DIGITALINX
VALUE-ENGINEERED DIGITAL SOLUTIONS

DL-UHDILC Owners Manual

Rev 190409

11675 Ridgeline Dr.
Colorado Springs, CO 80921

Toll-Free: 800-530-8998
Fax: 719-260-0075
supportlibav@libav.com

Important Safety Instructions

1. Read these instructions – All the safety and operating instructions should be read before this product is operated.
2. Keep these instructions – The safety and operating instructions should be retained for future reference.
3. Heed all warnings – All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow all instructions – All operating and use instructions should be followed.
5. Do not use this apparatus near water – The appliance should not be used near water or moisture – for example, in a wet basement or near a swimming pool, and the like.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized plug. A polarized plug has two blades with one wider than the other. 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 the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where it exits from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart or rack is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.

13. Unplug the apparatus during lighting storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as; the power-supply cord or plug is damaged, liquid has been spilt or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. CAUTION: Servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
16. Do not install this equipment in a confined or built-in space such as a book case or similar unit. The equipment must remain in well ventilation conditions. Ventilation should not be impeded by covering the ventilation openings with items such as newspaper, table-cloths, curtains etc.
17. WARNING: Only use attachments/accessories (such as the battery etc.) specified or provided by the manufacturer.
18. WARNING: Refer to the information on the underside of the enclosure for electrical and safety information before installing or operating the apparatus.
19. WARNING: To reduce the risk of fire or electric shock do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and objects filled with liquids, such as vases, shall not be placed on apparatus.
20. CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
21. WARNING: The battery shall not be exposed to excessive heat such as sunshine, fire or the like.
22. WARNING: The all-pole mains switch located on rear panel is used as the disconnect device, the switch shall remain readily operable.
23. WARNING: DO NOT INGEST BATTERY. CHEMICAL BURN HAZARD.
24. Keep new and used batteries away from children. If the battery compartment does not close securely, stop using the product and keep it away from children.
25. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

26. When the apparatus is not in use or during its relocation, take care of the power cord and plugs; e.g. tie up the power cord with cable tie or similar. The tie must be free from sharp edges and the like that might cause abrasion of the power cord. When put into use again ensure the power cord and plugs are not damaged. If any damage is found the power cord and plugs should be replaced by items either specified by the manufacturer or that have same characteristics as the original items.

27. This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of non-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

28. WARNING: To reduce the risk of electric shock, do not remove cover (or back) as there are no user-serviceable parts inside. Refer servicing to qualified personnel.

29. The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance.

30. Protective earthing terminal. The apparatus should be connected to a mains socket outlet with a protective earthing connection.

31. CAUTION: To prevent electric shock hazard, replace grille. (CSA 60065, clause 5.3A)

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Product Overview

The DigitaLinx DL-UHDILC is an HDMI in-line controller that can automate room peripherals and sink devices when a video signal is introduced to the unit. The DL-UHDILC is 4K compatible, supports HDCP version 2.2, has an analog and digital de-embedded audio output and has 15 built in EDID presets that can be adjusted by the rotary dial on the front panel.

When the DL-UHDILC auto-detects an input video signal, the DL-UHDILC will automatically turn a display or projector ON by CEC (default) or by pre-loaded RS232 serial commands and will trigger the first relay port to switch a projector screen or window shade down. When a video signal is no longer present after a specified amount of time, the DL-UHDILC will turn off the display or projector by CEC (default) or pre-loaded RS232 commands and will trigger the second relay port to switch a projector screen or window shade up.

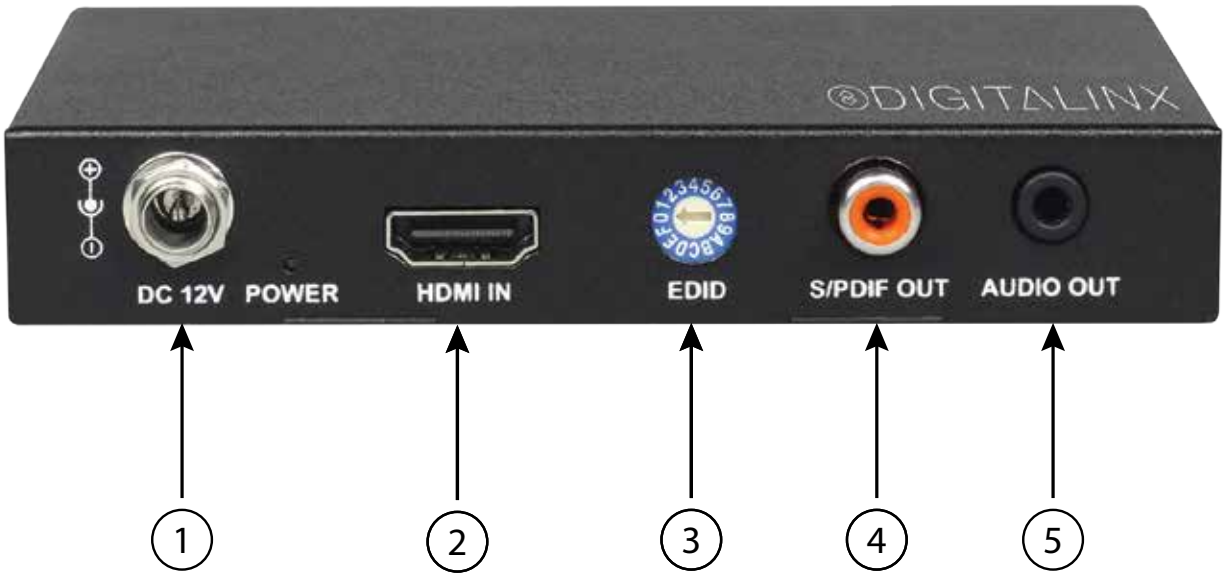
The DL-UHDILC is ideal for any situation that requires automated control upon sensing a video input.

