

HD1800K

4K60 1×9 HDMI HDBaseT Distribution Extender

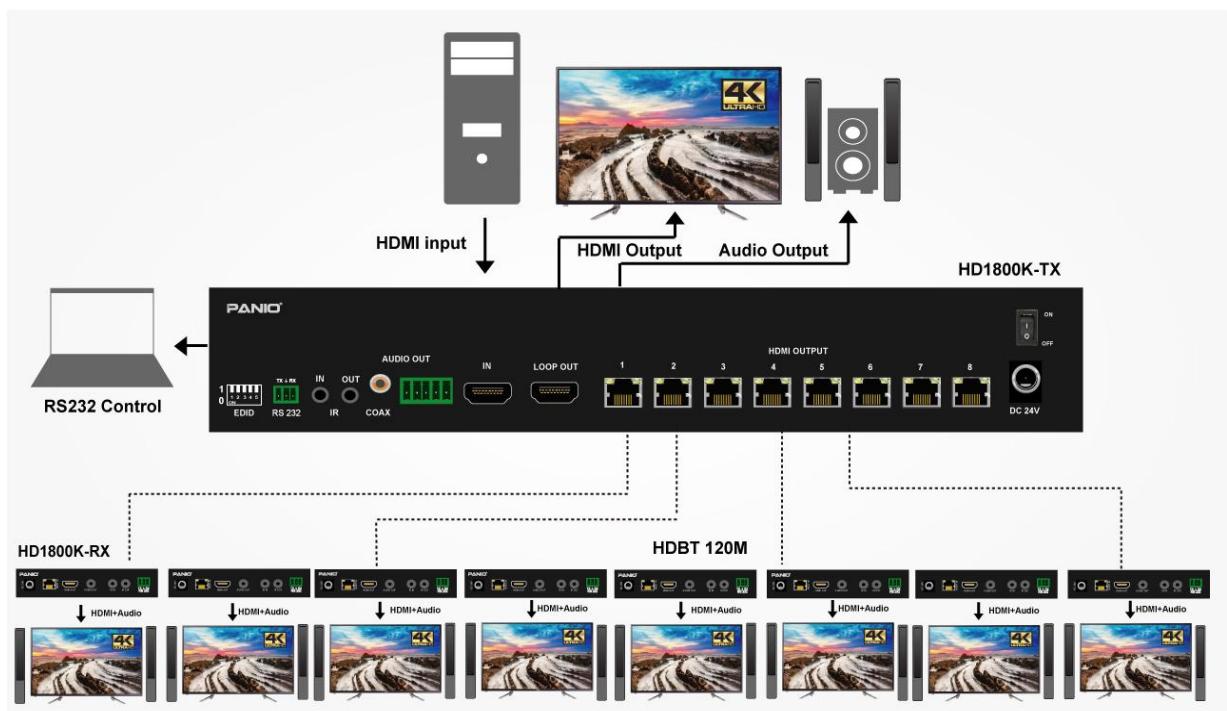
4K@60Hz 4:4:4, HDMI 2.0 + HDCP 2.2, 18Gbps, 120 m CAT, POC + IR + RS-232

Product Overview

PANIO HD1800K is a professional 1-input, 9-output HDMI distribution and extension system for synchronized multi-screen AV installations. One transmitter provides one local HDMI loop-out and eight HDBaseT RJ45 outputs for connection to eight receivers, distributing the same source to nine displays.

The system supports video up to 4K@60Hz YUV 4:4:4 with 18Gbps bandwidth, HDMI 2.0, HDCP 2.2 / 1.4, HDR10+, HLG, and Dolby Vision. It extends 4K60 signals up to 120 meters or 1080p60 signals up to 150 meters over CAT6 cable, while POC powers the receivers from the transmitter.

