



DIGITALINX  
VALUE-ENGINEERED DIGITAL SOLUTIONS

# DL-HD2100 Quick Install Guide



This guide is for quick installation only.  
For complete owners manual go to [www.libav.com](http://www.libav.com) or use a QR reader to access the manual via QR code below.



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## Product Overview

The DigitalLinx DL-HD2100 HDBaseT extender set extends HDMI audio, video as well as control up to 100m / 330' using a single Category 6 cable. Supports HDMI 2.0a, HDR10 and HDCP 2.2 as well as Dolby Atmos and DTS:X audio formats. Control extension supports bidirectional IR, Ethernet, ARC and RS232. Built in re-clocking circuitry ensures that extender set is backwards compatible with older HDMI version chip sets.

The DigitalLinx DL-HD2100 can transport HDMI data rates up to 18Gbps up to 100 meters. The system enables high data rates by utilizing visual lossless compression at a 2:1 data compression rate when the signal surpasses 10Gbps, anything under 10Gbps will never be compressed. Supports static HDR (HDR10) only when data rate exceeds 18Gbps, supports dynamic HDR (HDR10+ / Dolby Vision) when data rate is 10Gbps or less.

Built-in surge protection and diagnostic LEDs ensure hassle-free and robust installations. Flexible power design allows the units to be powered at either the TX or RX end, and only one power supply is required to power the set. The 12 volt power supply is secured with a screw-on connector to prevent the power from being accidentally disconnected.

The DL-HD2100 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

- (1) DL-HD2100 Transmitter and Receiver Set
- (2) IR Receivers (Eye)
- (2) IR Transmitters (Emitter)
- (1) IR-AC IR Coupler Cable
- (3) 3 pole Terminal Block (attached to extenders)
- (1) DC12v US Power Supply with US, UK, EU and AU adapters
- (4) Mounting Brackets with screws

# Transmitter



## 1. FRONT PANEL DIAGNOSTIC LEDs;

- POWER- Solid, the DL-HD2100 extender is receiving power from the power supply or from the remote extender via Category 6 cabling.
- STATUS- Flashes once per second, the HDBaseT processor is running.
- HDCP- Solid, HDCP signal is present in the HDMI stream. Flashes quickly, non-encrypted HDCP signal is present in the HDMI stream.
- LINK- Solid, the two DL-HD2100 components are communicating via Category cabling.

## 2. DC 12V

- Locking power port, connect DC12V power adapter to transmitter (either power port on transmitter and receiver can power entire set)

## 3. HDBT OUT

- RJ45 HDBaseT connection. Connect Cat6 cable to receiver

## 4. IR In / IR OUT

- 3.5mm IR input port for connection to IR receiver or IR system
- 3.5mm IR output port for connection to IR emitter

## 5. AUDIO OUT

- Analog audio de-embedding port for routing stereo audio to audio amplifier / mixer

## 6. RS232

- 3 pin Phoenix connector port for connecting / passing RS232 control to receiver / display location

## 7. HDMI In

- HDMI input port for connections to video sources

## 8. Ethernet

- RJ45 port for passing Ethernet to receiver / display location

## 9. TOSLINK OUT

- Digital audio return channel output port for routing multi-channel from DL-HD2100 receiver to audio amplifier or mixer

# Receiver



1. FRONT PANEL DIAGNOSTIC LEDs;
  - POWER-Solid, the DL-HD2100 extender is receiving power from the power supply or from the remote extender via Category 6 cabling.
  - STATUS- Flashes once per second, the HDBaseT processor is running.
  - HDCP- Solid, HDCP signal is present in the HDMI stream. Flashes quickly, non-encrypted HDCP signal is present in the HDMI stream.
  - LINK- Solid, the two DL-HD2100 components are communicating via Category cabling.
2. DC 12V
  - Locking power port, connect DC12V power adapter to receiver (either power port on transmitter and receiver can power entire set)
3. HDBT IN
  - RJ45 HDBaseT connection. Connect Cat6 cable to transmitter
4. IR In / IR OUT
  - 3.5mm IR input port for connection to IR receiver or IR system
  - 3.5mm IR output port for connection to IR emitter
5. AUDIO CONTROL
  - ARC- When ARC mode is selected, an HDMI cable from the HDMI OUT should connect to an ARC compatible input on a display, digital audio will then de-embed from the TOSLINK OUT on the DL-HD2100 transmitter
  - TOSLINK- When TOSLINK mode is selected, a Toslink cable should be connected from the displays digital audio output to the TOSLINK IN on the DL-HD2100 receiver, digital audio will then de-embed from the TOSLINK OUT port of the DL-HD2100 transmitter
6. RS232
  - 3 pin Phoenix connector port for connecting / passing RS232 control from transmitter location
7. HDMI In
  - HDMI input port for connections to video sources
8. Ethernet
  - RJ45 port for passing Ethernet from transmitter
9. TOSLINK IN
  - Digital audio return channel input port for injecting digital audio signal from display (only in TOSLINK mode)

# Connectivity Instructions

1. Verify all components included with the extender set are present before installation.
2. If the extenders are going to be permanently mounted to a surface, attach the included mounting brackets with the supplied screws.
3. Turn off power and disconnect the audio/video equipment by following the manufacturer's instructions.
4. Connect Category 6 or greater twisted pair cable with RJ45 connectors between the transmitter and the receiver. TIA/EIA-568B straight-through wiring connections must be used with all HDBaseT extenders.
5. Connect an HDMI cable and any desired control accessories between the display and the receiver.
6. Connect an HDMI cable and any desired control accessories between the source and the transmitter.
7. 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.
8. Power on attached audio/video devices.