Package Contents

- Quick Install Guide
- 12VDC, 0.5A Power Adapter with 4 power plug adaters for US, UK, EU and AU
- (3) 3 pin phoenix male connectors
- RS232 to 3 pin phoenix breakout adapter cable

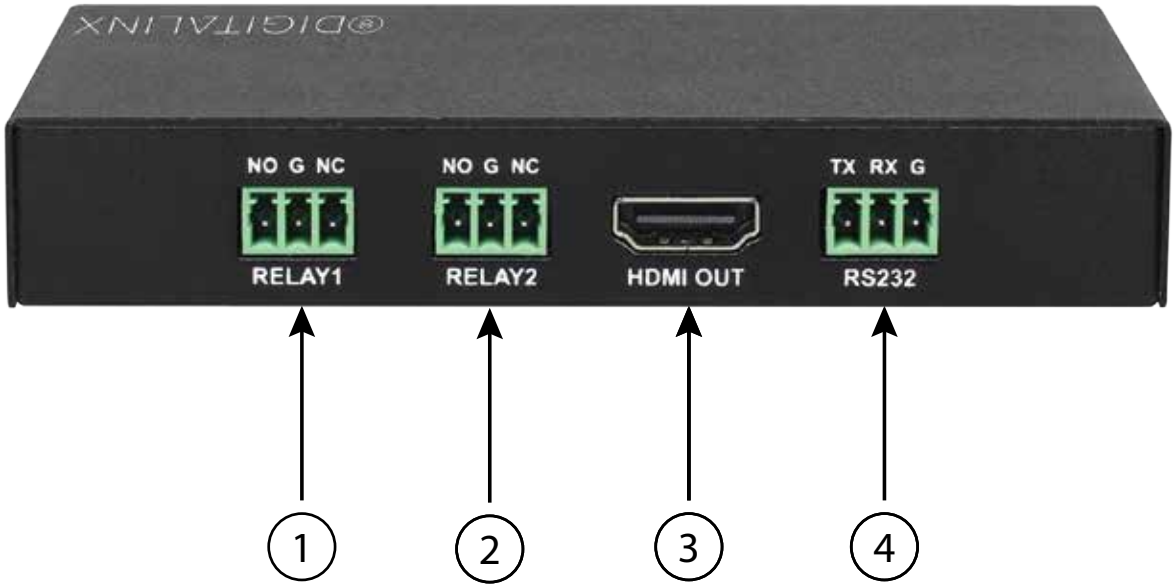
Front and Rear Panels

Front Panel



1. DC12V- Locking DC 12V power connector with POWER on/off indicator
2. HDMI IN- HDMI Video Input; connects to video source
3. EDID- Rotary dial for 15 resolution presets
   - The EDID preset chart is located on the bottom of the DL-UHDILC
4. S/PDIF OUT- Digital audio de-embedded output; connects to an AVR or audio amplifier
5. AUDIO OUT- Analog stereo audio de-embedded output; connects to an AVR or audio amplifier

Back Panel



1. RELAY1- Relay trigger: default relay mode; latching
2. RELAY2- Relay trigger: default relay mode; latching
3. HDMI OUT- Video output, connects to display or projector
4. RS232 - Control port, connects to and controls display device with pre-configured RS232 serial commands

• **NOTE:** The RS232 port can be configured by connecting a computer with a serial to USB adapter to the DL-UHDILC RS232 port and using the RS232 Automation Configurator software to configure the port. The RS232 Automation Configurator is located on the DL-UHDILC product page Online at *www.libav.com* under the SOFTWARE tab

EDID Management

The EDID rotary dials allows for EDID management so the source can sync with the desired video resolution of the system. If EDID copy fails then 1080p/60Hz Stereo EDID settings will be provided to the source

The EDID presets are as follows. (0) is factory default.

0	Copy EDID from HDMI Output	A	1400x1050@60Hz 2CH
1	3840x2160P@60Hz 2CH	B	1360x768@60Hz 2CH
2	3840x2160P@30Hz 2CH	C	1280x1024@60Hz 2CH
3	1920x1080P@60Hz 2CH	D	1280x960@60Hz 2CH
4	1280x720P@60Hz 2CH	E	1280x768@60Hz 2CH
5	1920x1200@60Hz 2CH	F	1024x768@60Hz 2CH
6	1680x1050@60Hz 2CH		
7	1600x1200@60Hz 2CH		
8	1600x900@60Hz 2CH		
9	1440x900@60Hz 2CH		

Installation Instructions

Basic Installation

1. Verify all components included are present before installation.
2. Connect an HDMI source device to the HDMI IN port using an HDMI cable
3. Connect a display device to the HDMI OUT port using an HDMI cable. If using CEC on and off support, make sure the CEC option on your display has been enabled in the displays settings menu.
4. Adjust EDID preset for desired resolution setting
5. Connect either S/PDIF OUT or AUDIO OUT to an audio amplifier or AVR for audio reinforcement with an RCA or 3.5mm audio .cable
6. If using a projector screen or window shade, connect RELAY1 / RELAY2 to the relay pins of a relay switch on a projector screen or window shade with a shielded 2 conductor cable with a ground, such as the Liberty 22-1P-EZ cable
   - RELAY1 will automatically switch from normally open (NO) to normally closed (NC) when a video signal is introduced to the system. RELAY2 will automatically switch from normally open (NO) to normally closed (NC) when a video signal is absent from system after a specified time that has been determined by the serial upload software. Default system timeout is set to 3 minutes and default relay mode is set to latching.
7. (Optional if not using CEC Display Control) Connect the 3 pin phoenix connector of the RS232 breakout cable to the RS232 port on the DL-UHDILC, then connect the DB-9 side of the breakout cable to a DB9 cable to connect that will connect to the sink device
   - NOTE: The RS232 port on the DigitaLinx DL-UHDILC must be configured by connecting a computer to the RS232 port of the DL-UHDILC and by using the DL-UHDILC Configuration Software which is located on the DL-UHDILC product page Online at www.libav.com.
8. Apply power to DL-UHDILC

