8K HDMI™ over HDBaseT Extender (150m)

Model: HD6400K

Lossless Transmission & Full-Format Compatibility for Professional AV Systems

1. Introduction

The HD6400K is a high-performance, long-distance HDBaseT extender engineered to transmit HDMI, RS-232, and IR signals. It delivers lossless transmission up to 150m while preserving uncompromised video and audio quality, making it an ideal solution for professional AV installations (e.g., auditoriums), control systems, and high-end home theaters.

2. Key Features

✓ **8K & 4K UHD Support** – Handles video bandwidth up to 40Gbps (FRL) and 18Gbps (TMDS) for smooth ultra-high-definition signal transmission.

✓ **Extended Transmission Range** – Up to 150m for 1080p, 120m for 4K@60Hz, and 90m for 8K@30Hz (4:4:4 chroma subsampling) without signal degradation.

✓ **HDR & Dolby Vision Compatibility** – Supports a full range of HDR formats: HDR10, HDR10+, Dolby Vision, and HLG (for vivid, true-to-life color reproduction).

✓ **Immersive Audio** – Compatible with premium audio formats: Dolby Atmos, DTS-HD Master Audio, and LPCM 7.1 (enhances home theater and gaming audio experiences).

✓ **Bi-Directional Control** – Enables bi-directional control via IR, RS-232, and CEC (simplifies remote management of connected devices).

✓ **Power Over Cable (PoC)** – A single power supply powers both the transmitter (TX) and receiver (RX) via PoC (reduces cable clutter and installation complexity).

✓ **Analog Audio De-embedding** – Supports analog audio de-embedding on both TX and RX units (works seamlessly with external speakers or amplifiers).

✓ **Future-Proof Design** – Compliant with the latest HDMI 2.1 and HDCP 2.3 standards (ensures compatibility with new UHD devices).
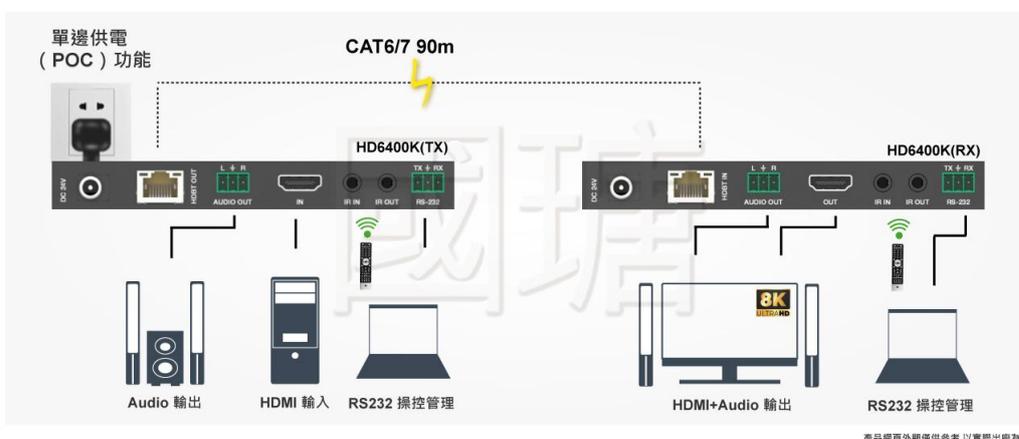
3. Technical Specifications

Category	Details
Compliance	HDMI 2.1, HDCP 2.3
Video Resolution	Up to 8K@30Hz (4:4:4), 4K@120Hz (4:4:4), 1080p@60Hz

Color Depth	8/10/12-bit; RGB, YCbCr 4:4:4/4:2:2/4:2:0
Audio Formats	LPCM 2.0/5.1/7.1, Dolby Atmos, DTS:X, Dolby TrueHD
Control Interface	Bi-directional IR, RS-232 (for device control), CEC
Power Supply	DC 24V/1A (with PoC support)
Operating Temperature	0°C ~ 40°C (suitable for most indoor commercial and residential environments)
Dimensions	140 × 65 × 18 mm (per unit, compact design for easy mounting)
Weight	240g (per unit, lightweight for flexible placement)

4. Application Diagram

5. Package Contents

- 1 × HD6400K Transmitter (TX)
- 1 × HD6400K Receiver (RX)
- 1 × IR Blaster Cable (length: 1.5m)
- 1 × IR Receiver Cable (length: 1.5m)
- 5 × Phoenix-style connectors (for secure, reliable wiring)
- 1 × 24V/1A DC Power Supply (with PoC capability for HD6400K)

- 4 × Mounting Ears + Matching Screws (for secure rack/wall installation of HD6400K units)
- 1 × HD6400K User Manual (with step-by-step setup guide and troubleshooting tips)

6. Use Cases

- **Home Theater Systems** – The HD6400K delivers true 8K UHD immersive entertainment (ideal for large-screen TVs/projectors, preserving cinema-like image and audio quality).
- **Corporate Meeting Rooms** – The HD6400K enables seamless high-definition presentations (supports long-range connectivity for flexible room layouts, no signal dropouts).
- **Esports & Gaming Venues** – The HD6400K supports 4K@120Hz signals with ultra-low latency (critical for competitive gaming, ensuring real-time input response).
- **Broadcast & Production Studios** – The HD6400K provides professional-grade AV signal distribution (meets strict quality standards for live broadcasts/recording, no signal degradation).