OREI HD18-EX165-K

OREI HD18-EX165-K 1x8 HDMI Extender Splitter User Manual

Model: HD18-EX165-K

1. INTRODUCTION

The OREI HD18-EX165-K is a high-performance 1x8 HDMI Extender Splitter designed to distribute a single HDMI source to up to eight HDMI displays simultaneously over CAT6/6a/7 network cables. This device supports resolutions up to 4K@30Hz (for 1x2 and 1x4 models) and 1080p@60Hz (up to 230ft), making it suitable for various applications including home entertainment, video conferences, meeting rooms, and digital signage. It features Power Over LAN (PoL) for receiver units, eliminating the need for separate power adapters at each display location, and includes EDID management and IR pass-back functionality for enhanced control and compatibility.

2. PACKAGE CONTENTS

Please ensure all items listed below are included in your package:

- 1 x OREI HD18-EX165-K Transmitter Unit
- 8 x OREI HD18-EX165-K Receiver Units
- 1 x 12V DC Power Adapter
- 1 x IR Blaster Cable
- 8 x IR Receiver Cables
- 1 x User Manual
- Mounting Brackets (for transmitter)

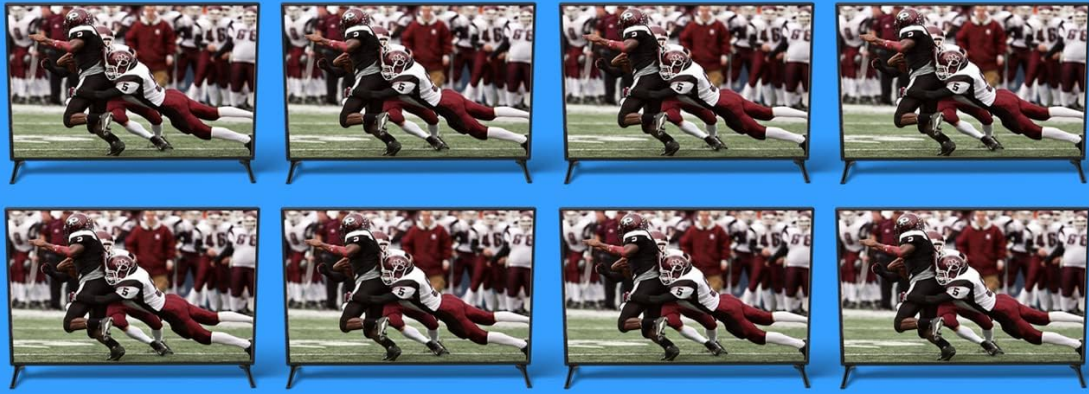Figure 1: OREI HD18-EX165-K Transmitter and Receiver Units

Figure 2: Package Contents Overview

3. PRODUCT OVERVIEW

3.1 Transmitter Unit (HD18-EX165-K)

The transmitter unit is the central hub for your HDMI signal distribution. It features multiple CAT output ports, an HDMI input, an HDMI loop-out, and controls for EDID management and IR transmission.

Figure 3: Transmitter Unit Ports and Indicators

- **CAT OUT 1-8:** RJ45 outputs for connecting to receiver units via CAT6/6a/7 cable.
- **HDMI IN:** Connect your HDMI source device (e.g., DVD player, game console).
- **HDMI OUT (Loop Out):** Connect a local display to monitor the HDMI source.
- **IR OUT:** Connect the IR Blaster cable to control the source device remotely.
- **EDID:** DIP switches for EDID management to ensure display compatibility.
- **UPDATE:** Micro USB port for firmware updates.
- **DC 12V:** Power input for the transmitter unit.
- **PWR ON/OFF:** Power switch for the unit.
- **POWER LED:** Indicates power status.

3.2 Receiver Unit

Each receiver unit connects to a display and receives the HDMI signal and power via a single CAT6/6a/7 cable from the transmitter. It also features an IR input for remote control functionality.

- **CAT IN:** RJ45 input for connecting to the transmitter unit via CAT6/6a/7 cable.

- **HDMI OUT:** Connect to your display device (e.g., TV, monitor).
- **IR IN:** Connect the IR Receiver cable to receive remote control signals.
- **EQ:** DIP switches for equalization adjustment based on cable length.

4. SETUP INSTRUCTIONS

Follow these steps to set up your OREI HD18-EX165-K HDMI Extender Splitter:

1. **Connect HDMI Source:** Connect your HDMI source device (e.g., DVD player, cable box) to the **HDMI IN** port on the transmitter unit using a high-quality HDMI cable.

2. **Connect Displays:** Connect each HDMI display to the **HDMI OUT** port on its respective receiver unit using high-quality HDMI cables.

3. **Connect CAT Cables:** Connect the **CAT OUT** ports on the transmitter unit to the **CAT IN** ports on each receiver unit using individual CAT6/6a/7 network cables. Ensure cables are properly terminated.

4. **(Optional) Local Display:** If desired, connect a local display to the **HDMI OUT (Loop Out)** port on the transmitter unit to monitor the source signal.