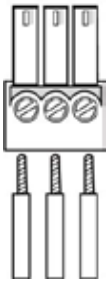
RS232 Connections

To use the pre-loaded RS232 control port to tripper on and off commands to a display or projector, connect the TX, RX, and ground control signal wires to the middle RS232 connections on the removable 6-pole terminal block. Consult the manual of the display or projector device to determine which pins the TX and RX signals are carried on. Be sure to always connect TX to RX and RX to TX.

Connecting to
TV Display

DL-UHDILC
RS232 PORTS

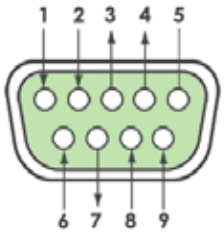
TX G RX



TV DISPLAY
PIN OUT

RX G TX

DB-9 TO PHOENIX
ADAPTER PIN OUT



2 - TRANSMIT
3- RECEIVE
5 - GROUND

Relay Port Wiring

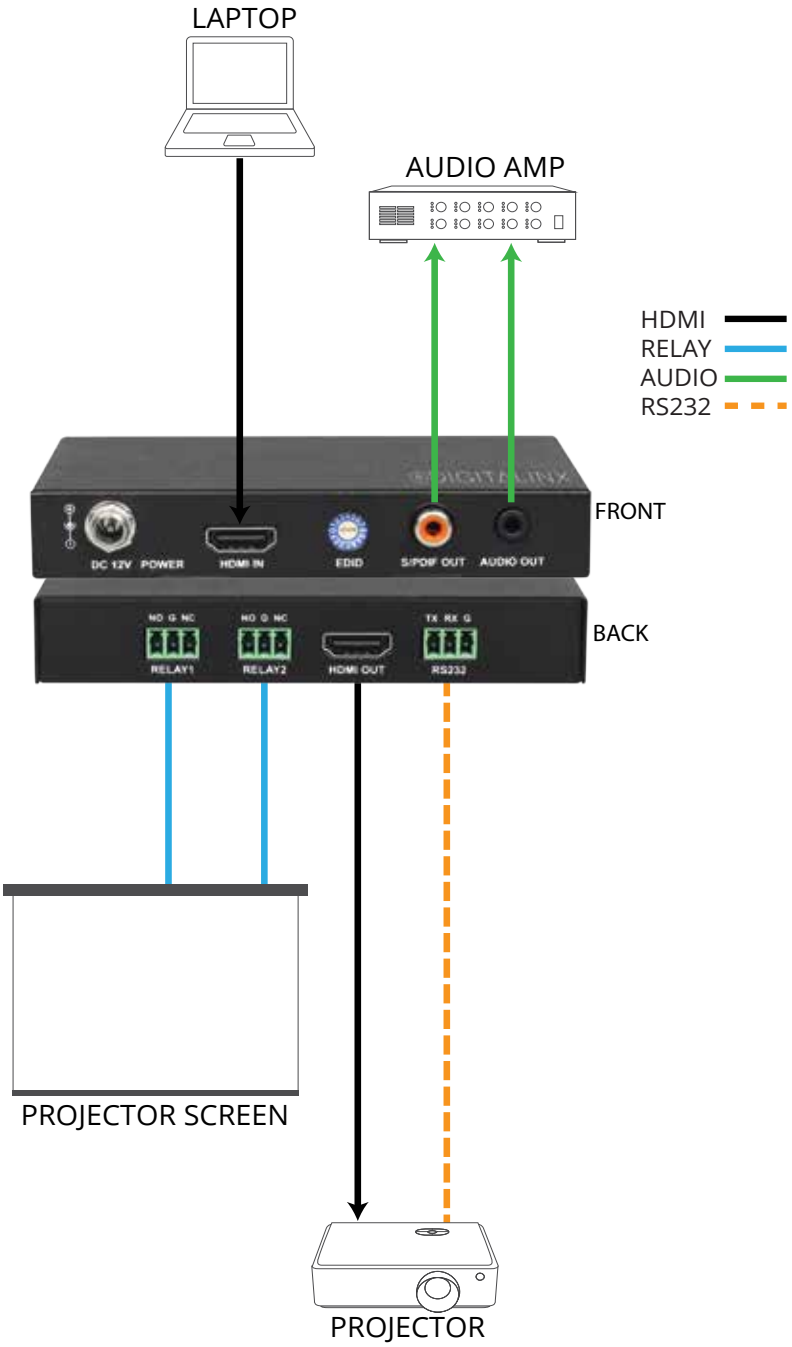
For the normally open contacts (NC), connect a circuit between the NO and COM terminals of the 3-pin

For the normally closed contacts (NC), connect a circuit between the NC and COM terminals of the 3-pin phoenix connector

RELAY 1 I/O STATE	***RELAY STATE***	
	NO	**NC**
ON	OPEN	CLOSED
OFF	CLOSED	OPEN

RELAY 2 I/O STATE	***RELAY STATE***	
	NO	**NC**
ON	CLOSED	OPEN
OFF	OPEN	CLOSED

Application Diagram



RS232 Port Configuration Software Usage

Overview

The Digitalinx RS232 Automation Configuration Software allows you to load ON and OFF serial commands into the RS232 control port of the DL-UHDILC so the commands can be sent to a connected display or projector to automate power when a video signal is introduced and the DL-UHDILC is in an off state. The software also gives you the ability to change relay modes from latching (default) to momentary on the two integrated relay ports.

