S/PDIF LED	MODE
On	Off	Audio from Display HDMI ARC
Off	On	Audio from Display S/PDIF
Off	Off	Audio de-embedded from TX

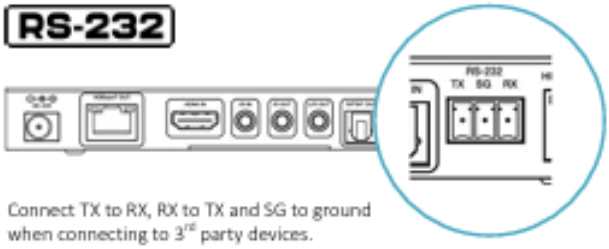
ETHERNET



100BaseT Ethernet

Use your single category cable AV network for simultaneous Ethernet extension. Ideal for stable hardwired smart TV LAN connection or adding a wireless access point.

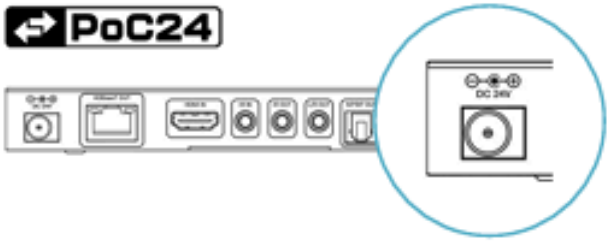
RS-232



Connect TX to RX, RX to TX and SG to ground when connecting to 3rd party devices.

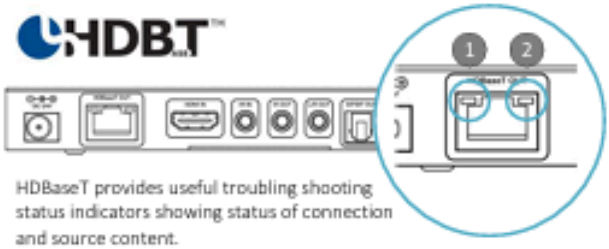
Secure hardwired bi-directional serial control between source and display. Extender kit comes complete with 3-Pin screw type connectors for ease of install.

PoC24



Ability to connect a single PSU to either transmitter or receiver adding extra convenience to your install. 24V PoC is standardardised accross all Netvio HDBaseT products.

HDBT™



HDBaseT provides useful troubling shooting status indicators showing status of connection and source content.

1
Solid | Good Connection
Flashing | Poor Connection
Dark | No Connection

2
Solid | HDMI with HDCP
Flashing | HDMI no HDCP
Dark | No Connection

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TOUBLESHOOTING

1. Check Power and Connections
Ensure both transmitter (TX) and receiver (RX) units have power (check LEDs).
Confirm the HDMI cables are securely connected and not damaged.
Use CAT6a or better cable—avoid flat or low-quality patch cables.
Verify that the CAT cable is connected to the correct ports (TX → RX).

2. Confirm Power over Cable (PoC) Behavior
If using PoC, only one side should be powered—adding power to both can cause damage.
Swap power supply to other side if unsure which unit is the PoC provider.

3. Test Signal Chain
Bypass other equipment (AVRs, switchers) and test with a direct source-to-display setup.
Try a known working source (like a Blu-ray player) and display.
Use short HDMI cables first to eliminate cable length as a problem.

4. Reset Devices
Power-cycle both extender units and connected devices.
If available, press the reset button on the HDBaseT units.

5. Check Cable Specifications and Distance
Ensure CAT cable length is within supported distance:
Up to 100m/330ft for 1080p
Typically 70m/230ft for 4K (varies by model)
Check for sharp bends, kinks, or termination issues on the cable.

6. Audio Issues
Confirm audio format compatibility (Dolby, DTS, LPCM).
Check if the source is set to output supported audio over HDMI.

8.Interference and Environmental Factors
Keep CAT cables away from high-voltage power lines, fluorescent lights, or large motors.
Shielded CAT6a cable (STP) is recommended in electrically noisy environments.

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When using IR extension kits to control your AV sources and displays, proper setup and environmental factors can significantly affect performance. Here are some key tips and common issues to check:

- **Emitter Placement (IR Emitter on Source Device):**
  - Ensure the IR emitter is securely placed directly over the IR sensor window of the source device (e.g., Blu-ray player, set-top box). This window is often near the front panel and may be difficult to see. If unsure, refer to the device's manual or test positioning while pressing remote buttons.

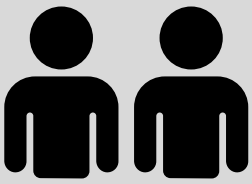
- **Receiver Position (IR Receiver or Transmitter Facing Remote):**
  - The IR receiver must be positioned in a location that has clear line-of-sight to the remote control. Avoid placing it behind TV bezels, inside cabinets, or near dark glass that might block or reflect IR signals.

- **Sunlight and Bright Lighting:**
  - Direct sunlight or strong fluorescent lighting can interfere with IR signals. Try to position the IR receiver away from windows or bright light sources. In rooms with excessive natural light, consider using a receiver with better shielding or IR filtering.

- **Signal Distance and Interference:**
  - IR extension kits typically work best within the recommended cable length. Excessive cable runs or using low-quality extension cables can degrade the signal. Also, avoid running IR cables alongside high-voltage power lines or network cables to reduce potential interference.

- **Double Check Input/Output:**
  - IR kits have specific ports for "IR IN" (receiver) and "IR OUT" (emitter). Connecting these incorrectly can prevent the system from working.

- **Test with Direct Remote Access:**
  - Before troubleshooting the IR extension, confirm the source device responds to the remote when used directly. If not, the issue may be with the remote or the device itself.



Much Easier with two people

Have one person point the remote control at the IR receiver device. They other people can be moving the IR emitter around the front panel of the source input device.

Together, you should be able to find the most responsive area. Once found secure both the receiver and emitter devices, try to avoid any movement, as this will effect the remote performance.

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TERMS OF USE

- **1. FCC Statement (U.S. Only – If Device Emits RF)**
  - This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
    - (1) This device may not cause harmful interference.
    - (2) This device must accept any interference received, including interference that may cause undesired operation.
  - Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- **2. CE Compliance Statement (EU Market)**
  - This product complies with the essential requirements and other relevant provisions of the Radio Equipment Directive (2014/53/EU), EMC Directive (2014/30/EU), and Low Voltage Directive (2014/35/EU), where applicable."
- **3. WEEE Directive (EU Market)**
  - Do not dispose of this product as unsorted municipal waste. Return it to a designated collection facility for the recycling of electrical and electronic equipment."
- **4. RoHS Compliance Statement**
  - This product complies with the Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU, as amended by Directive (EU) 2015/863."
- **5. Data Privacy / Network Disclaimer (For IP/Networked Devices)**
  - This device may store or transmit data over IP networks. It is the user's responsibility to ensure the network environment is secured and configured in accordance with IT policies."
- **6. Product Liability Disclaimer**
  - The manufacturer is not responsible for any loss of data, revenue, or property resulting from the use or misuse of this product. Installation should be performed by qualified personnel."
- **7. Environmental and Safety Use Conditions**
  - This device is intended for use in a pollution degree 2 environment. Operating temperature: 0°C to 40°C. Relative humidity: 10% to 90%, non-condensing."
- **8. Limitation of Warranty**
  - Warranty does not cover damage resulting from accident, misuse, unauthorized modification, or operation outside the product's intended use and environmental conditions. Go to www.netvio.co.uk for full warranty conditions.

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