



DIGITALINX  
VALUE-ENGINEERED DIGITAL SOLUTIONS

# DL-HDE100 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.



Scan QR Code with your Smart-phone or Tablet

## Important notice:

- Do not attempt to disassemble or alter the housing. There are no user-serviceable parts inside the unit. Doing so will void your warranty.
- To minimize the possibility of equipment damage from electrostatic discharge (ESD), all source and destination equipment must be powered off during installation.
- Do not connect the device to a telecommunication outlet wired to unrelated equipment. Doing so may damage the unit or any connected equipment. Ensure all connected twisted pair cabling is straight-through (point-to-point).
- Allow proper ventilation to reduce the risk of thermal failure.

# Product Overview

The DigitalLinx DL-HDE100 HDBaseT extender set transmits HDMI, bidirectional IR, RS232 and Ethernet up to 100 meters away using a single Category 6 twisted pair cable.

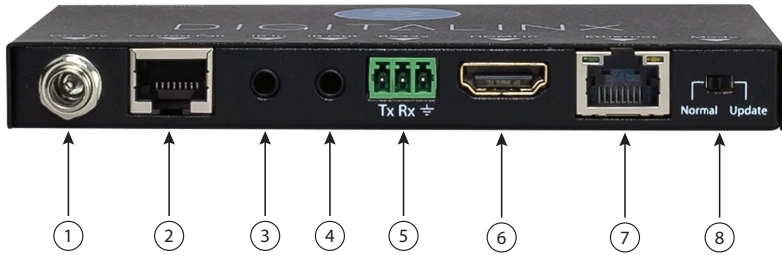
Built-in surge protection and diagnostic LEDs ensure hassle-free and robust installations. Flexible power design allows the units to be powered at either the TX or RX end, and only one power supply is required. The 18 volt power supply is secured with a screw-on connector to prevent the power from being accidentally disconnected.

The DL-HDE100 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

- DL-HDE100 Transmitter and Receiver Set
- (1) Quick Install Guide
- (2) IR Receivers (Eye)
- (2) IR Transmitters (Emitter)
- (1) IR-AC IR Coupler Cable
- (2) 3 pole Terminal Block (attached to extenders)
- (1) DC18v Power Supply with 4 Power Plug Adapters for US, EU, AU, UK
- (4) Mounting Brackets with screws

# Transmitter View



1. DC 18V
  - Locking power port, connect DC18V power adapter (either power port can power entire set)
2. Twisted Pair
  - RJ45 HDBaseT connection. Connect Cat6 cable to transmitter
3. IR In
  - 3.5mm IR input port for connection to IR receiver or IR system
4. IR Out
  - 3.5mm IR output port for connection to IR emitter
5. RS232
  - 3 pin Phoenix connector port for connecting / passing RS232 control
6. HDMI In
  - HDMI input port for connections to video sources
7. Ethernet
  - RJ45 port for passing Ethernet to receiver / display location
8. Mode- *Normal*- for normal operation. *Update*- for firmware update process
  - The mode switch is used when updating firmware in the extender. A separate document will provide usage instructions once a new firmware update is available.

## Front Panel Diagnostic LEDs:

The DL-HDE100 provides four blue LEDs to indicate the current operating status and to assist troubleshooting an installation.

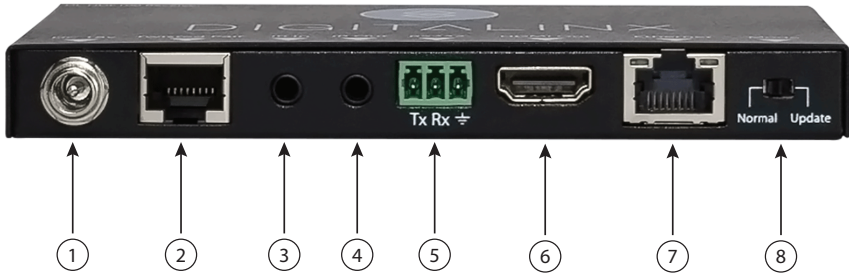
Power: *Solid*, the DL-HDE100 extender is receiving power from the power supply or from the remote extender via Category 6 cabling.

Status: *Flashes once per second*, the HDBaseT processor is running.

Link: *Solid*, the two DL-HDE100 extenders are communicating via Category 6 cabling.

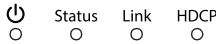
HDCP: *Solid*, HDCP signal is present in the HDMI stream. *Flashes quickly*, no HDCP signal is present in the HDMI stream.