5. **(Optional) IR Control:**

   - Connect the IR Blaster cable to the **IR OUT** port on the transmitter unit and position the blaster head near the IR sensor of your HDMI source device.
   - Connect the IR Receiver cables to the **IR IN** ports on each receiver unit and position the receiver head in a location where it can receive signals from your remote control.

6. **Power On:** Connect the 12V DC power adapter to the **DC 12V** port on the transmitter unit and plug it into a power outlet. Turn on the power switch. The Power LED on the transmitter should illuminate. Receiver units will receive power via the CAT cable (PoL).

7. **Adjust EQ Switches (Receivers):** Based on the length of your CAT cable runs, adjust the **EQ** DIP switches on each receiver unit for optimal signal quality. Refer to the user manual for specific settings based on cable length.

8. **Adjust EDID Switches (Transmitter):** Configure the **EDID** DIP switches on the transmitter unit to match the desired audio and video format for your displays. Refer to the user manual for specific settings.
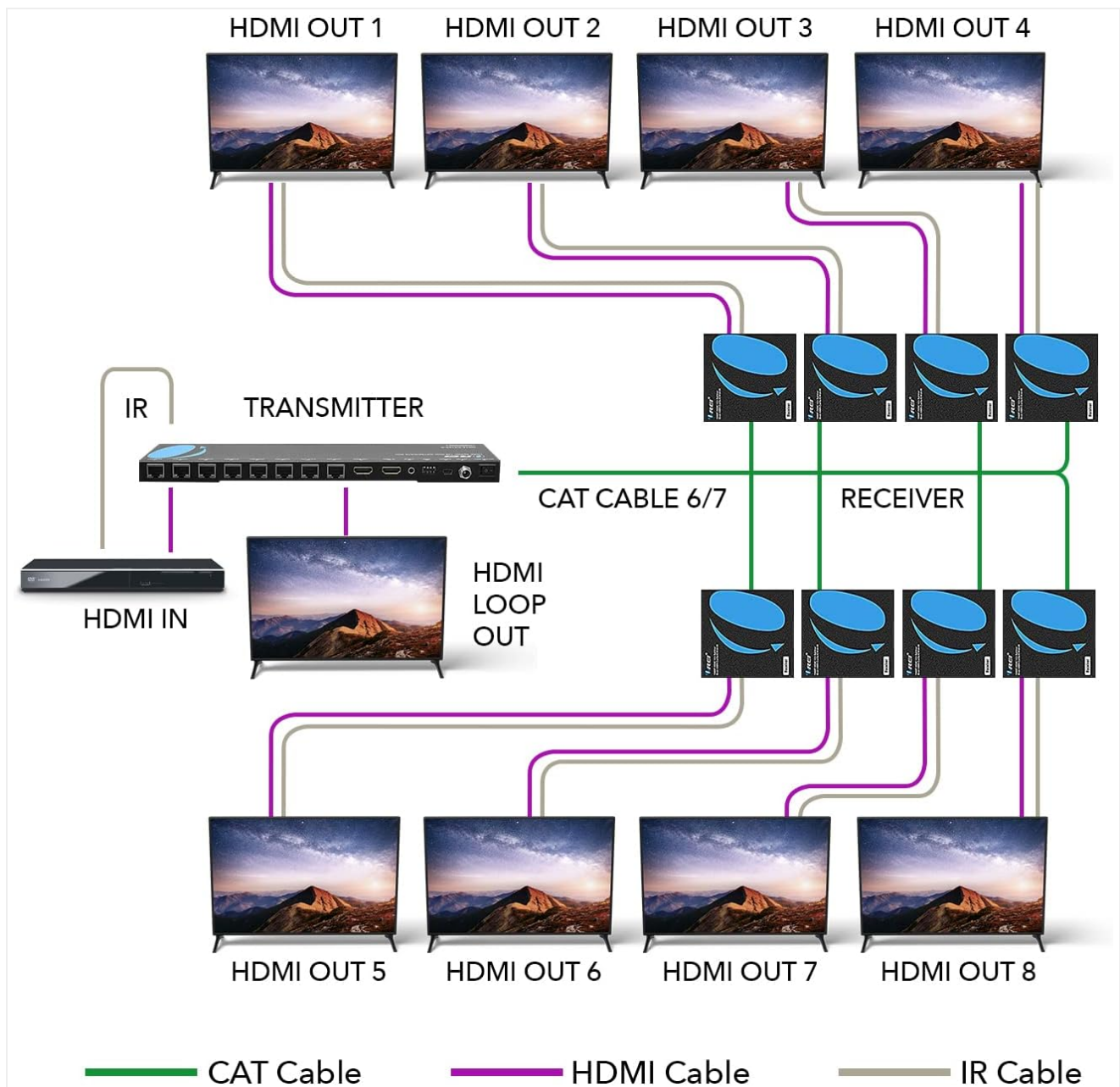
Figure 4: Typical Connection Diagram

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Video 1: OREI HDMI Extender Splitter Multiple Over Single Cable - This video demonstrates the setup and functionality of the HDMI extender splitter.

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Video 2: Send HDMI Signal to 8 TVs over LAN cable - A detailed guide on sending HDMI signals to multiple displays using the OREI extender splitter.

