EX-HT2-402-10

NETVIO

40M (131FT) HDMI EXTENDER OVER HDBASET, 4K60, HDR, 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.

The Netvio EX-HT2-402-10 is a high-performance HDMI extender designed to deliver uncompressed video and audio over long distances using standard CAT6 infrastructure. It extends 4K60 4:4:4 HDMI signals up to 40 meters (131 feet) and 1080p up to 70 meters (231 feet), making it ideal for conference rooms, digital signage, education, and home entertainment systems.

With 10.2Gbps HDMI bandwidth, the EX-HT2-402-10 ensures flawless image quality, full support for HDR10, Dolby Vision, and multichannel audio formats. The transmitter includes a local HDMI loop-through for easy monitoring or signal pass-through, while the receiver offers audio breakout via analog output, enabling seamless integration with amplifiers or sound systems.

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

The terms HDMI and HDMI High-Definition Multimedia interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

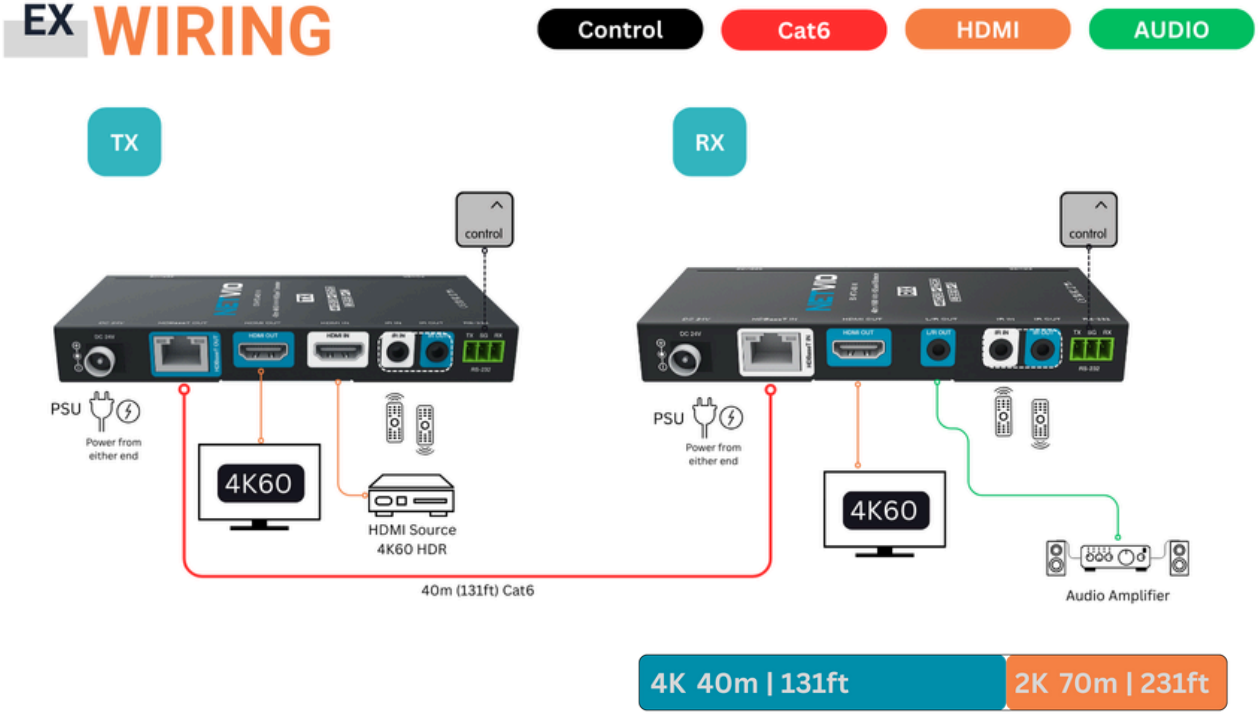
FEATURES

- Supports resolutions up to 4K@60Hz 4:4:4 and HDR
- Transmits 4K up to 40m, 1080p up to 70m over a single Cat5e/6/7 cable
- HDMI 2.0b and HDCP 2.2 compliant
- Video, Audio, Control, Power over HDBaseT.
- Supports Dolby Digital, Dolby TrueHD, DTS, and DTS-HD audio formats
- 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:18mm | W: 140mm | D: 65mm**
  - **160g**
- **Power Supply**
  - **DC 24V/1A (US/EU/UK standard, CE/FCC/UL/C-Tick certified)**
- **Power Consumption**
  - **9.36W (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**

