4K60 HDR HDMI Repeater with Signal Retiming - 18Gbps, HDCP 2.2

Rescue Marginal HDMI Runs Without a Cat Extender Pair: Inline Retiming, CEC & ARC Pass-Through, Optional Micro-USB Power

MPN: HDRPT4K



Restores a stable 18Gbps 4K signal with HDR support on HDMI runs that are too long or too marginal for passive cable, without pulling Cat cable or mounting a powered extender pair. HDRPT4K is a compact inline HDMI repeater, 2.56 × 0.39 × 0.94 in (65 × 10 × 24 mm) and 15 g. It sits between two HDMI cables at the wall plate, behind the display or mid-run. It draws its 5V from the HDMI source over the cable and uses 0.75W. A Micro-USB port takes 5V injection when the source drive is weak or units are cascaded. It is the right choice for conference rooms, classrooms, residential retrofits and signage fixtures, where keeping the cable already in the wall matters more than the reach of a Cat extender kit.

Signal retiming regenerates a clean signal at the repeater, so the next cable segment starts at full strength rather than carrying forward the jitter of the last one. The repeater is HDMI 2.0 and HDCP 2.2 compliant and backward compatible with HDMI 1.x and HDCP 1.x. It supports up to 4096×2160@60Hz (4:4:4, 8-bit), HDR sources and 12-bit Deep Color up to 1080p@60Hz. LPCM up to 8 channels, Bitstream and HD Bitstream audio pass unchanged. CEC and ARC bypass keep display control and audio return to the AVR or soundbar working across the run, and there are no settings to configure. The strongest differentiator is a documented cascade of up to four units, or five cable segments, each rated to 16 ft (4.9 m) at 4K on 24AWG cable. That turns a short HDMI chain into a planned, repeatable fix. Power injection on the first and last unit is recommended in a cascade.

1 PRODUCT OVERVIEW

DESIGNED FOR

Conference rooms with a table-to-display run, classrooms with a lectern-to-projector run, home theaters and media rooms fed from an equipment closet, and digital signage and retail fixtures. It also fits lobbies, worship spaces and event rooms where HDMI copper has to go further than one cable can carry it, and the field kit for rental, staging and service callbacks. It is built for any room where the HDMI cable is already in the wall and the room is not being opened again.

THE CHALLENGE

Many HDMI runs were pulled for 1080p and 10.2Gbps. When 4K60 HDR sources arrive at 18Gbps, the same cable starts to sparkle, blank, drop the HDCP 2.2 handshake or fall back to a lower mode. The run might be a few feet past the cable's rating, or an older cable sealed behind drywall, or fed by a source with weak 5V. Either way, the usual fix is a new Cat pull and a powered extender pair at each end, or a new active optical cable. Both mean reopening walls or conduit, more labour on site and a return visit for what should be a punch-list item.

THE KANEXPRO ADVANTAGE

- Retiming regenerates a clean 18Gbps signal inline, so the cable already in the wall can carry 4K60 (4:4:4, 8-bit), HDR and HDCP 2.2 content.
- A documented cascade of up to four units, or five cable segments, lets you plan a longer HDMI chain rather than hope one booster reaches.
- CEC and ARC bypass keep display power-on, source switching and audio return to the AVR or soundbar working through the repeater.
- It runs on the source's HDMI 5V at 0.75W, so no outlet is needed at the display end. Micro-USB 5V injection covers weak sources and cascades.
- At 65 × 10 × 24 mm and 15 g, it is a compact inline design.

2 PRODUCT POSITIONING

> ***HDRPT4K is the inline 18Gbps HDMI repeater for integrators who need to rescue a marginal or over-length 4K60 HDR run without pulling new cable or installing a powered extender pair.***

3 APPLICATIONS

Conference room table-to-display run

A 40–50 ft HDMI run from a table cubby to a wall display, installed years ago for 1080p, now drops out with 4K60 laptops and room PCs. One HDRPT4K at the display end or mid-run retimes the signal and restores a stable HDCP 2.2 handshake. CEC pass-through keeps display auto-on working. No new cable pull, no second box to mount.