5. OPERATING INSTRUCTIONS

5.1 EDID Management

The EDID (Extended Display Identification Data) switches on the transmitter unit allow you to manage the communication between your source and displays, ensuring optimal compatibility and picture quality. Incorrect EDID settings can lead to display issues or no signal. Refer to the EDID table in your user manual to select the appropriate settings for your setup.

5.2 EQ (Equalization) Adjustment

The EQ switches on each receiver unit are used to compensate for signal degradation over long CAT cable runs. Adjust these switches based on the actual length of the CAT cable connecting the receiver to the transmitter. Proper

EQ adjustment is crucial for maintaining signal integrity and preventing flickering or signal loss. Consult the EQ settings table in your user manual for guidance.

5.3 IR Remote Control

The IR pass-back feature allows you to control your HDMI source device from any of the remote display locations. Simply point your source device's remote control at the IR Receiver connected to the display's receiver unit. The signal will be transmitted back to the IR Blaster connected to the transmitter unit, which then relays the command to your source device.

6. SPECIFICATIONS

Product Dimensions	10 x 4.5 x 1 inches
Item Weight	1 pounds
Item Model Number	HD18-EX165-K
Brand	OREI
Color	Black
Connector Type	HDMI
Compatible Devices	DVD Player, Monitor
Cable Type	HDMI, CAT6/6a/7
Max Resolution (1x2 & 1x4 models)	4K@30Hz
Max Resolution (1x8 model)	1080p@60Hz
Max Transmission Distance (1080p)	Up to 230ft (70m)
Max Transmission Distance (4K@30Hz)	Up to 165ft (50m)
IR Pass-back	20~60Hz
Power Over LAN (PoL)	Supported (receivers powered by transmitter)

7. TROUBLESHOOTING

- **No Picture/Flickering Image:**
  - Check all HDMI and CAT cable connections. Ensure they are secure.
  - Verify the CAT cable type and quality. CAT6/6a/7 is recommended.
  - Adjust the **EQ** switches on the receiver units according to the cable length.
  - Adjust the **EDID** switches on the transmitter unit to match your display's capabilities. Try different EDID settings.
  - Ensure the power adapter is securely connected to the transmitter and the unit is powered on.

- **IR Remote Control Not Working:**
  - Ensure the IR Blaster is correctly connected to the transmitter and positioned directly in front of the source device's IR sensor.

- Ensure the IR Receiver is correctly connected to the receiver unit and positioned to receive signals from your remote control.
- Check for any obstructions between your remote and the IR Receiver.

- **Intermittent Signal:**

  - Ensure all cables are of good quality and not damaged.
  - Avoid bending CAT cables sharply, as this can affect signal integrity.
  - Check for electromagnetic interference (EMI) from other electronic devices.

8. WARRANTY AND SUPPORT

The OREI HD18-EX165-K HDMI Extender Splitter comes with a 1-Year OREI Manufacturer's Warranty. For technical assistance or warranty claims, please contact OREI customer support. Contact information can typically be found on the OREI website or in the product packaging.

Related Documents - HD18-EX165-K

HDMI Splitter 1x8 Over CAT5E/CAT6 50m User Manual	[OREI HDMI Splitter 1x8 Over CAT5E/CAT6 50m User Manual](#) User manual for the OREI HDMI Splitter 1x8, extending HDMI signals up to 50m over CAT5E/CAT6 cables. Features include 1080p support, EDID control, and IR extension.
	[OREI HD18-EX132-K HDMI Extender Splitter 1x8 Over CAT6 40m User Manual](#) User manual for the OREI HD18-EX132-K HDMI Extender Splitter. Learn about its features, specifications, installation, operation, and troubleshooting for extending HDMI signals up to 40m over CAT6 cable.
	[OREI ipcolor 4K HDR HDMI 1x8 Splitter Extender Over 70 Meter Cat6 User Manual](#) This user manual provides detailed information on the OREI ipcolor 4K HDR HDMI 1x8 Splitter Extender, including features, specifications, function settings, and connection diagrams. It supports zero latency transmission, up to 4K@60Hz resolution, and transmission distances up to 70 meters over Cat6/6A/7 cables.
	[OREI ipcolor 4K HDR HDMI 1x8 Splitter Extender User Manual](#) Comprehensive user manual for the OREI ipcolor 4K @60Hz 18Gbps 4:4:4 HDR HDMI 1x8 Splitter Extender. Learn about its features, specifications, installation, operation, and troubleshooting.

	[OREI UHD-IPC165-K 4K HDMI Extender with Loop Out - User Manual](#) User manual for the OREI UHD-IPC165-K, a 4K@60Hz 18Gbps 4:4:4 HDR HDMI Extender over Cat6 cable up to 50 meters, featuring loop out and IR control.
HDMI Extender over single 50m/164ft UTP Cables with IR Control User manual VER: 1.1	[OREI EX-170C HDMI Extender User Manual](#) User manual for the OREI EX-170C HDMI Extender over single 50m/164ft UTP Cables with IR Control. This manual provides an introduction, package contents, features, specifications, panel descriptions, connection diagrams, and operating instructions for the device.