

EX-HT2-USB2-0201-10

NETVIO

4K60 2X1 SWITCHING HDMI/USB-C EXTENDER WITH USB2.0 KVM



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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-USB2-0201-10 is a high-performance HDMI/USB-C over HDBaseT 2.0 extender set, delivering 18Gbps bandwidth, uncompressed 4K60Hz 4:4:4 video, HDR formats including Dolby Vision, and integrated USB 2.0 extension for KVM applications.

Transmitting signals up to 100m (4K) or 150m (1080p) over a single CAT6A/7 cable, it supports Power over Cable (PoC), manual or auto input switching, advanced EDID management, and analog audio de-embedding on both TX and RX.

This guide provides the information needed for installation, configuration, and operation. We recommend reading it fully before use to ensure reliable performance.

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. However, in some cases with poor ambient grounding, it's acceptable to only connect the shield at one end (typically the switch/transmitter side) —consult an electrician when unsure.

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/Cat6a 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:

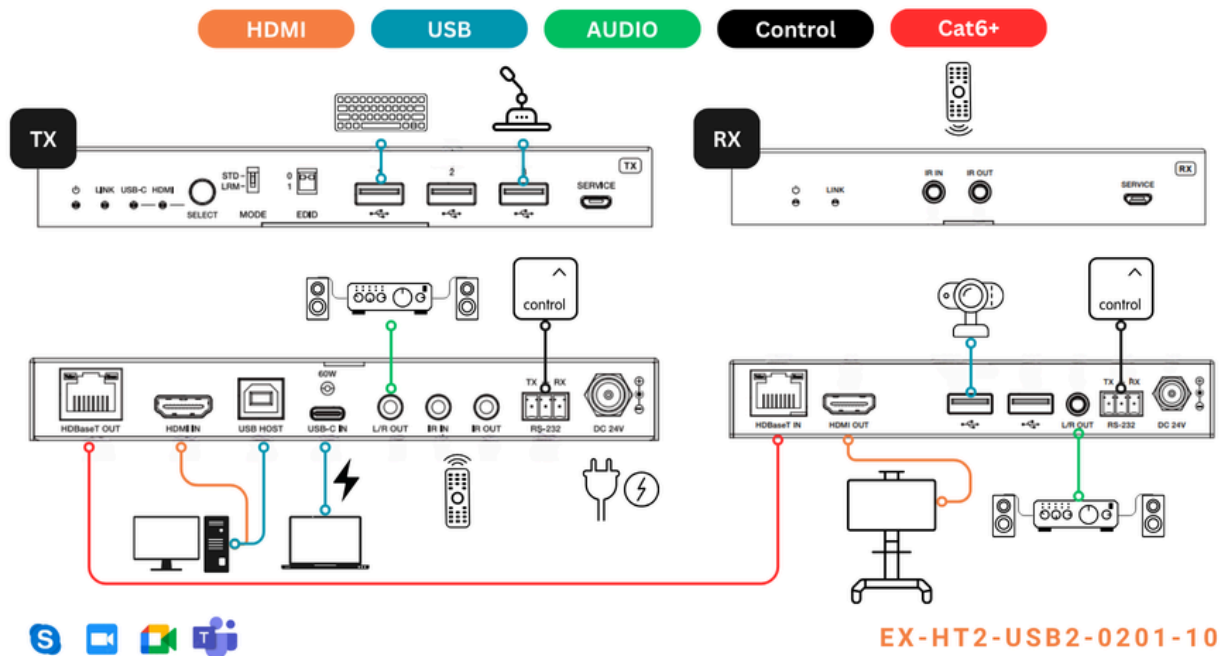
- After installation, ensure that the cable is thoroughly tested. A basic continuity check may not be sufficient to identify issues or certify performance.
- Finally, always verify compliance with local building and fire codes before installation.

WARRANTY

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

IN-THE-BOX

- 1 × EX-HT2-USB2-0201-10 Transmitter (TX)
- 1 × EX-HT2-USB2-0201-10 Receiver (RX)
- 1 × IR Blaster Cable (1.5m)
- 1 × IR Receiver Cable (1.5m)
- 2 × 3-pin Phoenix Connector (for RS-232)
- 4 × Mounting Ears
- 8 × Machine Screws (KM3×4)
- 1 × 24V / 3.75A Power Supply
- 1 × User Information



INSTALLATION NOTES

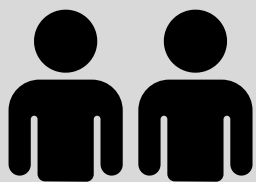
EDID DIP SWITCHES SETTINGS

- 00 - EDID information is copied from the display at the RX.
- 01 - EDID is preset to 4K@60 4:2:0 Hz 2.0CH
- 10 - EDID is preset to 1080p60 4:4:4 2.0CH
- 11 - EDID is preset to 1200p60 4:4:4

A power cycle after setting switches will be required.

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.

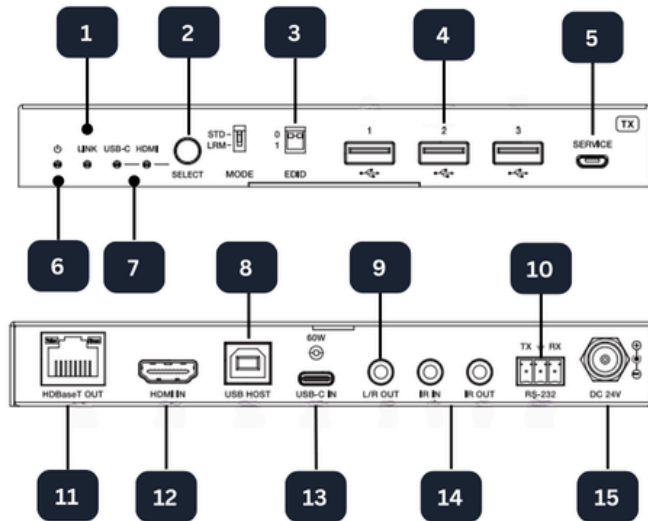


Much Easier with two people

Have one person point the remote control at the IR receiver device. The other person 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 affect the remote performance.

