

DL-HD70LS Owners Manual







Important Safety Instructions

- » Please completely read and verify you understand all instructions in this manual before operating this equipment.
- » Keep these instructions in a safe, accessible place for future reference.
- » Heed all warnings.
- » Follow all instructions.
- » Do not use this apparatus near water.
- » Clean only with a dry cloth.
- » Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- » Use only accessories specified or recommended by Intelix.
- » Explanation of graphical symbols:
 - Lightning bolt/flash symbol: the lightning bolt/flash and arrowhead within an equilateral triangle symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product enclosure which may be of sufficient magnitude to constitute a risk of shock to a person or persons.



♦ Exclamation point symbol: the exclamation point within an equilateral triangle symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



- WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE AND OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS.
- » Use the mains plug to disconnect the apparatus from the mains.
- » THE MAINS PLUG OF THE POWER CORD MUST REMAIN READILY ACCESSIBLE.
- » Do not defeat the safety purpose polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of your obsolete outlet. Caution! To reduce the risk of electrical shock, grounding of the center pin of this plug must be maintained.
- » Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and the point where they exit from the apparatus.
- » Do not block the air ventilation openings. Only mount the equipment per Intelix's instructions.
- Use only with the cart, stand, table, or rack specified by Intelix or sold with the equipment. When/if a cart is used, use caution when moving the cart/equipment combination to avoid injury from tip-over.



- » Unplug this apparatus during lightning storms or when unused for long periods of time.
- » Caution! Shock Hazard. Do not open the unit.
- » Refer to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

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Product Overview

The DigitaLinx DL-HD70LS extender set transmits HDMI (1080p, 4Kx2K (UHD/HDR) & 3D), including HDCP 2.2, and bidirectional IR up to 70 meters away using a single solid core, shielded Category 6 twisted pair cable.

Built-in surge protection helps ensure hassle-free and robust installations. The 12 volt power supply is secured with a screw-on connector to prevent the power from being accidentally disconnected.

The DL-HD70LS is sold only as a set. The individual transmitter and receiver are not compatible with other HDBaseT devices due to proprietary PoE circuitry.

Package Contents

- Quick Guide
- (1) IR Receiver (Eye)
- (1) IR Transmitter (Emitter)
- (1) DC12v US Power Supply with four adapter plugs (US, EU, AU, UK)
- (4) Mounting Brackets with screws
- (8) Rubber feet



Front and Rear Panels

Transmitter View

HDMI INPUT SIDE

HDMI IN IR OUT 1 2 3

TWISTED PAIR OUTPUT SIDE



- 1. HDMIIN
 - HDMI input port for connections to video sources
- IR IN
 - 3.5mm IR input port for connection to IR receiver or IR system
- 3. IR OUT
 - •3.5mm IR input port for connection to IR receiver or IR system
- 4. Power Indicator
 - Indicates power for transmitter
- 5. 12V DC
 - Locking power port, connect DC12V power adapter (either power port can power entire set)
- 6. Twisted Pair Output with Link and HDCP Status Indicators
 - RJ45 HDBaseT connection. Connect Cat6 cable to receiver

LED States

Solid Link - Link established between transmitter and receiver Flashing HDCP- HDMI signal is not encrypted Solid HDCP- HDMI signal is encrypted

Receiver View

HDMI OUTPUT SIDE



TWISTED PAIR INPUT SIDE



- 1. HDMI OUT
 - HDMI output port for connections to display devices
- IR IN
 - 3.5mm IR input port for connection to IR receiver or IR system
- 3. IR OUT
 - •3.5mm IR input port for connection to IR receiver or IR system
- 4. Power Indicator
 - Indicates power for transmitter
- 5. 12V DC
 - Locking power port, connect DC12V power adapter (either power port can power entire set)
- 6. Twisted Pair Input with Link and HDCP Status Indicators
 - RJ45 HDBaseT connection. Connect Cat6 cable to transmitter

LED States

Solid Link - Link established between transmitter and receiver Flashing HDCP- HDMI signal is not encrypted Solid HDCP- HDMI signal is encrypted

Installation Instructions

Quick Start

- 1. Connect video source to transmitter HDMI IN
- 2. Connect display device to receiver HDMI OUT
- 3. Connect transmitter and receiver together with a shielded Category 6 cable
- 4. Connect IR control (optional)
- 5. Apply power to either transmitter OR receiver to power entire circuit

Connecting a Video Source

HDMI Input (Transmitter)

Connect an HDMI source device to the HDMI input on the DL-HD70LS transmitter labeled *HDMI IN* using an HDMI cable that is less than or equal to 5 meters in total length. For HDMI source devices that are further away, an active HDMI cable may be required to complete the connection.