Downloading RS232 Port Configuration Software

The Digitalinx RS232 Automation Configuration Software can be found online on the DL-UHDILC product page under the *SOFTWARE* tab at *www.libav.com*. Download the zip file and extract all files, then run the tool on a Windows PC that will be used to configure the DL-UHDILC.

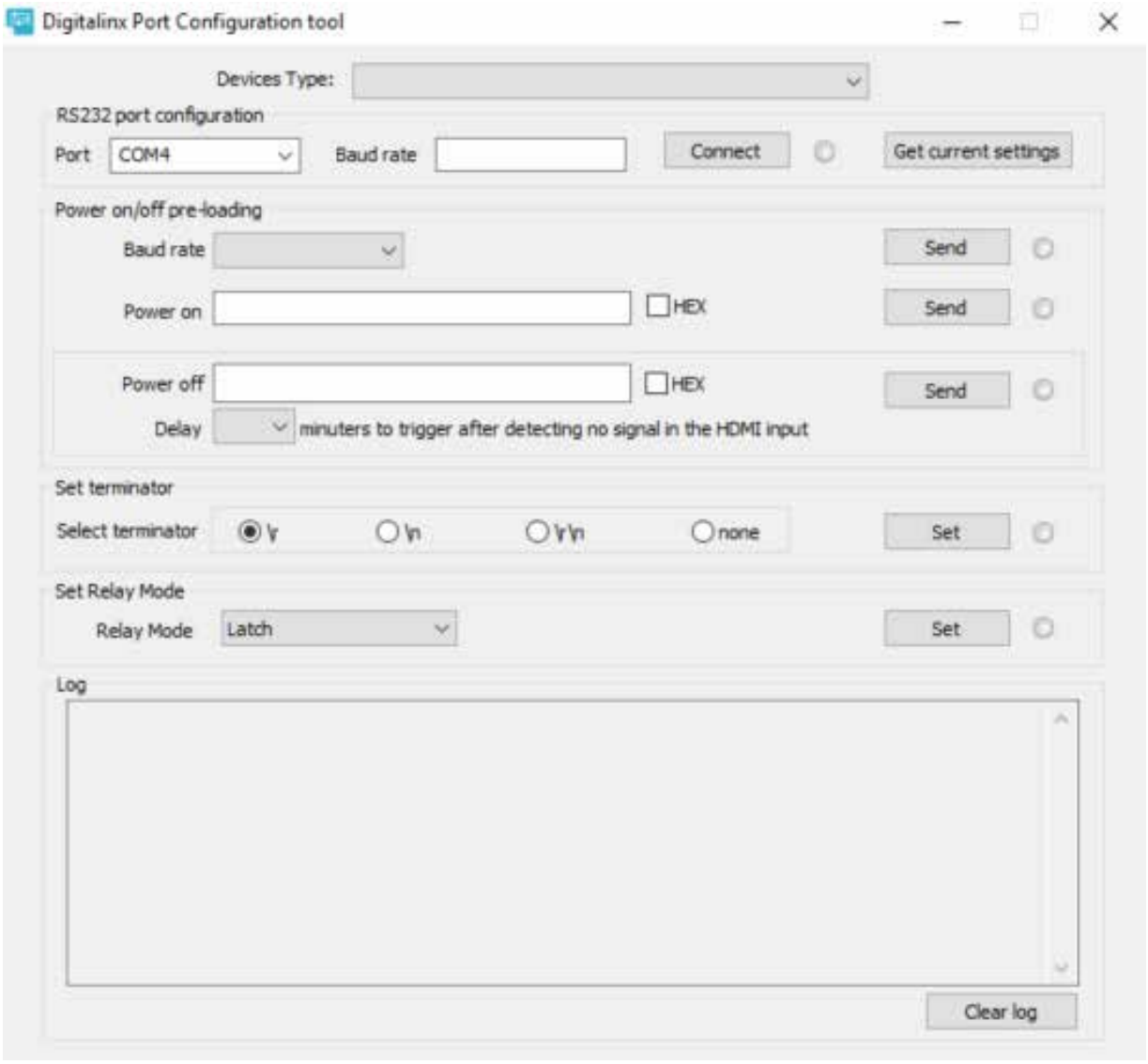
Making a PC Connection

To connect a PC to the DL-UHDILC RS232 port, a DB9 (RS232) to USB adapter is required. The Liberty 120-DA-0004 RS232 to USB adapter can be used for this configuration connection.

Once the RS232 to USB adapter has been installed on the PC, connect the DB9 connector on the USB adapter to the DB9 connector of the DB9 to phoenix adapter that came in the DL-UHDILC box. Then connect the phoenix connector of the supplied DB9 adapter to the DL-UHDILC RS232 port.

