4K60 1×8 HDMI Distribution Amplifier over CAT6 — 60m/197ft

Compact 4K60 Splitter Kit with PoC, HDR Pass-Through & Audio Extraction — Eight Outputs

MPN: SP-HDPOC1X8

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1. Introduction

Splits one 4K60 4:4:4 HDMI source to eight CAT-connected displays at distances up to 60m in a compact compact enclosure that fits behind displays, inside furniture, or in shallow rack spaces. The SP-HDPOC1X8 includes four PoC-powered receivers — no separate power adapters, no configuration — just connect CAT cables and go.

Purpose-built for classrooms, retail signage, worship overflow, and residential multi-room setups where cable runs stay under 60m and simplicity matters more than enterprise control features. Supports HDMI 2.0, HDCP 2.2, 3D, HDR10/HDR10+/HLG/Dolby Vision, and 7.1-channel lossless audio. Coaxial and 3.5mm audio extraction on the transmitter feeds amplifiers or powered speakers. A rotary EDID dial eliminates HDMI handshake issues across mixed displays, and the Micro-USB SERVICE port provides ASCII command access for advanced integrators. CE/FCC/UL certified.

2. Features

- HDMI 2.0, HDCP 2.2/1.x, DVI 1.0 compliant — 18Gbps bandwidth, 4K2K@50/60Hz 4:4:4
- 4K60 at 35m, 4K30 at 50m, 1080p at 60m/197ft per receiver over a single CAT6/6a/7 cable
- Compact compact TX (300×100×28mm) + 4 ultra-small receivers (88×61×18mm) — fits behind displays or in shallow racks
- 3D, HDR10, HDR10+, HLG, and Dolby Vision pass-through on all outputs
- 7.1-channel lossless audio pass-through — LPCM, Dolby TrueHD, DTS-HD Master Audio, DSD
- Coaxial (RCA) + analog (3.5mm) audio extraction on the transmitter for amplifier or speaker feeds
- One-way IR pass-through — control the source device from any receiver location
- Rotary EDID dial with 27+ presets resolves handshake issues; Micro-USB SERVICE port for ASCII commands (115200 baud)
- Single 12V/2.5A adapter powers the TX and all eight receivers via PoC — 25W total, zero configuration

3. Package Contents

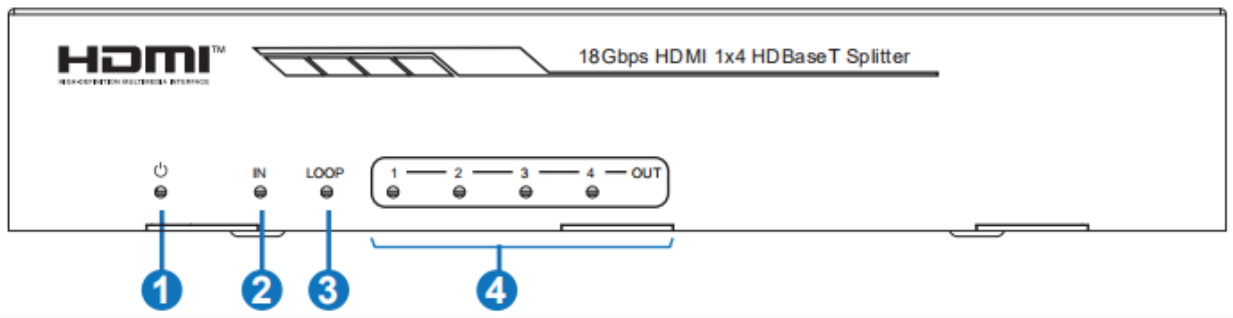
- 1× 18Gbps HDMI 1×8 Premium Extender Splitter
- 4× Premium Extender Receiver
- 5× IR Blaster Cable (1.5m)
- 5× 0K–60KHz IR Receiver Cable (1.5m)
- 5× 3-pin Phoenix Connector
- 1× 5-pin Phoenix Connector
- 10× Mounting Ears
- 1× 24V/3.75A DC Locking Power Adapter
- 1× User Manual

4. Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2/1.x
Video Bandwidth	594 MHz / 18 Gbps
Video Resolution	Up to 4K2K@60Hz 4:4:4
Color Depth	8/10/12-bit
Color Space	RGB 4:4:4, YCbCr 4:4:4 / 4:2:2 / 4:2:0
HDR Formats	HDR, HDR10+, HLG, Dolby Vision
HDMI Audio	LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, TrueHD, DD+, DTS-ES, DTS-HD MA, DTS-X
Coaxial Audio	PCM 2.0, Dolby Digital/Plus, DTS 2.0/5.1
Analog Audio	PCM 2.0CH
ESD Protection	±8kV (air-gap) / ±4kV (contact)
Extension Distance	
4K2K@60Hz	Up to 35m / 394ft over CAT6/6a/7
1080p@60Hz	Up to 60m / 197ft over CAT6/6a/7
Mechanical	
TX Dimensions	440mm (W) × 130mm (D) × 40mm (H) — 1.62kg
RX Dimensions	88mm (W) × 61mm (D) × 18mm (H) — 155g
Power Supply	AC 100–240V → DC 24V/3.75A (locking) • 25W • PoC to RX
Environment	0–40°C • 20–90% RH • CE / FCC / UL

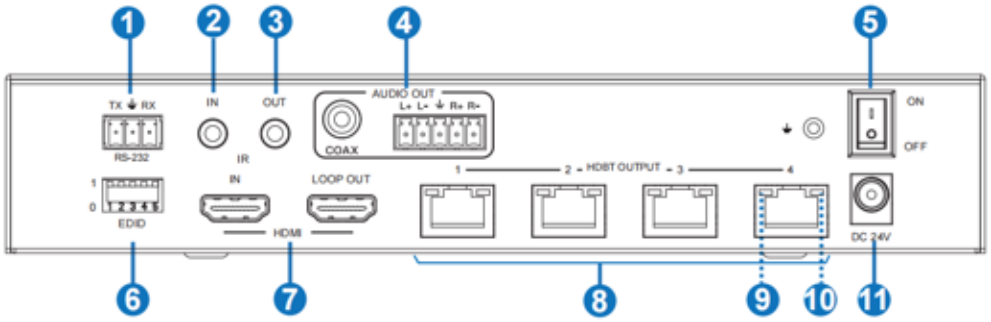
5. Operation Controls & Functions

5.1 Transmitter — Front Panel



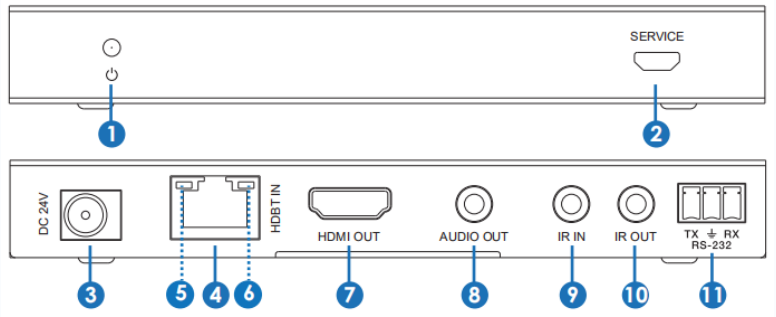
NO.	NAME	FUNCTION DESCRIPTION
1	POWER LED	Red when device is powered on.
2	IN LED	Green when HDMI IN port connects an active source.
3	LOOP LED	Green when HDMI LOOP OUT connects an active display.
4	OUT (1–8) LED	Green when corresponding HDBT OUTPUT connects a receiver.