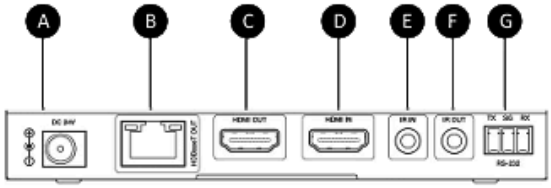
EX WIRING



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Transmitter Overview



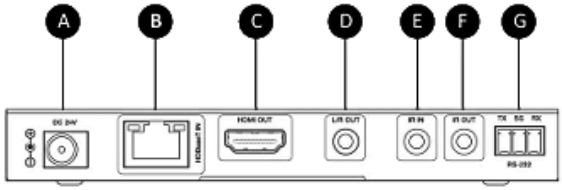


1	Power Status LED
2	Firmware update port
A	DC 24V Power In
B	HDBaseT Output (from source)
C	HDMI (Loop Out)

D	HDMI (Source) Input
E	IR Capture Port
F	IR Sender Port
G	RS-232 Pass Through

Receiver Overview



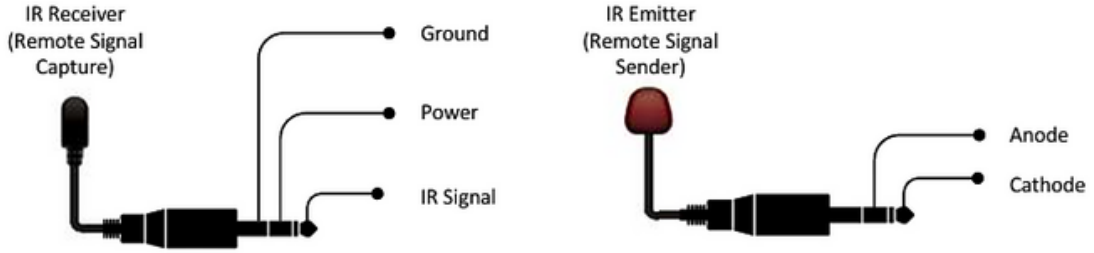


1	Power Status LED
2	Firmware update port
A	DC 24V Power In
B	HDBaseT Input (from display)
C	HDMI Output (to display)

D	Stereo Audio Output
E	IR Capture Port
F	IR Sender Port
G	RS-232 Pass Through

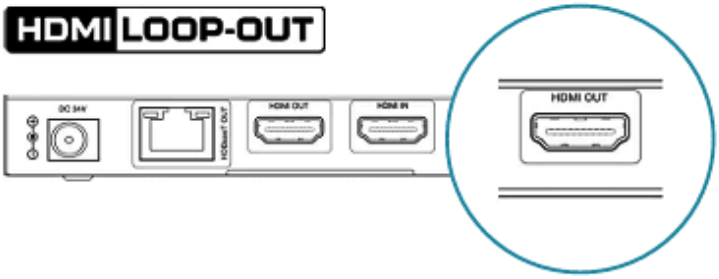
IR Pin Outs

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.



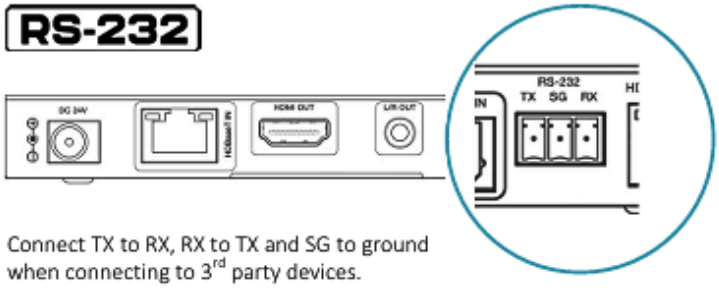
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HDMI LOOP-OUT



Full 18Gb HDMI loop-out to feed local monitor or connect to further Netvio device. Active fiber cables are perfect for additional long distance transmission.

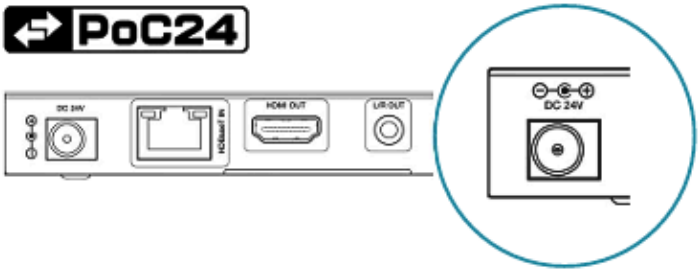
RS-232



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

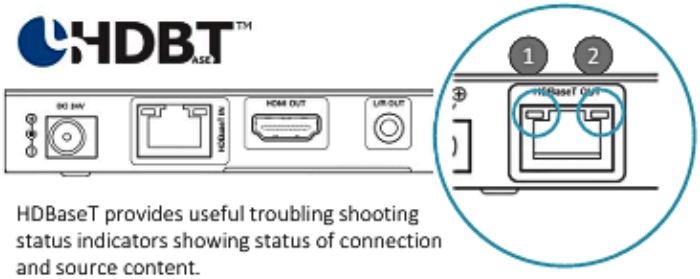
Secure hardwired bi-directional serial control between source and display. Extender kit comes complete with 3-Pin screw type connectors for ease of install.

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	2
Solid | Good Connection	**Solid** | HDMI with HDCP
Flashing | Poor Connection	**Flashing** | HDMI no HDCP
Dark | No Connection	**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 CAT6 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.

- 7.**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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TERMS OF USE

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.

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."

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."

RoHS Compliance Statement

- This product complies with the Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU, as amended by Directive (EU) 2015/863."

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."

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."

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."

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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