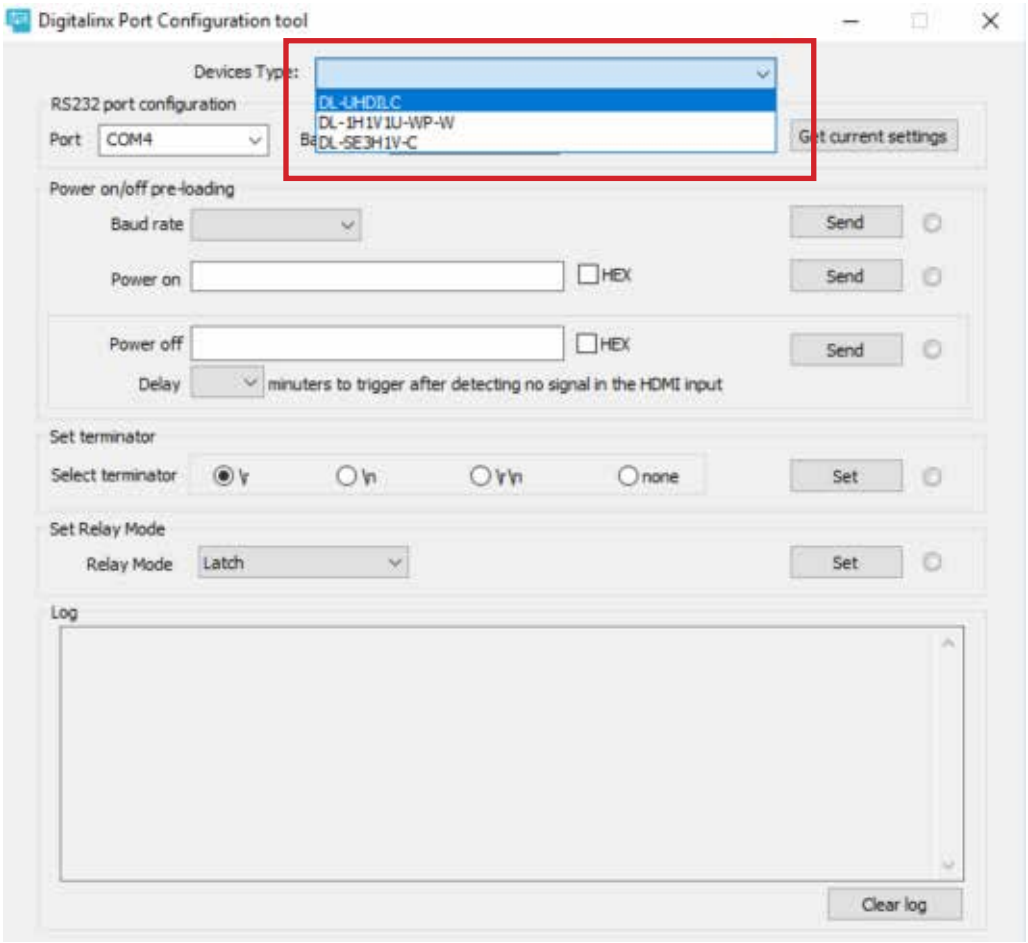
Running RS232 Automation Configuration Software

Open the configuration software by double clicking the configuration tool icon. The following screen will appear



Serial Settings for DL-UHDILC

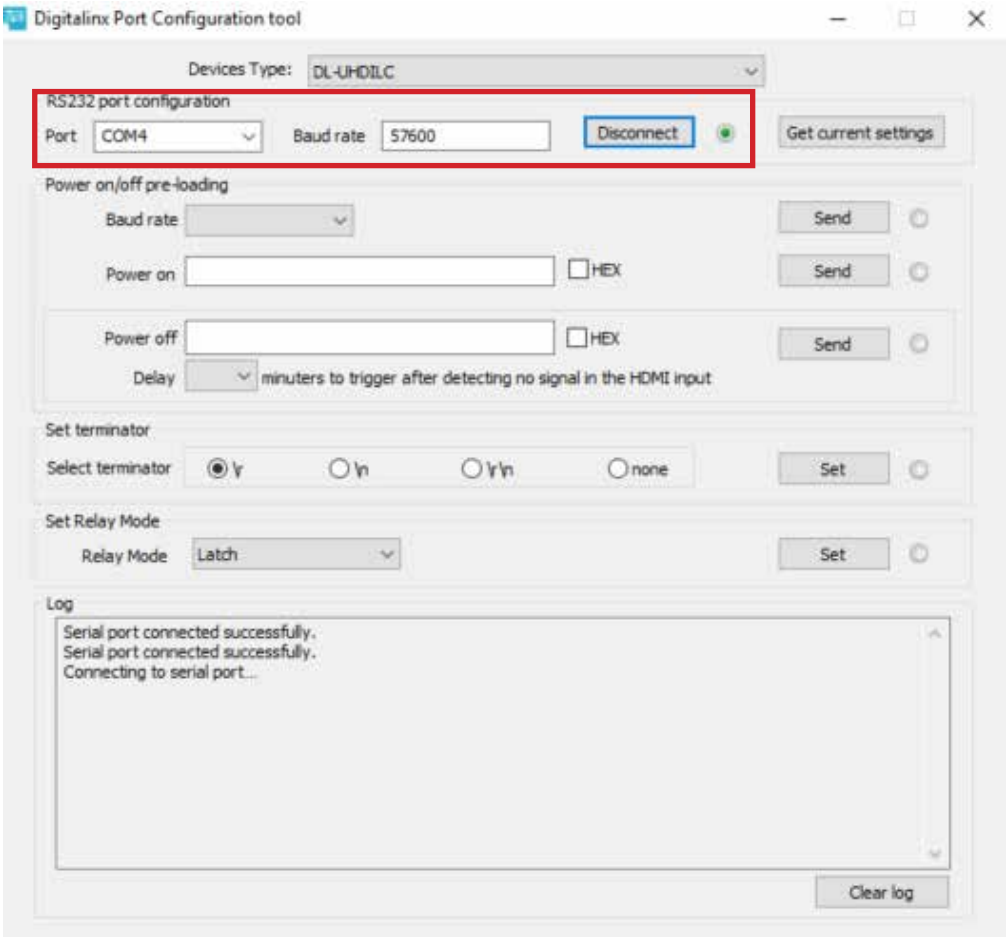
To establish communication with the software, select the DL-UHDILC under *DEVICE TYPES.*



After a device is selected, select the Port number in the drop down field that the USB to RS232 is connected to on the computer. Typically this will default when starting the software after the serial COM connection has been made.