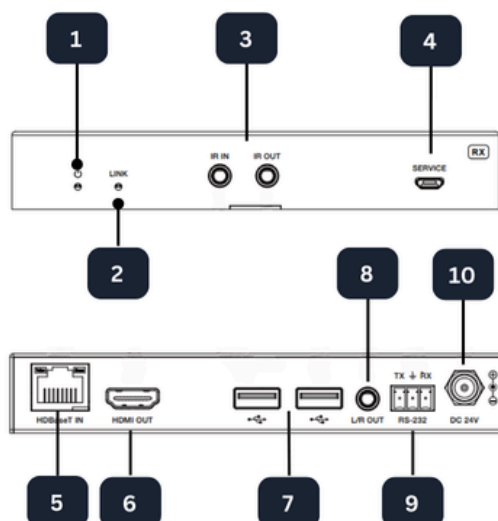
TX CONNECTIONS



- 1 Solid confirms stable connection between TX & RX
- 2 Manual switching selector button
- 3 EDID Mode : 00 Copy | 01 4K30 | 10 1080p60 | 11 1200p60
- 4 USB devices ports for peripheral devices (5V/500mA)
- 5 Firmware update & API command control port.
- 6 Power status light - Red confirming on status
- 7 Active source showing green LED
- 8 USB host port for PC connection, linked to HDMI Input port
- 9 Analog stereo audio output
- 10 RS-232 serial port & API command control
- 11 HDBaseT Output (RJ45)
- 12 HDMI input port
- 13 USB-C (with 60W charging / PSU TX connection required)
- 14 IR output/input supplied (cables supplied)
- 15 DC 24V/3.75A Power Input (power either TX or RX)

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RX CONNECTIONS



- 1 Power status - Red confirming on status
- 2 Solid confirms stable connection between TX & RX
- 3 IR output/input supplied (cables supplied)
- 4 Firmware update & API command control port.
- 5 HDBaseT category cable input (RJ45)
- 6 HDMI output (to Display)
- 7 USB devices ports for peripheral devices (5V/1000mA)
- 8 Analog stereo audio output
- 9 RS-232 serial port & API command control
- 10 RS-232 serial port & API command control

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SPECIFICATIONS

Video

- Compliance: HDMI 2.0b
- Max Bandwidth: 18Gbps
- Max Resolution: 4K@60Hz (3840×2160) RGB/YCBCR 4:4:4
- Supported Formats: 4:4:4, 4:2:2, 4:2:0
- Color Depth: 8/10/12-bit
- HDR Support: HDR, HDR10, HDR10+, Dolby Vision, HLG
- HDCP Compliance: HDCP 2.2

Audio

- Embedded Audio Formats:
- LPCM 2.0 / 2.1 / 5.1 / 6.1 / 7.1,
- Dolby Digital, Dolby Digital Plus (DD+), Dolby TrueHD
- Analog Audio Output: 3.5mm stereo (Receiver unit, de-embedded).

Transmission

- Cable Type: CAT6/6a
- Distance:
 - 4K@60Hz 4:4:4 – up to 70m
 - 1080p – up to 70m
- Power-over-Cable: Bi-directional POC (only one unit requires power)

Connections

Transmitter (TX)

- HDMI IN: 1× HDMI Type A (19-pin, female)
- HDMI OUT (Loop): 1× HDMI Type A (19-pin, female)
- CAT OUT: 1× RJ45
- USB-B: 1× PC connection
- SERVICE: 1× Micro-USB (firmware updates)
- DC 12V power input

Receiver (RX)

- CAT IN: 1× RJ45
- HDMI OUT: 1× HDMI Type A (19-pin, female)
- L/R OUT: 1× 3.5mm stereo
- USB-A: 2× peripheral ports
- SERVICE: 1× Micro-USB (firmware updates)
- DC 12V power input

Mechanical

- Dimensions (TX/RX): 90mm (W) × 68mm (D) × 22mm (H)
- Weight: TX: 170g / RX: 169g
- Housing: Metal, black finish

Environmental

- Operating Temp: 0°C ~ 40°C (32°F ~ 104°F)
- Storage Temp: -20°C ~ 60°C (-4°F ~ 140°F)
- Operating Humidity: 20% ~ 90% RH (non-condensing)
- Storage Humidity: 10% ~ 90% RH (non-condensing)

Power

- Supply: DC 12V/1A locking adapter (included)
- Consumption: Max 4.2W
- POC: Bi-directional (one PSU powers both units)

TERMS OF USE

FCC Statement (U.S. Only – If Device Emits RF)

- o 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.
- o 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)

- o 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)

- o 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

- o 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)

- o 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

- o 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

- o 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

- o 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.



Warranty Returns

If you have any concerns regarding the performance of your Netvio product, please contact our support team at support@netvio.co.uk.

If troubleshooting does not resolve the issue, we can arrange a replacement either directly or through your regional distributor.

To help us process your request quickly, please include details of where the product was purchased and provide a proof of purchase document.

Subject to fault confirmation, verification that the product has been used within its intended design scope, and confirmation of ownership period, a replacement item will be provided.