5.1 Transmitter — Rear Panel



NO.	NAME	FUNCTION DESCRIPTION
1	RS-232	3-pin phoenix connector for firmware update, RS-232 command control, and serial command control to receivers.
2	IR IN	Connect IR receiver cable. Signal emits from IR OUT on each receiver.
3	IR OUT	Connect IR blaster cable. Signal received from IR IN on each receiver.
4	AUDIO OUT (COAX, L/R)	Coaxial and balanced audio output — connect to amplifier or speaker.
5	POWER Switch	Power on/off switch.
6	EDID DIP Switch	5-pin DIP switch for EDID mode selection. See Section 6.
7	HDMI IN / LOOP OUT	IN: Connect HDMI source. LOOP OUT: Connect local display.
8	HDBT OUTPUT (1–8)	Connect to HDBT IN on each receiver via CAT cable.
9	Connection Indicator (Green)	Illuminating: good connection. Flashing: poor connection. Dark: not connected.
10	Data Indicator (Orange)	Illuminating: HDMI with HDCP. Flashing: HDMI without HDCP. Dark: no signal.
11	DC 24V	24V/3.75A locking power adapter input. Powers TX and all receivers via PoC.

5.2 Premium Extender Receiver



NO.	NAME	FUNCTION DESCRIPTION
1	Power Indicator	On when receiver is powered (via PoC or local PSU).
2	SERVICE Port	Mini-USB port for firmware update.
3	DC 24V	Optional local power input (24V/1A). Not required when PoC is active.
4	Connection Indicator	Green: good link. Flashing: poor link. Dark: no connection.
5	Data Indicator	Orange: HDMI+HDCP. Flashing: HDMI only. Dark: no signal.
6	HDBT IN	RJ45 input — connect to HDBT OUTPUT on transmitter via CAT cable.
7	HDMI OUT	Connect to display (TV, projector, monitor).
8	AUDIO OUT	3.5mm stereo mini-jack audio output.
9	IR IN	Connect IR receiver cable. Signal passes to TX IR OUT.
10	IR OUT	Connect IR blaster cable. Signal received from TX IR IN.
11	RS-232	3-pin phoenix connector for serial command control to/from transmitter.

6. EDID Mode

Use the 5-pin EDID DIP switch on the transmitter rear panel to select the desired EDID profile:

DIP (5-PIN)	EDID DESCRIPTION
11111	1080P, Stereo Audio 2.0
11110	1080P, Dolby/DTS 5.1
11101	1080P, HD Audio 7.1
10110	4K2K@30Hz 4:4:4, Stereo 2.0
10101	4K2K@30Hz 4:4:4, Dolby/DTS 5.1
10100	4K2K@30Hz 4:4:4, HD Audio 7.1
10011	4K2K@60Hz 4:2:0, Stereo 2.0
10010	4K2K@60Hz 4:2:0, Dolby/DTS 5.1
10001	4K2K@60Hz 4:2:0, HD Audio 7.1
10000	4K2K@60Hz 4:4:4, Stereo 2.0
01111	4K2K@60Hz 4:4:4, Dolby/DTS 5.1
01110	4K2K@60Hz 4:4:4, HD Audio 7.1
01101	4K2K@60Hz 4:4:4, Stereo 2.0 HDR
01100	4K2K@60Hz 4:4:4, Dolby/DTS 5.1 HDR
01011	4K2K@60Hz 4:4:4, HD Audio 7.1 HDR
01010	COPY from LOOP OUT
01001	COPY from HDBT OUT 1
01000	COPY from HDBT OUT 2
00111	COPY from HDBT OUT 3
00110	COPY from HDBT OUT 4
00000	RS-232 / PC Control Mode