Connecting a Display

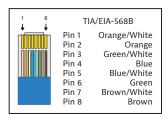
HDMI Output (Receiver)

Connect the display to the HDMI output on the DL-HD70LS receiver labeled *HDMI OUT* using an HDMI cable that is less than or equal to 5 meters in length. It is recommended to keep the DL-HD70LS receiver near the display input as it is not recommended that an active HDMI cable be used on the HDMI output on the DL-HD70LS receiver.



HDBaseT Connection

Connect one end of a Category cable to the DL-HD70LS transmitter labeled *TWISTED PAIR*, then connect the other end of the Category cable to the DL-HD70LS receiver labeled *TWISTED PAIR*



Twisted Pair Wiring
Use TIA/EIA-568B wiring for Category 6 connection between send and receive units.

To ensure proper performance of the DL-HD70, it is recommended that you use solid core, shielded Category 6 F/UTP cabling at a minimum. Category 5e F/UTP may perform well up to a certain length but may not support power over HDBaseT reliably longer distances.



When using shielded category cabling ALWAYS...

-use shielded connectors
-properly ground the category cable

For optimized performance use the following Liberty Wire and Cable branded cabling;

Category 6 plenum; **24-4P-P-L6SH** Category 6A plenum; **24-4P-P-L6ASH**

Category 6 NON-plenum; **24-4P-L6SH**Category 6A NON -plenum; **24-4P-L6ASH**

Connecting IR Control

The DL-HD70LS is capable of transmitting bi-directional IR signals through the HDBaseT circuit. The DL-HD70LS comes with 1 IR receiver (eye) and 1 IR emitter (flasher) so you can control devices from either end of the extender circuit.



Passing IR Signals:

The DL-HD70LS is capable of passing IR signals between 33 and 55 KHz. To prevent damage to any of the electronics, the extenders should be powered off while inserting or removing any IR components. Inserting an IR transmitter into the IR IN port may damage the IR circuit for that extender.

Source Device Control using IR

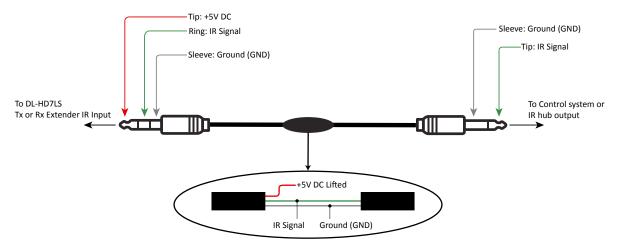
Attach the IR emitter to the IR receiver of the source device, insert the TS 3.5 mm plug of the emitter to the *IR OUT* port of the DL-HD70LS transmitter. Insert the TS 3.5 mm plug of the IR receiver (eye) to the *IR IN* port of the DL-HD70LS receiver. Point the source device IR remote at the display location where the IR receiver is located, IR signals will now travel through HDBaseT to the DL-HD70LS transmitter side where the IR emitter is attached to the source device.

Remote Display using IR

Attach the IR emitter to the IR receiver of the display device, insert the TS 3.5 mm plug of the emitter to the *IR OUT* port of the DL-HD70LS receiver. Insert the TS 3.5 mm plug of the IR receiver (eye) to the IR IN port of the DL-HD70LS transmitter. Point the source device IR remote at the source device location where the IR receiver is located, IR signals will now travel through HDBaseT to the DL-HD70LS receiver side where the IR emitter is attached to the display device.

Source / Display Control from Control System

To pass 3rd party IR system signals through the DL-HD70LS, such as a control system, connect the TS connector of the IR-AC coupling cable (purchased separately) to the IR output port of the control system and connect the TRS connector of the IR-AC cable to the IR IN to either transmitter or receiver of the DL-HD70LS.



Note: Voltage on Tip from RX may be differnt for non Liberty Devices



Apply Power

Connect the included power supply to the transmitter or receiver and lock the power supply to the power connector by twisting the locking collar clockwise. It is not required that both the transmitter and receiver be powered simultaneously.



