

PANIO HD1400K

4K60 HDMI 1x5 Distribution Extender

1 Local HDMI + 4 HDBaseT Outputs, 120m 4K60, PoC, Audio De-embedding, IR & RS-232

Product Overview

The HD1400K is a professional 1-input, 5-output HDMI distribution extender. It sends one 4K source to one local HDMI display and four remote HDBaseT receivers for control rooms, classrooms, showrooms, houses of worship, and other multi-display installations.

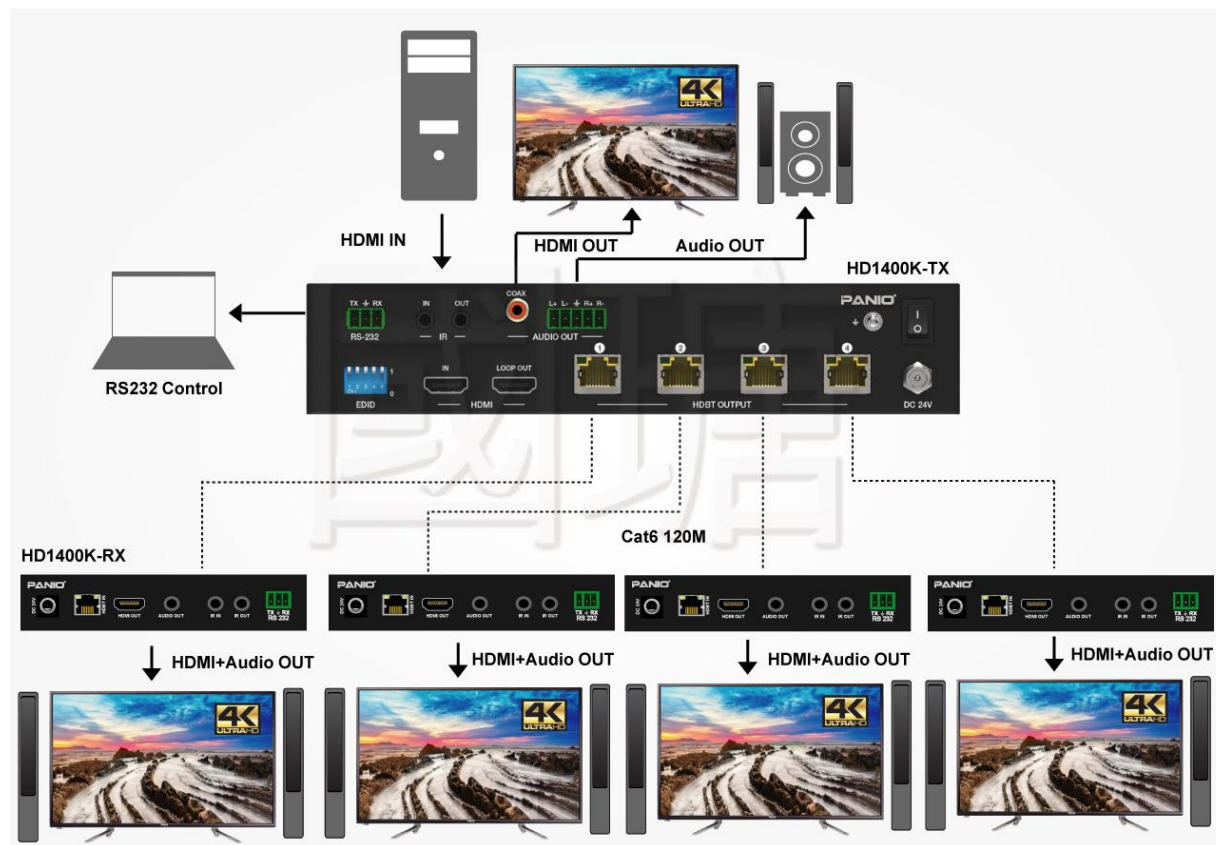
PANIO's fifth-generation 18Gbps architecture supports 4K60 4:4:4, HDR, 120m HDBaseT, PoC receiver power, audio separation, EDID, bidirectional IR, and RS-232 in a rack-ready hardware platform.

