



# DIGITALINX

VALUE-ENGINEERED DIGITAL SOLUTIONS

## DL-SC41U-TX 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

## Product Overview

The DigitaLinx DL-SC41U-TX is a 4x1 multi format A/V presentation auto switcher that supports video resolutions up to 4K@60Hz 4:4:4 8bit deep color, is HDCP 2.2 compliant and has a built in USB 3.0 switching hub for control and integration of USB devices such as USB cameras and microphones. The switcher features four video inputs; (2) HDMI, (1) Display Port and (1) USB-C. The USB-C input supports video, data (USB host) and power charging up to 40w. There is a 2 port USB client hub built with 2 USB host ports that can be switched independently or can be assigned to follow a video input so when the video input is triggered or switched, the defined USB host port will also switch. The switcher features two matrix outputs; HDMI and HDBaseT 2.0. The built in HDBaseT 2.0 transmitter output supports long distance transport of audio, video and High Speed USB 2.0 signals up to 190Mbps up to 70 meters / 232' using one category cable. The switcher is compatible with the DL-SCU-RX HDBaseT 2.0 receiver (sold separately) and the receiver can supply power to the DL-SC41U-TX remotely when used in this configuration.

The DL-SC41U-TX gives you the ability to automate the display power ON by using pre-loaded RS232 commands whenever a video signal is introduced to the system using any A/V input. It will also turn the display power OFF after a specified amount of time has passed when no video signal or switching activity is present. For a complete list of programming commands to automate display power status, please see the complete owners manual online at [www.libav.com](http://www.libav.com) or by using the QR code on the print page of this guide.

The DL-SC41U-TX can be controlled via front panel buttons or by API commands using RS232 or Ethernet. A web server / GUI is built in that features A/V and USB switching control, automatic display control and input EDID management.

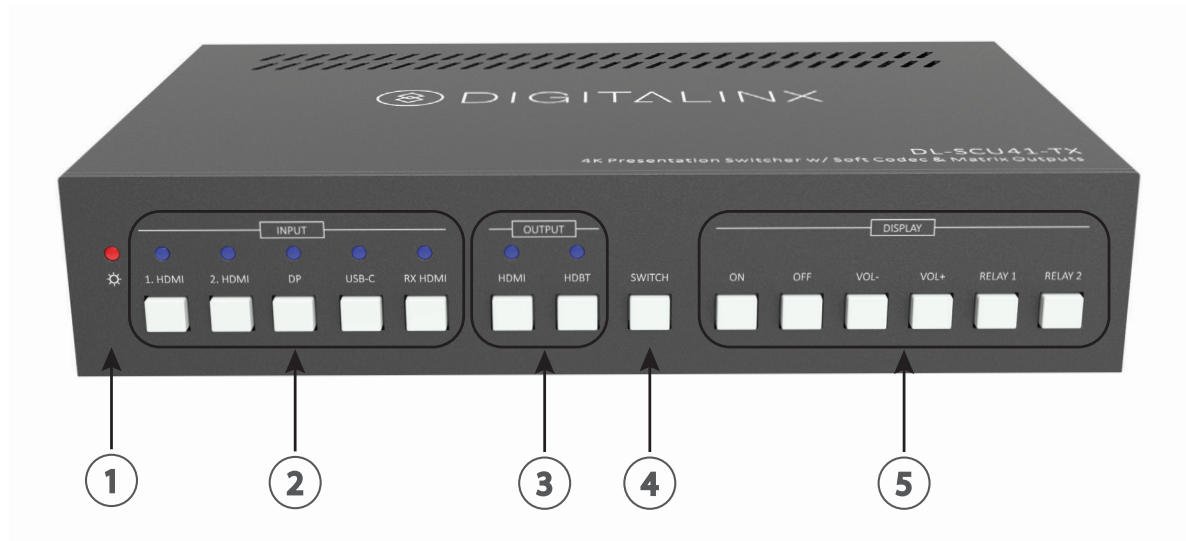
The DL-SC41U-TX is ideal for software based video teleconference rooms that require the consolidation and sync of A/V and USB signals from a laptop or room PC.

**NOTE:** The DL-SC41U-TX switcher can be used as a standalone switcher or paired with an HDBaseT receiver. The DL-SCU-RX HDBaseT 2.0 receiver (sold separately) is required to complete an extension circuit. When using the DL-SCU-RX, only USB 2.0 Full Speed devices can be used on the receiver.