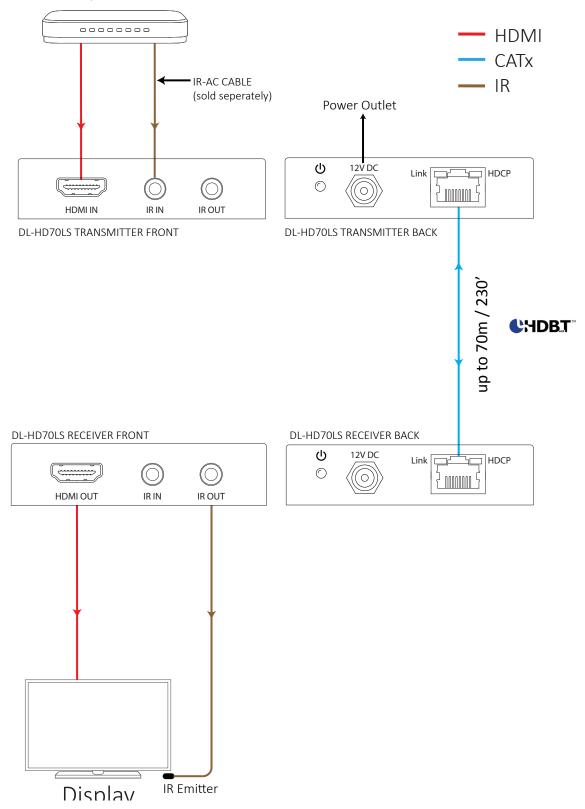
Application Diagrams

HDMI Extension / Bi-Directional IR Control

Source Device IR Emitter (2) **HDMI** CATx IR Eye (1) - IR Power Outlet ψ 12V DC \bigcirc $\langle\!(\bigcirc\!)\rangle$ DL-HD70LS TRANSMITTER FRONT DL-HD70LS TRANSMITTER BACK up to 70m / 230' **UHDB**₃T™ DL-HD70LS RECEIVER FRONT DL-HD70LS RECEIVER BACK \bigcirc $\langle \bigcirc \rangle$ 2 11111111 5 HDMI OUT IR OUT IR Eye (2) IR Emitter (1) Display

HDMI Extension / Control System IR Control

Control System / Switcher



Technical Specifications

Supported Audio and Video		
Maximum Video Compatibility	70 m: Deep Color 36/30/24 Bit at 1080p	
	40 m: Deep Color 48 Bit at 1080p, 3D, and 4k x 2k (UHD)	
Video Compliance	HDMI, HDCP, and CEC (Consumer Electronics Control)	
Embedded Audio	Up to PCM 8 channel, Dolby Digital TrueHD, and DTS-HD Master Audio	
IR Carrier Frequency Range	33-55kHz at 5 volts	
HDBaseT Signal Characteristics		
Maximum Distance	70 m	
Cable Requirements	Solid core shielded Category 5e, Category 6 or greater with TIA/EIA-568B crimp pattern	
Bandwidth	10.2 Gbps	
Chassis and Environmental		
Dimensions (H x W x D)	18 mm x 120 mm x 74 mm (0.71 in x 4.72 in x 2.91 in)	
Operating Temperature (Environment)	0° to +40° C (+32° to +104° F)	
Operating Temperature (Chassis)	31° C (88° F) (S); 38° C (100° F) (R)	
Operating Humidity (Environment)	20% to 90%, Non-condensing	
Power		
Maximum Power Consumption	12 watts	
Power Supply Input Voltage	100-240V AC at 50-60 Hz	
Power Supply Output Voltage	12V DC	
Regulatory	CE, RoHS	
Other		
Standard Warranty	2 Years	
Included Items	Quick Guide, Power Supply, Adapter Plugs (US, EU, AU, UK), Mounting Brackets (4 ea), Mounting Screws (4 ea), (8) Rubber Feet, (1) IR Emitter, (1) II Receiver	
IR Transmitter	DIGIB-EMT	
IR Receiver	DIGIB-EYE, IR-AC	

Distances and picture quality may be affected by cable grade, cable quality, source and destination equipment, RF and electrical interference, and cable patches.

Thank you for your purchase.

For Technical Support please call our toll free number at 800-530-8898 or email us at supportlibav@libav.com

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