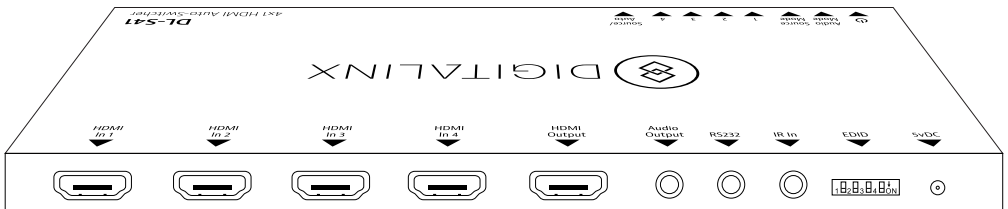# DIGITALINX
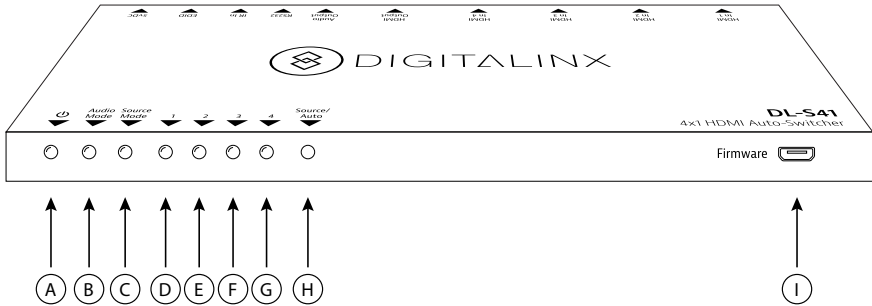## VALUE-ENGINEERED DIGITAL SOLUTIONS

DL-S41 Installation Guide

The DL-S41 is a small format auto-switcher with four HDMI video inputs and one HDMI output. This switcher supports HDMI video resolutions up to 4K (3840x2160) at 30 Hz, 1080p 3D, and multichannel audio. In addition to passing EDID information from the display, there are multiple built-in EDID settings to simplify an installation. The DL-S41 will de-embed digital stereo audio to provide an analog audio source for an existing audio system. This switcher also features audio return channel (ARC) support through the analog audio output.

When in auto-switch mode, the DL-S41 will switch to an HDMI input as soon as a new source is connected. When the active source is removed, the switcher will select the first source on the lowest numbered input. The DL-S41 may also be controlled via RS232, IR with the included remote, or from the source button on the front of the switcher.
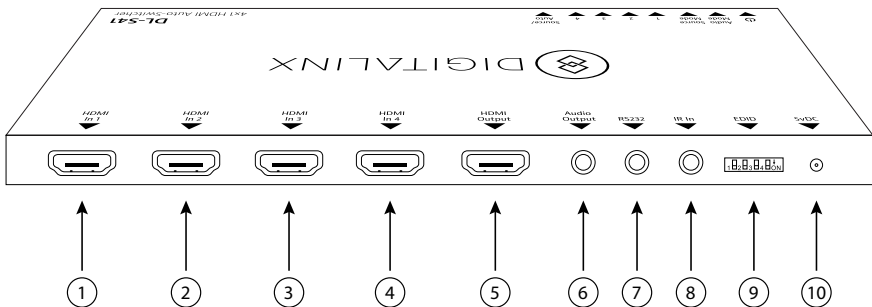
Included Accessories:

- · Mounting rails with screws
- · Rubber feet
- · RS232 Cable
- · IR Remote with battery

- · IR Receiver
- · Power Supply
- · Installation Guide

Front Panel:

A. **Power LED**
   Red when powered on
B. **Audio Mode LED**
   Green when de-embedding audio
   Yellow when in ARC mode
C. **Source Mode LED**
   Green in manual switch mode
   Yellow in auto-switch mode
D. **Input 1 LED**
E. **Input 2 LED**
F. **Input 3 LED**
G. **Input 4 LED**
H. **Source/Auto Button**
   Press to switch to next input
   Press and hold to switch between manual and auto modes
I. **Firmware Update Port**
   A separate document will provide usage instructions once a new firmware update is available.