## Package Contents

- DL-SC41U-TX 4X1 HDMI / USB Switcher
- (1) Quick Install Guide
- (1) 3 pin Phoenix Male Connector
- (4) Plastic Cushions
- (2) Mounting clips with 4 screws
- DC24V Power Supply with US, UK, EU and AU adapter plugs

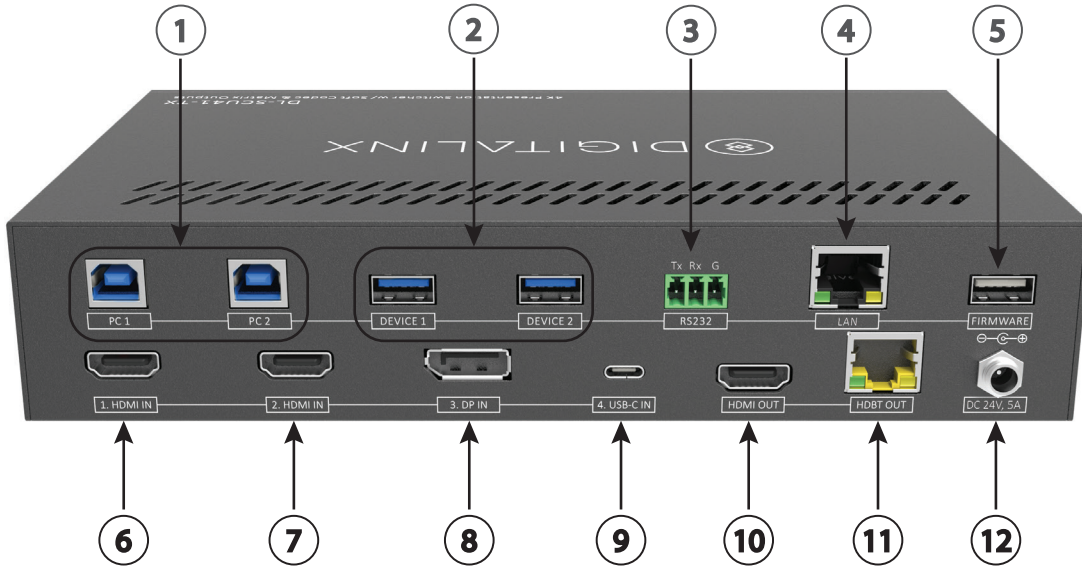
## Front Panel View



1. **POWER LED** - Illuminated red when power is applied
2. **INPUT** - A/V source selector and input LEDs
  - **NOTE:** The RX HDMI can only be used when paired with the DL-SCU-RX HDBaseT receiver
3. **OUTPUT** - Output selector and output LEDs
4. **SWITCH** - A/V switch selector
  - To route an input to an output, select the *INPUT*, then the *OUTPUT* then press *SWITCH*. By default the DL-SC41U-TX is set to auto switching mode.
5. **DISPLAY** - Display control buttons, triggers CEC / RS232 commands
  - ON: Turns display ON
  - OFF: Turns display OFF
  - VOL-: Turns display volume down
  - VOL+: Turns display volume up
  - RELAY 1: Turns relay 1 state ON/OFF
  - RELAY 2: Turns relay 2 state ON/OFF

**NOTE:** The RELAY 1/2 buttons can only be used when paired with the DL-SCU-RX HDBaseT receiver

# Back Panel View



1. **PC1 / PC2** - USB B Host ports

**NOTE:** By default PC1 is set to follow HDMI 1 video input, PC2 is set to follow HDMI 2 video input. This can be changed in the web GUI settings. See owners manual for complete instructions.

2. **Device 1 / Device 2** - USB A Client ports

3. **RS232** - Phoenix connector for RS232 system control

4. **LAN** - RJ45 connector for Ethernet system control

5. **FIRMWARE** - USB A port for firmware updates

6. **1. HDMI IN** - HDMI input 1

7. **2. HDMI IN** - HDMI input 2

8. **3. DP IN** - Display Port input

9. **4. USB-C IN** - USB C input, support A/V, data and power charging up to 40 watts

**NOTE:** The DL-SC41U-TX USB-C input supports ALT-DP mode for video, to ensure a source is compatible with the DL-SC41U-TX check the sources capability of supporting this mode.

10. **HDMI OUT** - HDMI output

11. **HDBT OUT** - 70M / 232' HDBaseT 2.0 transmitter output

12. **DC24V** - Power supply input

# Connectivity Instructions

1. Verify all components included with the extender set are present before installation.
2. Turn off power and disconnect the audio/video equipment by following the manufacturer's instructions.
3. Connect a source device to the HDMI inputs using an HDMI cable that is less than or equal to 5 meters in length. For source devices that are further away, an HDMI extension device will be required to complete the connection.
4. Connect a source device to the Display Port input using a Display Port cable that is less than or equal to 5 meters in length. For source devices that are further away, an extension device will be required to complete the connection.
5. Connect a source device to the USB-C input using a USB-C video cable that is less than or equal to 2 meters in total length. Only a USB-C cable rated for video, data and power will work as charging cables typically will not support video and/or data.
6. Connect an HDMI cable that is less to or equal to 5 meters in length between the display and the HDMI output of the DL-SC41U-TX. For display devices that are further away, an HDMI extension device will be required to complete the connection such as the DL-SCR-RX HDBaseT 2.0 receiver.
7. (Optional) Connect Category 6 or greater solid core twisted pair cable with RJ45 connectors between the DL-SC41U-TX and a compatible HDBaseT 2.0 receiver (DL-SCU-RX sold separately). TIA/EIA-568B straight-through wiring connections must be used.
8. (Optional) Connect an HDMI cable less to or equal to 5 meters in length between the TV display and the HDBaseT 2.0 receiver (DL-SCU-RX sold separately) HDMI output.
9. If using the DL-SC41U-TX in standalone mode, connect the power supply adapter to the DL-SC41U-TX. If using the optional HDBaseT receiver (DL-SCU-RX, sold separately) to power the DL-SC41U-TX via HDBaseT, connect the power supply adapter to the DL-SCU-RX.

