

1×5 HDMI Video Distribution & Extension System (4K 60Hz 18Gbps)

Model: PANIO HD1210K

1. Product Overview

The HD1210K is a high-performance 1×5 HDMI video distribution & extension system specifically designed for small-to-medium display spaces and simplified wiring scenarios. Fully compliant with HDMI 2.0b (18Gbps) and HDCP 2.2/1.4 standards, it innovatively integrates a "transmitter + receiver" architecture. The product enables long-distance transmission of 4K@60Hz signals up to 60 meters via a single CAT6/6a/7 cable, and supports one-way POC (Power over Cable) technology, significantly simplifying construction and power supply requirements. Additionally, it comes with built-in intelligent EDID management, 3.5mm audio extraction, and bidirectional IR passback functions, compatible with various high-definition audio and video formats. It is an ideal solution for small retail stores, clinics, corporate meeting rooms, boutique counters, and other scenarios.

2. Key Features

- 5-Channels Synchronized Display Architecture: The transmitter includes 1 local loop-out port, paired with 2 dual-output receivers, totaling 5 high-efficiency synchronized transmission channels, perfectly matching multi-screen needs in small-to-medium spaces.
- Full Support for 4K High Resolution & HDR: Maximum support for 4K@60Hz (4:4:4) 8-bit resolution, backward compatible with multiple resolutions; compatible with HDR, HDR10+, and HLG formats, restoring delicate color dynamic range and delivering sharp image details.
- Stable Long-Distance Transmission: Via CAT6/6a/7 cables, transmission distance reaches up to 60 meters for 4K@60Hz and 100 meters for 4K@30Hz; built-in digital balancing technology ensures lag-free and flicker-free images.
- One-Way POC (Power over Cable) Technology: Only need to connect a 12V power supply to the transmitter, which can power 2 receivers via the cable. No additional transformers are required, saving socket resources and optimizing installation aesthetics.
- 3.5mm Audio Extraction & Separation: The transmitter is equipped with an independent analog audio output port, which can de-embed digital audio tracks from HDMI into analog signals for easy connection to power amplifiers, monitoring speakers, or commercial broadcasting systems.
- Intelligent EDID Management & Bidirectional IR Passback: Multiple EDID DIP switch modes are provided to ensure perfect compatibility between signal sources and displays of different specifications; the bidirectional IR passback function allows direct control of signal source devices at the display end.
- Efficient Heat Dissipation & 24/7 Operation: Adopting a professional metal chassis with excellent heat dissipation performance, it supports 24/7 non-stop operation, ensuring long-term stability and durability.

- Comprehensive HD Audio Support: Compatible with various HD audio formats such as LPCM 2.0/2.1/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby TrueHD, and DTS-HD Master Audio, delivering an immersive audio experience.

3. Technical Specifications

Compliance Standards	HDMI 2.0b (18Gbps), HDCP 2.2 / 1.4
Video Specifications	<p>Resolution: Max 4K@60Hz (4:4:4) 8-bit, backward compatible with multiple resolutions</p> <p>Color Depth: 8-bit (4K60); 8/10/12-bit (1080P)</p> <p>HDR Support: HDR, HDR10+, HLG</p> <p>Color Space: YUV 4:4:4</p>
Audio Specifications	Supports LPCM 2.0/2.1/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby TrueHD, DTS-HD Master Audio, etc.
Port Configuration	<p>Transmitter (Tx): 1×HDMI IN (Type A), 1×HDMI LOOP OUT (Type A), 2×CAT6 Network Output Ports, 1×3.5mm Audio Output, 1×IR-RX Port, 1×DC 12V Power Input, 1×Power Switch</p> <p>Receiver (Rx): 2×HDMI OUT (Type A), 1×CAT6 Network Input Port, 2×IR-TX Port, 1×3.5mm Audio Output</p>
Transmission Distance	<p>4K@60Hz: Up to 60 meters (CAT6/6a/7 cables)</p> <p>4K@30Hz: Up to 100 meters (CAT6/6a/7 cables)</p> <p>Total HDMI Cable Length Limit: 10 meters</p>
Power Requirements	Power Supply: DC 12V (Powered by Tx end, Rx supports POC Power over Cable)
Physical Specifications	<p>Dimensions (Tx): 153.5(L) × 103(W) × 27(H) mm</p> <p>Material: Professional Metal Chassis (High-Efficiency Heat Dissipation)</p>