Product Features

- **2-in-1 Distribution & Extension:** Combines a professional 1x5 HDMI splitter with four long-distance HDBaseT extension channels in one chassis.
- **Fifth-Generation 18Gbps Processing:** Coordinates HDMI distribution, HDBaseT transmission, EDID, audio, PoC, IR, and RS-232 through an integrated hardware architecture.
- **4K60 4:4:4 UHD Support:** Processes video up to 3840 x 2160 at 60Hz with full 4:4:4 chroma and 18Gbps HDMI bandwidth.
- **120m Ultra-Long 4K Extension:** Transmits 4K60 signals up to 120m and 1080P60 signals up to 150m over direct CAT cabling.
- **1 Local + 4 Remote Displays:** Provides one local HDMI output and four independent HDBaseT outputs for five synchronized displays.
- **PoC Single-Side Power:** The transmitter supplies power to all four receivers through the HDBaseT cables, reducing remote power adapters and outlet requirements.
- **Multi-Point Audio Separation:** Supports transmitter-side coaxial and analog L/R audio output plus 3.5mm audio extraction at each receiver.
- **HDR & Professional Audio:** Supports HDR10+, HLG, Dolby Vision and high-definition audio formats up to 7.1-channel pass-through.
- **Bidirectional IR & RS-232:** Extends control signals between the equipment rack and remote display locations for integrated operation.
- **EDID Signal Management:** Optimizes source-to-display compatibility across local and remote outputs and reduces handshake-related display issues.
- **Rack-Ready Plug-and-Play Design:** Hardware operation requires no application software and supports professional 19-inch rack deployment.

Application Concept

Diagram



Specification

Parameter	Specification
Model Name	HD1400K
Product Type	4K60 HDMI 1x5 Distribution Extender
Processing Architecture	Fifth-generation 18Gbps HDMI / HDBaseT hardware architecture
HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.2 / 1.4
Maximum Resolution	3840 x 2160 @ 60Hz, YCbCr 4:4:4
Video Bandwidth	18Gbps
HDR Compatibility	HDR10+, HLG, Dolby Vision
Distribution Architecture	1 x local HDMI output + 4 x HDBaseT remote outputs
Transmission Distance	4K60: up to 120m; 1080P60: up to 150m

Parameter	Specification
Audio De-embedding	TX: coaxial RCA + analog L/R; RX: 3.5mm analog audio
HDMI Audio Support	LPCM up to 7.1CH, Dolby Digital / TrueHD / DD+, DTS / DTS-HD / DTS-X
Control Extension	Bidirectional wideband IR and RS-232
Signal Management	EDID management; synchronized multi-output distribution

Interface & Control

Connection Interface

Interface	Description
Transmitter Input	1 x HDMI IN (Type A female)
Transmitter Outputs	1 x HDMI OUT; 4 x HDBaseT OUT (RJ45); 1 x coaxial audio; 1 x analog L/R audio
Receiver Input	1 x HDBaseT IN (RJ45, PoC powered)
Receiver Outputs	1 x HDMI OUT; 1 x 3.5mm analog audio output
Control Ports	Bidirectional IR ports and RS-232 Phoenix terminals on transmitter / receivers

Control & Extension Functions

- **PoC Receiver Power:** A single 24V transmitter power supply powers the four receivers through their HDBaseT links; do not connect additional receiver adapters.
- **Direct Point-to-Point Cabling:** Each HDBaseT output must connect directly to its matching receiver and cannot pass through an Ethernet network switch.
- **IR, RS-232 & EDID Integration:** Use bidirectional IR and RS-232 for remote equipment control, while EDID management maintains stable source and display negotiation.

Mechanical & Environmental

Parameter	Specification
Housing	Metal enclosure, black
Transmitter Dimensions	220 mm (L) x 130 mm (W) x 40 mm (H)
Receiver Dimensions	140 mm (L) x 65 mm (W) x 18 mm (H)
Transmitter Net Weight	853 g
Receiver Net Weight	246 g each
Power Supply	DC 24V / 2.7A; receivers powered from transmitter by PoC
Recommended HDMI Cable	Certified HDMI 2.0 cable, up to 5m at input / local output

Parameter	Specification
Recommended CAT Cable	CAT6 / CAT6A / CAT7, full 8-core, TIA/EIA-568B termination
Rack Installation	19-inch rack compatible with supplied mounting accessories
Deployment Notes	Direct TX-to-RX point-to-point links; keep data cabling away from power lines

Package Contents

- 1 x HD1400K-T 1x5 HDMI / HDBaseT Transmitter
- 4 x HD1400K-R PoC HDBaseT Receiver
- 1 x DC 24V / 2.7A Power Adapter
- 10 x IR Cable Set
- 5 x 3-Pin Phoenix RS-232 Cable + 1 x 5-Pin Phoenix Audio Connector
- 1 x Rack-Mounting Accessory Set + 1 x User Manual

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