**NOTE:** If you choose to supply 40 watts of power charging to the USB-C input on the DL-SC41U-TX while using the DL-SCU-RX extender receiver, you will need to power both the DL-SC41U-TX and the DL-SCU-RX devices with the supplied power supplies.

10. (Optional) Connect RS232 / Ethernet control to a 3rd party control system to control switcher functions

**NOTE:** A list of RS232 commands for this unit is available in the owners manual online at [www.libav.com](http://www.libav.com) under the *DOCUMENTATION* tab of the DL-SC41U-TX product page

11. Power on attached audio/video devices.

# Cabling Wiring Requirements

## HDBaseT Cabling

To ensure proper performance of the DL-SC41U-TX, 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 over longer distances.



When using shielded category cabling *ALWAYS*...

- ....use shielded connectors
- ....properly ground the category cable

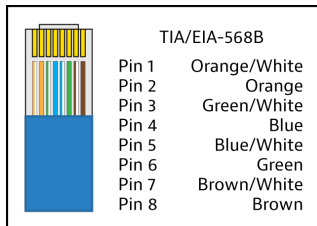
For optimized HDBaseT performance use the following Liberty Wire and Cable branded cabling;

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**



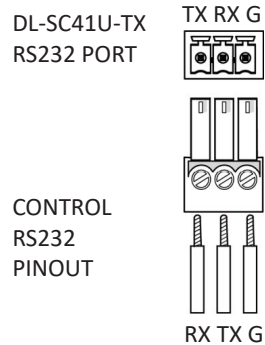
### Twisted Pair Wiring

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

The RS232 connection on the matrix is 3 pin phoenix. See below for RS232 configuration.

- 9600 baud
- 8 Data Bits
- 1 Stop Bit
- Parity = none

Connecting to System Controller



# Technical Specifications

<b>Video</b>	
Video Inputs	(2) HDMI, (1) Display Port, (1) USB-C
Video Input Connector	(2) HDMI type A, (1) Display Port, (1) USB-C
Input Video Signal	HDMI for HDMI input, DisplayPort 1.2 for Display Port, ALT-DP Mode for USB-C
Video Output	(1) HDMI, (1) HDBaseT
Video Output Connector	(1) HDMI type A, (1) RJ45
Input Resolution Support	HDMI / Display Port: Up to 3840 x 2160 @60Hz / 4:4:4 / 8 bit deep color USB-C: Up to 3840 x 2160 @30Hz / 4:4:4 / 8 bit deep color
Output Resolution Support	HDMI: Up to 4K@60Hz 4:4:4 HDBaseT: Up to 4K@60Hz 4:2:0
Standards	Compliant with HDMI 2.0b, HDCP 2.2 and CEC
Bandwidth	All Inputs: 18Gbps HDMI Output: 18Gbps HDBaseT Output: 10.2Gbps
HDBaseT 2.0 Transmission Distance	1080P @ 70m or less when using Cat6 F/UTP, 4K @ 40m or less when using Cat6 F/UTP
<b>USB</b>	
Supported USB Standard	Local Switcher: Up to USB 3.0 @ 5Gbps HDBaseT 2.0 Receiver (optional): Up to USB 2.0 High Speed up to 190Mbps
USB Port Types	(2) USB B (Host) (1) USB C (Host) (2) USB A (Client)
<b>Audio</b>	
Supported output formats	HDMI Embedded: LPCM 7.1 audio, Dolby Atmos®, Dolby® TrueHD, Dolby Digital® Plus, DTS: X™, and DTS-HD® Master Audio™ pass-through
<b>Device Control Parameters</b>	
Ethernet	100BaseT
RS232 Baud Rate	9600 baud (default)
<b>Chassis and Environmental</b>	
Dimensions (WxHxD)	220 mm x 44 mm x 130 mm (8.7 in x 1.7 in x 5.1 in)
Shipping Weight	605g (1.3lbs.)
Operating Temperature	0° to +55° C (+32° to +131° F)
Operating Humidity	10% to 90%, Non-condensing
Storage Temperature	-20° to +70° C (+14° to +158° F)
Storage Humidity	10% to 90%, Non-condensing
<b>Power, ESD, and Regulatory</b>	
Power Supply Input	100V-240VAC / 50-60 Hz
Power Supply Output	24VDC / 5A
Power Consumption	32 watts (68 watts MAX with USB-C power charging support)
USB-C Power Consumption	40 watts
ESD Protection	15kV
Product Regulatory	FCC, CE, RoHS
Power Supply Regulatory	CE, RoHS
<b>Other</b>	
Standard Warranty	5 years
Included Accessories	Quick Install Guide, Power Supply with US, UK, AU and EU power plugs, (1) 3-pin to DB9 RS232 Cable, (2) Mounting clips with screws and (4) plastic cushions

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](mailto:supportlibav@libav.com)

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

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