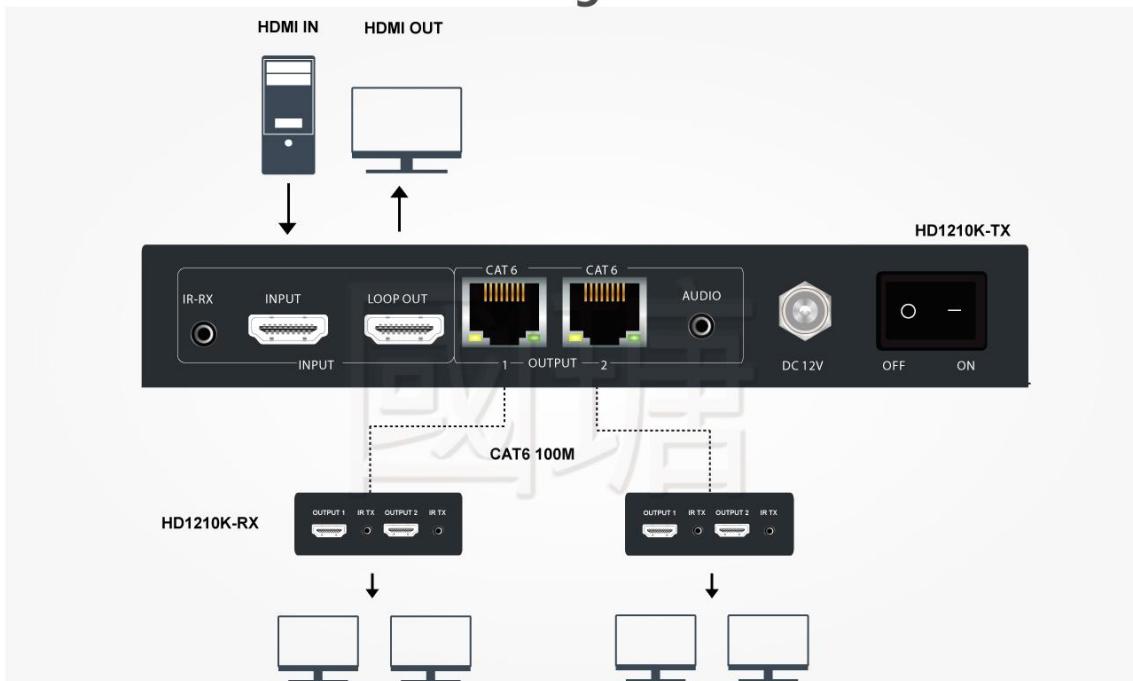
4. Important Installation Notes

- Cable Recommendation: Use pure copper CAT6 or higher-grade cables to ensure stable 4K long-distance transmission; the total length of HDMI cables shall not exceed 10 meters.
- Power Operation: Supports POC power supply; complete all cable connections before turning on the transmitter power; only use the original 12V power adapter provided to avoid malfunctions caused by voltage mismatch.
- EDID Settings: Before installation, confirm that the EDID DIP switch on the transmitter

is set to the mode matching the display to ensure normal image display.

- **Environment Maintenance:** Do not use the device in humid, high-temperature, or conductive dust environments; ensure good ventilation around the device to maintain heat dissipation efficiency.
- **Wiring Taboos:** Avoid running network cables parallel to or in the same conduit as high-power cables such as air conditioning or motor cables to prevent electromagnetic interference affecting signal quality.
- **No Hot-Swapping:** Turn off the device power before connecting or disconnecting HDMI cables, network cables, etc.; hot-swapping may cause circuit damage due to static electricity or surge current.

Diagram



5. Package Contents

Item	Quantity
HD1210K_Tx 1x2 Network Transmitter	1 unit
HD1210K_Rx Dual-Output Receiver	2 units

12V/1.5A Power Adapter	1 piece
IR Transmitter Cable	1 piece
IR Receiver Cables	4 pieces
Multi-Language User Manual	1 piece