Enter in the baud rate for the DL-UHDILC in the *BAUD RATE* field and click *CONNECT*. The default baud rate for the DL-UHDILC is 57600.

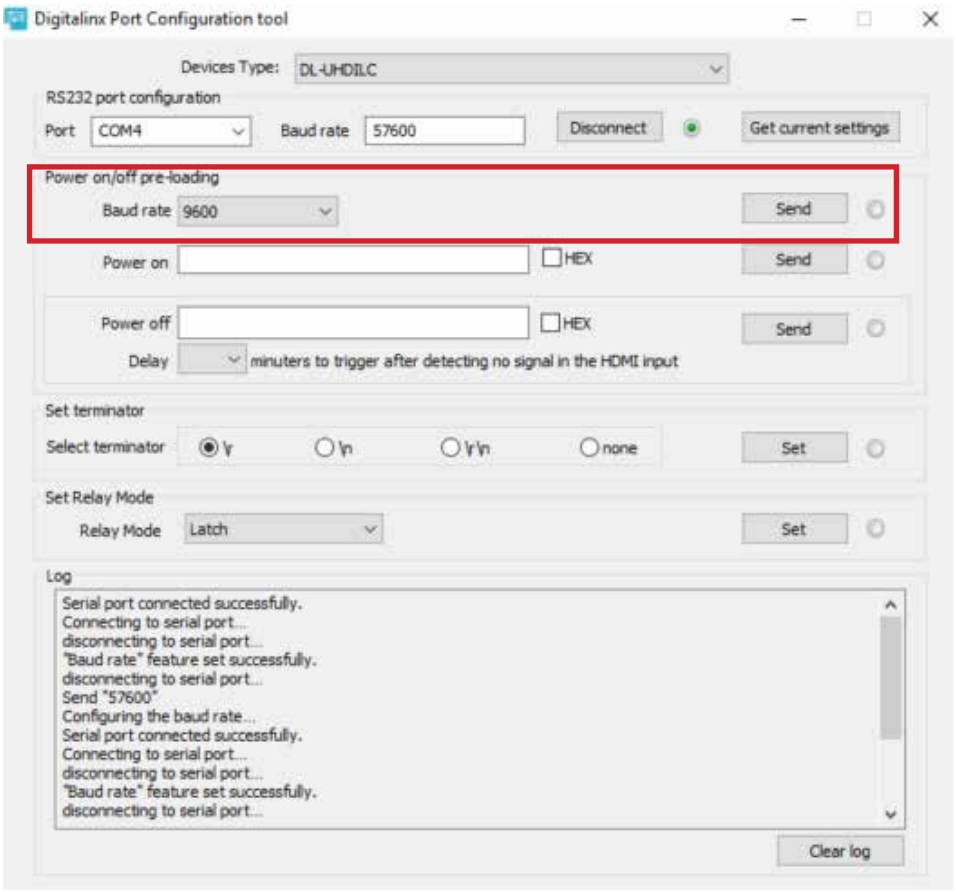
If you are successfully connected to the unit, a green light will appear next the *Connect* button which will now read *DISCONNECT*.



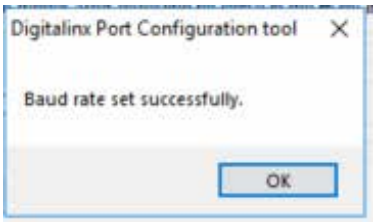
To obtain current RS232 settings you can click the *GET CURRENT SETTINGS* button.

Configuring RS232 Serial Commands

In the *Power on/off pre-loading* section, enter in the Baud Rate of the display device by selecting the correct setting from the drop down menu and the click Send. The baud rate of the display device will be located in the manufacturers owners manual of the display device.