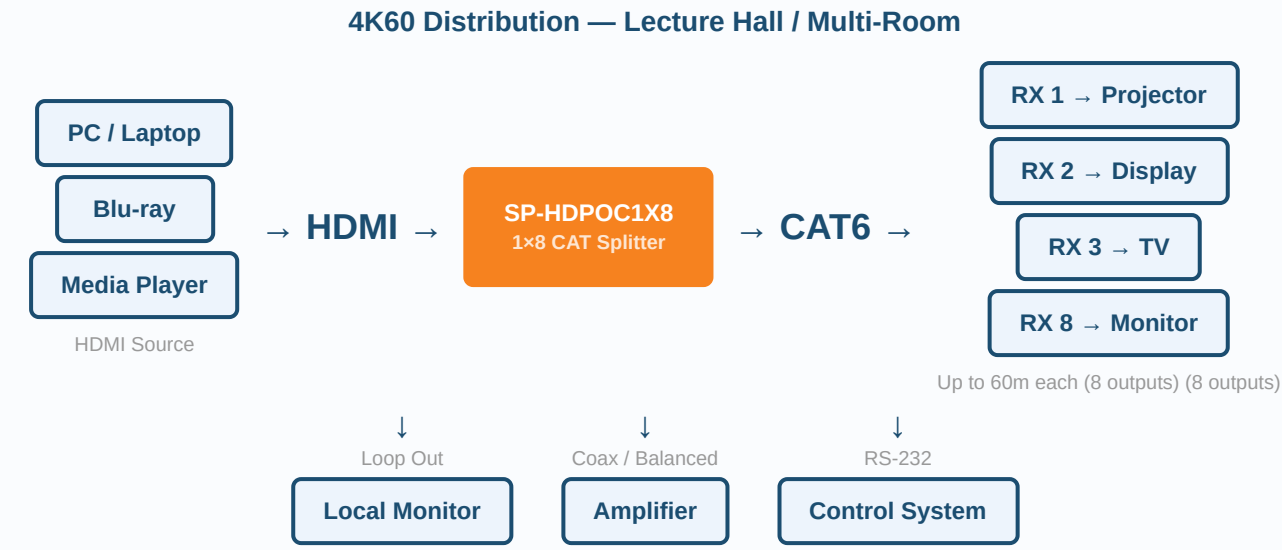
RS-232 Serial Port Settings

Baud rate: 115200 • Data bits: 8 • Stop bits: 1 • Parity: None

Key Commands

COMMAND	FUNCTION	EXAMPLE
s power z!	Power on/off (z=0 off, z=1 on)	s power 1!
s reboot!	Reboot device	s reboot!
r type!	Get device model	r type!
r status!	Get full device status	r status!
r link out y!	Connection status of output y (0=all, 1–4, 5=loop)	r link out 1!
s hdbt y stream z!	Enable/disable HDBT output y stream (z=0/1)	s hdbt 1 stream 1!
s hdbt y hdcp z!	Enable/disable HDBT output y HDCP (z=0/1)	s hdbt 0 hdcp 1!
s edid in from z!	Set input EDID (z=1–27)	s edid in from 21!
s rs232 bypass hdbt y!	Route RS-232 to HDBT output y (0=all, 5=NC)	s rs232 bypass hdbt 1!
s reset!	Factory reset	s reset!

7. Application Example



How it works: Connect one HDMI source to the TX input. The signal is distributed to eight receivers over individual CAT6/6a/7 cables at up to 35m (4K60) or 60m (1080p). Each receiver outputs HDMI to a local display. The TX loop output connects a local monitor for source monitoring. Audio is de-embedded via coaxial (RCA) and balanced (phoenix) outputs on the TX.
PoC: All receivers are powered by the TX over the CAT cable — no local power adapters needed.
Control: RS-232 and one-way IR pass through between TX and each RX for remote device control and EDID management.

8. Troubleshooting

Q: No video on one or more displays?
A: Verify CAT6/6a/7 STP cable is used (solid-core copper, not CCA). Check the connection indicator LEDs on both TX and RX. If mixed-resolution displays, adjust the EDID DIP switch to match the lowest common resolution.

Q: No audio from the coaxial/balanced output?
A: Confirm the source device is outputting audio over HDMI. For Dolby/DTS, set EDID to a mode that includes 5.1 or 7.1 audio (e.g., DIP 01111 for 4K60 4:4:4 + Dolby/DTS 5.1).

Q: PoC not powering a receiver?
A: Verify the CAT cable run does not exceed the rated distance. Try a different CAT port on the TX. If the cable run is near maximum, use a local 24V/1A power adapter on the RX as a fallback.

Q: RS-232 commands not responding?
A: Confirm serial settings: 115200 baud, 8 data bits, 1 stop bit, no parity. Verify the 3-pin phoenix connector wiring (TX, RX, GND). Commands are case-sensitive and must end with !