# Receiver View



1. DC 18V
  - Locking power port, connect DC18V power adapter (either power port can power entire set)
2. Twisted Pair
  - RJ45 HDBaseT connection. Connect Cat6 cable to transmitter
3. IR In
  - 3.5mm IR input port for connection to IR receiver or IR system
4. IR Out
  - 3.5mm IR output port for connection to IR emitter
5. RS232
  - 3 pin Phoenix connector port for connecting / passing RS232 control
6. HDMI Out
  - HDMI output port for connections to display technology
7. Ethernet
  - RJ45 port for passing Ethernet from transmitter location
8. Mode- *Normal*- for normal operation. *Update*- for firmware update process
  - The mode switch is used when updating firmware in the extender. A separate document will provide usage instructions once a new firmware update is available.

## Front Panel Diagnostic LEDs:



The DL-HDE100 provides four blue LEDs to indicate the current operating status and to assist troubleshooting an installation.

**Power:** *Solid*, the DL-HDE100 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.

**Link:** *Solid*, the two DL-HDE100 extenders are communicating via Category 6 cabling.

**HDCP:** *Solid*, HDCP signal is present in the HDMI stream. *Flashes quickly*, no HDCP signal is present in the HDMI stream.

# 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 (DL-HDE100-TX) and the receiver (DL-HDE100-RX). 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 (DL-HDE100-RX).
6. Connect an HDMI cable and any desired control accessories between the source and the transmitter (DL-HDE100-TX).
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.

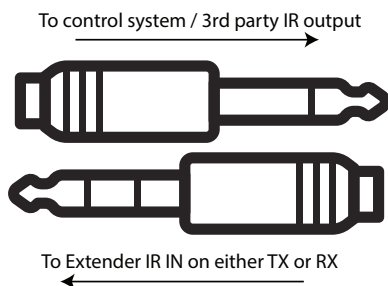
## *Passing IR Signals:*

The DL-HDE100 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 pass 3rd party IR system signals through the DL-HDE100, such as a control system, connect the TS connector of the IR-AC coupling cable (provided) 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-HDE100.



# Cabling Requirements

## HDBaseT Cabling

To ensure proper performance of the DL-HDE100, it is recommended that you use solid core, shielded 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

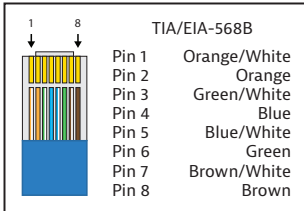
For optimized HDBaseT performance use the following Liberty Wire and Cable branded cabling;

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**

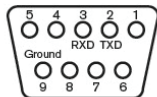


## Twisted Pair Wiring

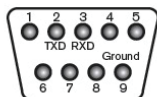
Use TIA/EIA-568B wiring for Category 6 connection between send and receive units.



Tx Rx  $\equiv$



Female connector - 9 holes



Male connector - 9 holes

## RS232 Wiring

Connect the controller or device RX signal to TX on the DL-HDE100 extender. Connect the controller or device TX signal to Rx on the DL-HDE100 extender.

# Technical Specifications

<b>Supported Audio and Video</b>	
Maximum Video Compatibility	100 m; Deep Color 36/30/24 Bit at 1080p
	70 m; Deep Color 48 bit at 1080p, 3D and UHD
Video Compliance	HDMI 2.0, HDCP 2.2, 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
RS232 Baud Rate	Up to 115200 baud
<b>HDBaseT Signal Characteristics</b>	
Maximum Distance	100 meters (330')
Cable Requirements	Solid core shielded Category 6 or greater with TIA/EIA-568B crimp pattern
Bandwidth	10.2 Gbps
<b>Chassis and Environmental</b>	
Dimensions	135mm x 74mm x 15mm (5.31 in. x 2.91 in. x 0.59 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
<b>Power</b>	
Maximum Power Consumption	3 watts (S), 6 watts (R)
Power Supply Input Voltage	100-240V AC at 50-60 Hz
Power Supply Output Voltage	18V DC
Regulatory	CE, RoHS
<b>Other</b>	
Standard Warranty	5 Years
Included Items	Quick Install Guide, DC18v Power Supply with 4 Power Plug Adapters for US, EU, AU, and UK, IR Transmitters (2 ea), IR Receivers (2 ea), (1) IR-AC IR coupler cable, Mounting Brackets (4 ea), Mounting Screws (4 ea)

Liberty AV Solutions  
11675 Ridgeline Drive  
Colorado Springs, CO 80918  
800-530-8998  
supportlibav@libav.com

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](mailto:supportlibav@libav.com)

[www.libav.com](http://www.libav.com)



DIGITALINX

VALUE-ENGINEERED DIGITAL SOLUTIONS

is a brand of:



**LIBERTY**<sup>®</sup>

**AV SOLUTIONS**

A SUBSIDIARY OF WESCO DISTRIBUTION, INC.

11675 Ridgeline Drive  
Colorado Springs, Colorado  
80921 USA  
Phone: 719-260-0061  
Fax: 719-260-0075  
Toll-Free: 800-530-8998