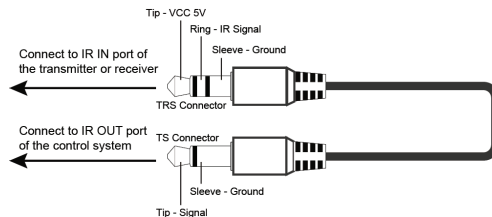
## Passing IR Signals:

The DL-HD2100 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.

IR OUT: The IR transmitter (IR emitter) must be plugged into the IR OUT port.

IR IN: The IR receiver (IR eye) must be plugged into the IR IN port.

To connect to a 3rd party IR system such as a control system, connect the TS connector of the IR-AC coupling cable 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-HD2100.



# Cabling Requirements

To ensure proper performance of the DL-HD2100, it is recommended that you use solid core Category 6 F/UTP cabling at a minimum. Category 5e F/UTP may perform well but may not support power over HDBaseT reliably.



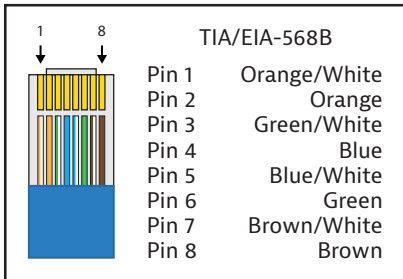
When using shielded category cabling **ALWAYS...**

- ....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 6 NON-plenum; 24-4P-L6SH

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

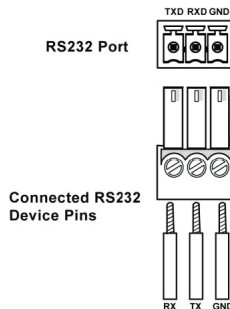
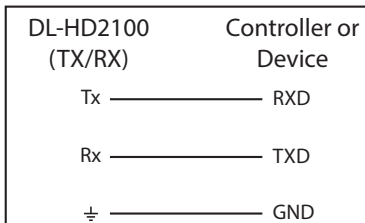


## Twisted Pair Wiring

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

## RS232 Wiring

Connect the controller or device RXD signal to Tx on the DL-HD2100 extender. Connect the controller or device TXD signal to Rx on the DL-HD2100 extender.



# Technical Specifications

<b>Supported Audio and Video</b>	
Video Compliance	HDMI 2.0+, HDCP 2.2, ARC (Audio Return Channel) and CEC (Consumer Electronics Control)
Input / Output Resolution Support	<b>SMPTE:</b> Up to 4096x2160@60Hz (4:4:4 chroma sub-sampling / 8 bit deep color) <b>VESA:</b> Up to 1920x1200
Maximum Pixel Clock	594MHz
Embedded Audio	Up to PCM 8 channel, Dolby Atmos, DTS: X, Dolby TrueHD, DTS-HD Master Audio, Dolby Digital and DTS
IR Carrier Frequency Range	33-55kHz at 5 volts
RS232 Baud Rate	Up to 115200 baud
<b>HDBaseT Signal Characteristics</b>	
Maximum Distance	<i>1080p:</i> 100 meters / 328 feet <i>4K@60Hz 4:4:4:</i> 70 meters / 229 feet
Cable Requirements	Solid core F/UTP Category 6 cable or greater with TIA/EIA-568B crimp pattern
Bandwidth	18 Gbps (compressed) / 10.2 Gbps (uncompressed)
<b>Chassis and Environmental</b>	
Dimensions	TX- 195mm x 94.8mm x 21mm (7.7 in. x 3.7 in. x 0.8 in.) RX- 195mm x 94.8mm x 21mm (7.7 in. x 3.7 in. x 0.8 in.)
Operating Temperature (Environment)	TX/RX- 0° to +45° C (+32° to +113° F)
Operating Temperature (Chassis)	31° C (88° F) (TX); 38° C (100° F) (RX)
Operating Humidity (Environment)	10% to 90%, Non-condensing
Product Weight	0.4kg / 2.2 lbs
<b>Power</b>	
Maximum Power Consumption	27 watts (TX)- when receiver is powered by transmitter 27 watts (RX)- when transmitter is powered by receiver
Power Supply Input Voltage	100-240V AC at 50-60 Hz
Power Supply Output Voltage	DC 12V 3A
ESD Protection	±8kV(Air-gap discharge)/ ±4kV(Contact discharge)
Surge Protection	Voltage: ±1 kV
Regulatory	CE, FCC
Other	
Standard Warranty	5 Years
Included Items	(1) Transmitter, (1) Receiver, (1) Quick Install Guide, DC 12V Power Supply with US, UK, EU and AU adapters, (2) IR Transmitters, (2) IR Receivers, (1) IR-AC IR coupler cable, (4) Mounting Brackets, Mounting Screws

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