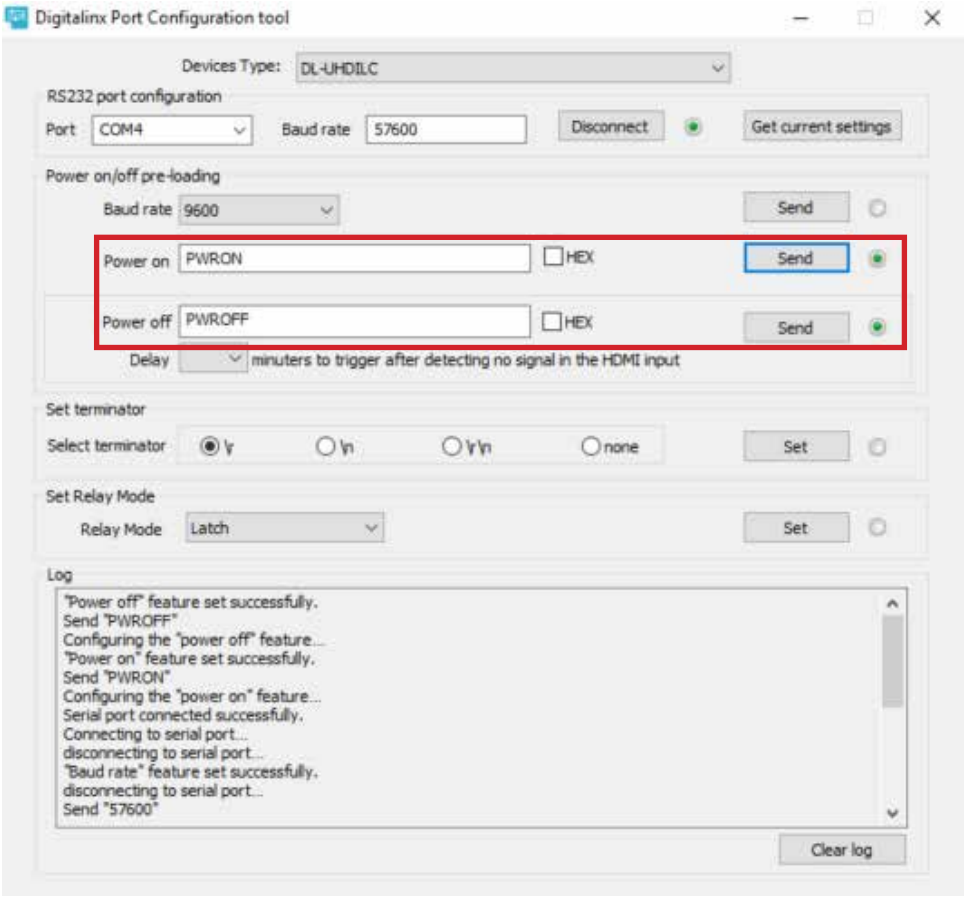
If connection was successful, the green light next to the Send button will illuminate and pop up window will notify you of the successful connection.



Once you have entered in the *Baud Rate* of the display device in the software, the DL-UHDILC default baud rate setting will be changed to the same rate setting as well. The RS232 configuration tool will reset the connection to the device using the newly selected baud rate.

Enter the displays POWER ON and OFF/STANDBY command for the display device in the *Power on* and *Power off* field. Serial commands for displays and projectors are provided by the display manufacturer and can be found in the products instructional documentation.

Click the *Send* buttons adjacent to both the *Power On* and *Power off* field to upload the commands. If upload is successful a green light next to the *Send* button will illuminate and a pop up window will confirm a successful upload.



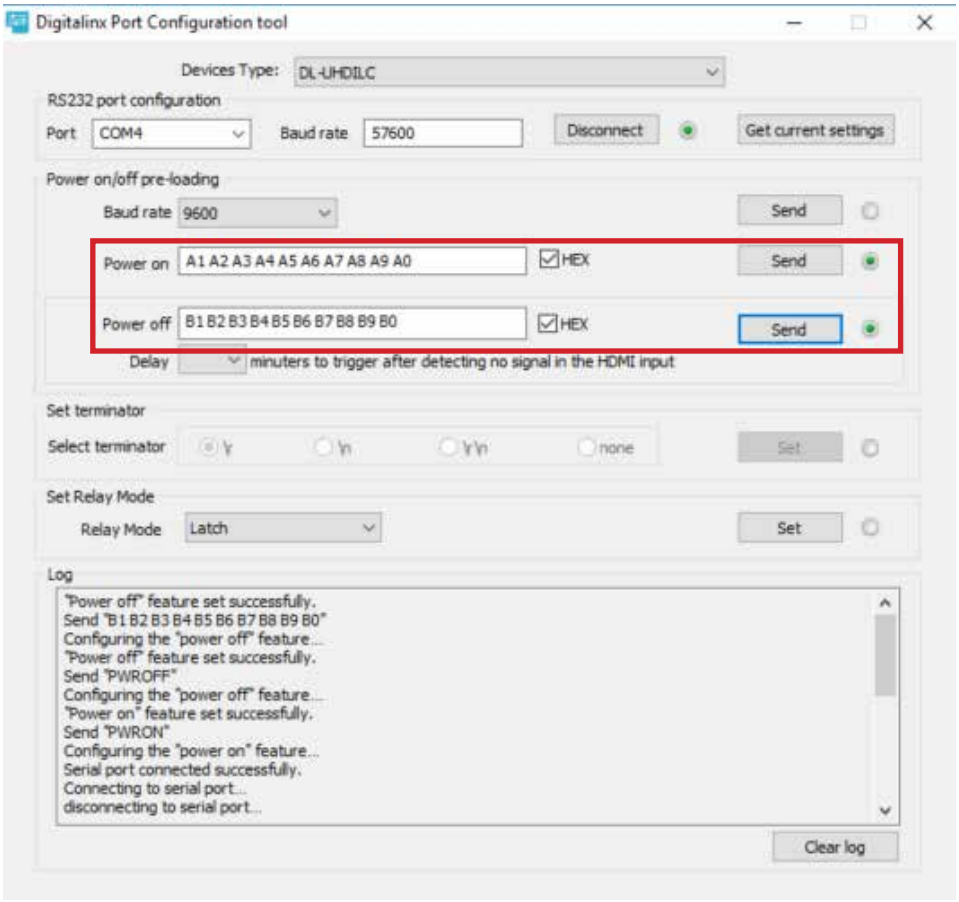
If the ASCII based commands require a terminator, choose the appropriate terminator from the *Set terminator* section and then click the Set button. If upload is successful a green light next to the Set button will illuminate and a pop up window will confirm a successful upload. Note, this option is only for ASCII based commands, this is not required or is an option for HEX based commands.