Classroom lectern to projector

In higher-ed and K-12 rooms the lectern-to-ceiling-projector run often passes 30 ft through plenum and conduit. Inline retiming lets the facilities team move to 4K laser projectors on the cable already in place. Where the lectern source gives weak 5V, the Micro-USB port takes local power, so the room is not reopened.

Residential retrofit, equipment closet to living-room display

A homeowner upgrades to a 4K HDR display and streaming source, and the HDMI cable buried in the wall cannot hold 18Gbps. HDRPT4K goes inline at the wall plate, passes HDR and HD bitstream audio, and keeps ARC working so the display can return audio to the AVR. The integrator avoids cutting drywall.

Long chains in large spaces

Lobbies, worship spaces and event rooms sometimes need HDMI copper beyond a single cable's reach where no Cat cable exists. Up to 4 units in cascade (5 segments) build a longer chain, with power injection on the first and last unit as the manual recommends. Each segment is limited to 16 ft at 4K on 24AWG cable, so plan the chain to that figure.

Digital signage and retail fixtures

A media player is mounted in a back room or ceiling space and the display sits on a fixture or menu board. The 65 × 10 × 24 mm, 15 g unit fits behind a display or inside a fixture. It powers from the HDMI line at 0.75W, so there is no extra outlet to find.

Rental, staging and service kits

A field tech carrying a few units can fix a marginal HDMI run on site: event stages, temporary presentation setups, or a punch-list callback. Bus power with optional Micro-USB injection means it works off almost any source or a USB power bank port.

4 WHO THIS IS FOR

Corporate meeting spaces, K-12 and higher-ed classrooms · **Residential custom install** · **Hospitality** · **Signage** · **Worship**

Ideal User	lead installer or project tech. Buys from the van stock list or a distributor counter, and adds it to an order to fix a failing run on site. A secondary persona is the system designer who specifies it for a planned run in the 25–80 ft band.
Project Types	corporate meeting spaces, K-12 and higher-ed classrooms, residential custom install, hospitality, signage, worship.
Typical Buyer	the installer or operations manager. It is a line item, not a design decision, and well under any approval threshold.

5 FREQUENTLY ASKED QUESTIONS

Q: When should I use HDRPT4K instead of a Cat-based HDMI extender?

Use HDRPT4K when an HDMI cable is already in place, or the run is short enough that pulling Cat cable and mounting two powered boxes is not justified. It goes inline on the existing HDMI cable and retimes the signal so the next segment starts clean. For long runs, or where new cable is being pulled anyway, a KanexPro HDMI extender over Cat6 is the better fit.

Q: How far can I extend a 4K signal?
At 4K, each cable segment is rated up to 16 ft (4.9 m), verified with high-quality 24AWG HDMI cable. Up to four HDRPT4K units can be cascaded, which gives five cable segments in total. Cable quality affects real-world distance and cascading, so plan with good-quality 24AWG cable.

Q: Does it support 4K60 HDR and HDCP 2.2 content?
Yes. HDRPT4K passes 18Gbps signals up to 4096×2160@60Hz (4:4:4, 8-bit), supports HDR sources, and is HDCP 2.2 compliant while staying backward compatible with HDCP 1.x and HDMI 1.x sources and displays. It also supports 12-bit Deep Color up to 1080p@60Hz.

Q: Does it need a power supply?
In most installations, no. It draws 5V from the HDMI source over the cable and uses 0.75W. If the source provides weak 5V, or you are cascading units, connect a 5V supply to the Micro-USB port. When cascading, power injection on the first and last unit is strongly recommended.

Q: Will CEC control and ARC still work through it?
Yes. HDRPT4K passes CEC and ARC through, so display power-on, source switching and audio return from the display to the AVR or soundbar keep working across the repeater.

Q: Which audio formats pass through?
LPCM up to 8 channels, Bitstream and HD Bitstream audio pass through unchanged, so surround and high-resolution formats reach the AVR or display as sent by the source.

Q: Where does it mount, and how is documentation provided?
The unit measures 2.56" × 0.39" × 0.94" (65 × 10 × 24 mm) and weighs 15 g, so it fits behind a display, inside a wall box or in a fixture. Documentation is digital.