Diagram



Product Features

- **1×9 Synchronous Distribution:** One local HDMI output plus eight HDBaseT receiver outputs provide nine synchronized display channels from one source.
- **4K60 Ultra HD Performance:** Supports 3840×2160@60Hz YUV 4:4:4, 18Gbps bandwidth, HDR10+, HLG, and Dolby Vision.
- **120 m / 150 m HDBaseT Extension:** Transmits 4K60 up to 120 m or 1080p60 up to 150 m over direct CAT6 cable links.
- **Eight Remote Receiver Stations:** Eight RJ45 outputs connect to eight HD1800K-R receivers for reliable remote HDMI distribution.
- **POC Single-Side Power:** The supplied 24V / 3.75A adapter powers the transmitter and all receivers through the CAT cables.
- **Independent Audio De-embedding:** Coaxial and analog L/R audio at the transmitter, plus 3.5 mm audio at each receiver, support external sound systems.
- **Bidirectional IR Routing:** Wide-band IR routing allows source and display control from local or remote locations.
- **RS-232 Control Extension:** Serial control signals can be transmitted together with HDMI over the HDBaseT links.
- **EDID Management:** Built-in EDID functions improve source and display compatibility for professional installations.
- **Rack-Mount Hardware Design:** The 19-inch rack-compatible transmitter operates without additional software installation.

Specification

Parameter	Specification
Model	HD1800K (1 × transmitter + 8 × receivers)
Product Type	4K60 1-input, 9-output HDMI / HDBaseT distribution extender
Transmitter Ports	1 × HDMI input, 1 × HDMI loop-out, coaxial audio, L/R audio, 2 × IR, RS-232, 8 × HDBaseT RJ45
Receiver Ports	HDMI output, 3.5 mm audio output, 2 × IR, RS-232, HDBaseT RJ45 input
Video / Standards	Up to 4K@60Hz YUV 4:4:4; HDMI 2.0; HDCP 2.2 / 1.4; 18Gbps
Transmission Distance	4K60: up to 120 m; 1080p60: up to 150 m over CAT6
HDMI Audio	LPCM 2.0 / 2.1 / 5.1 / 6.1 / 7.1; Dolby and DTS HD formats
Control / EDID	Bidirectional IR, RS-232 extension, and EDID management
ESD Protection	±8 kV air-gap discharge; ±4 kV contact discharge
Power	DC 24V / 3.75A; receivers powered from the transmitter by POC

Interface & System Architecture

Interface	Description
TX Video	1 × HDMI input and 1 × local HDMI loop-out
TX HDBaseT Outputs	8 × RJ45 outputs for eight HD1800K-R receivers
TX Audio / Control	Coaxial audio, L/R audio, 2 × IR, RS-232, and EDID controls
RX Video / Audio	1 × HDMI output and 1 × 3.5 mm analog audio output per receiver
RX Control	2 × IR ports and 1 × RS-232 port per receiver
System Capacity	One source distributed to one local display and eight remote displays

Distribution & Extension Functions

- **Flexible 1×9 Distribution:** Use the local loop-out and eight receiver stations for synchronized multi-screen deployment.
- **Direct Long-Distance HDBaseT:** Connect each transmitter port directly to a receiver; network switches are not supported.

Mechanical & Environmental

Parameter	Specification
Transmitter Dimensions	440 × 130 × 40 mm
Receiver Dimensions	140 × 65 × 18 mm
Power Input	DC 24V / 3.75A at transmitter
Transmitter Weight	1.62 kg
Receiver Weight	246 g each
HDMI Cable Limit	Certified HDMI 2.0 cable, up to 5 m at input and output

Package Contents

- 1 × HD1800K-T Transmitter
- 8 × HD1800K-R Receivers
- 1 × 24V / 3.75A Power Adapter
- 18 × IR Cables
- 9 × 3-Pin Phoenix RS-232 Cables
- 1 × 5-Pin Phoenix Audio Cable
- 1 × Rack Accessory Kit and 1 × User Manual

Applicable Scenarios

- **Retail Digital Signage & Showrooms:** Distribute one 4K source to nine synchronized commercial displays.
- **Conference & Training Rooms:** Use the local output for preview while feeding eight remote presentation displays.
- **Control & Monitoring Rooms:** Deliver the same high-resolution source to multiple operator or status displays.
- **Education & Lecture Halls:** Extend video, audio, IR, and RS-232 control across long CAT6 cable runs.
- **Hospitality & Public Information:** Deploy synchronized content with independent local and remote audio outputs.

Installation Recommendations

- Use certified HDMI 2.0 cables and keep the input and output HDMI cable length within 5 meters.
- Use full 8-core CAT6 network cable for 4K signal transmission.
- Connect the transmitter directly to each receiver; do not route the links through a network switch.
- Do not daisy-chain uncertified switches, splitters, or converters without technical approval.
- Use only the original certified 24V / 3.75A power adapter.

PANIO International Co., Ltd.

Web: www.panio.com.tw Email: sales@panio.com.tw