Explanation of terminator menu:

\r = Carriage Return <CR>
\n = Line Feed <LF>
\r\n = Carriage Return + Line Feed <CR><LF>
none = No terminator required

By default, ASCII command type is used. If the command for display ON/OFF is only available in Hex coding, check the *HEX* button next to the *Power On* command field and then enter the Hex command in the *Power On* and *Power Off* field.

NOTE: *When entering in HEX formatted commands, place a space between each character. Prefix and suffix characters are not required i.e. 0x01 0x 02, 01h, 02h. Correct formatted example is below.*

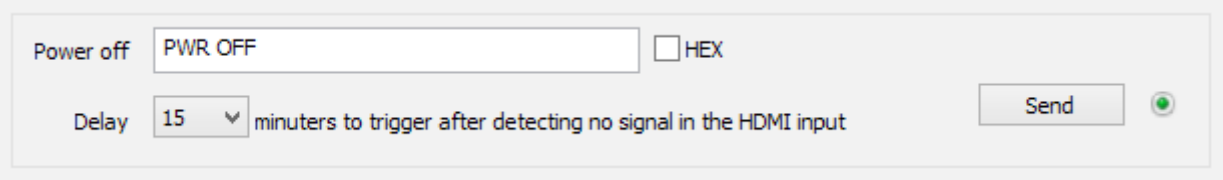


Configuring System Timeout

By default system timeout is set to 3 minutes. After there is no present video signal passing through the DL-UHDILC for 3 minutes the system will transmit the *Power off* command to the display or projector and trigger the second relay port switch.

To change the default system timeout, choose the desired time from the Delay drop down menu underneath the *Power off* command field.

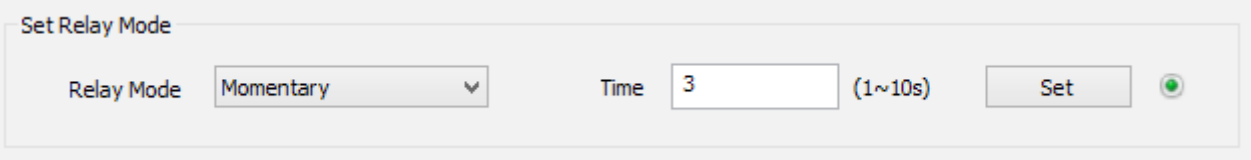
Click the *Send* button adjacent to the *Power off* field. If upload is successful a green light next to the *Send* button will illuminate and a pop up window will confirm a successful upload.



Setting Relay Modes

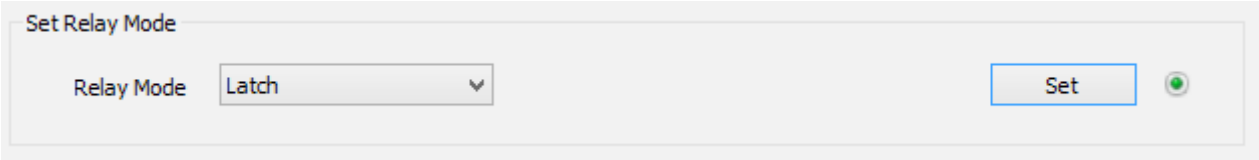
By default the relay ports are set to latching, with the configuration software tool you can change the mode to momentary and then set the momentary switch time as well.

To change the default relay mode to momentary, choose the *Momentary* selection from the Relay Mode drop down menu, then set the time (1-10 seconds) in the *Time* field.



Click the *Set* button. If upload is successful a green light next to the Set button will illuminate and a pop up window will confirm a successful upload.

To change back to latching relay mode, choose the *Latch* selection from the *Relay Mode* drop down menu, then click *Set* button to make the change.



Technical Specifications

VIDEO	
Video Inputs	(1) HDMI
Video Input Connector	(1) HDMI type A
Video Output	(1) HDMI
Video Output Connector	(1) HDMI type A
Maximum Pixel Clock	600Mhz
Output Resolution Support	4096x2160 24/25/30/50/60Hz; 3840x2160 24/25/30/50/60Hz; 1920x1200 60Hz; 1920x1080 24/25/30/50/60Hz; 1280x720 24/25/30/50/60Hz; 1680x1050 60Hz; 1600x1200 60Hz; 1600x900 60Hz; 1440x900 60Hz; 1400x1050 60Hz; 1366x768 60Hz; 1360x768 60Hz; 1280x1024 60Hz; 1280x960 60Hz; 1280x800 60Hz; 1280x768 60Hz; 1024x768 60Hz; 800x600 60Hz
Standards	Compliant with HDMI 2.0 & HDCP2.2
Bandwidth	18Gbps
Audio	
Audio Output	(1) S/PDIF (1) Analog
Audio Output Connector	(1) RCA (1) Stereo 3.5mm
Frequency Response	20Hz~20K Hz
CONTROL	
Control Port	(2) RELAY (1) RS232
Control Connector	(2) 3 pin phoenix connector (RELAY) (1) 3 pin phoenix connector (RS232)
Other	
Temperature	0 ~ +45 C (32 F- 113 F)
Humidity	10% ~ 90%
Power Supply	DC12V 0.5A
Power Consumption	<3W
Dimension (W*H*D)	4.72” x .79” x 3.15”
Weight	.5 lbs
Warranty	2 years
Included Accessories	Quick Install Guide; (1) Power adapter with 4 power plug adapters for UK, US, EU and AU; (1) RS232 to 3 pin phoenix breakout cable; (3) 3 pin phoenix male connectors

Thank you for your purchase.

For Technical Support please call our toll free number at 800-530-8998
or email us at supportlibav@libav.com

www.libav.com

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