Rear Panel:

1. HDMI In 1
2. HDMI In 2
3. HDMI In 3
4. HDMI In 4
5. HDMI Output
6. Audio Output
7. RS232
8. IR In
9. EDID switches
10. 5V DC Input

Instructions

1.   Verify all components included with the switcher are present before installation.

2.   If the switcher will be permanently mounted to a surface, attach the included mounting brackets with the supplied screws.

3.   If the switcher will be sitting on a shelf, attach the included rubber feet to the bottom of the unit.

4.   Turn off power and disconnect the audio/video equipment by following the manufacturer's instructions.

5.   If the switcher needs to use preset a preset EDID instead of the EDID of the connected display, set the EDID switches according to the table below.

6.   Connect an HDMI cable between the sources and the HDMI Input ports.

7.   Connect an HDMI cable between the display and the HDMI Output port.

8.   Connect an analog audio cable with 3.5 mm stereo audio plug to the Audio Output port.

9.   If the switcher will be controlled via IR, plug in the supplied IR receiver to the IR In port.

10. If the switcher will be controlled via RS232, plug in the supplied RS232 cable to the RS232 port.

11. Connect the included power supply to the switcher.

12. Power on attached audio/video devices.

EDID Settings:

Up, Up, Up, Up	EDID Pass-through (default)
Up, Up, Up, Dn	1080p 3D, 2 channel audio
Up, Up, Dn, Up	1080p 3D, 6 channel audio (Dolby and DTS)
Up, Up, Dn, Dn	1080p, 2 channel audio
Up, Dn, Up, Up	1080p, 6 channel audio (Dolby and DTS)
Up, Dn, Up, Dn	UHD at 30 Hz (3840x2160)

Source Button Control

Manual Switching:

When the DL-S41 is in manual switching mode, the Source Mode LED will be green. To advance to the next input, press the Source/Auto button.

Automatic Switching:

To enable automatic switching, press the Source/Auto button for three seconds. The Source Mode LED will change to yellow.

When in auto-switch mode, the DL-S41 will switch according to the following rules:

New Input: Upon detecting a new input, the switcher will automatically select the new input.

Reboot: Once power is restored to the switcher, Input 1 will automatically be selected as the current source even if an active source is on another input.

Source Removed: When an active source is removed, the DL-S41 will switch to the first available active input starting at HDMI Input 1.

IR Control

MENU:

Mute
Turns on and off audio and video output.

Audio
Switches between source HDMI audio and ARC audio output available on the Audio Output port.

Source/Auto
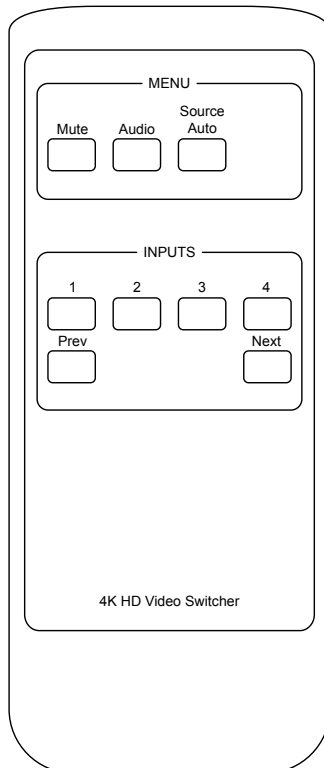Same function as the Source/Auto button on the switcher.

INPUTS:

1, 2, 3, 4
Switches directly to the specified input

Prev
Switches to the previous input

Next
Switches to the next input

```
┌───────────────────────────────┐
│                               │
│   ┌──── MENU ────┐            │
│   │        Source │           │
│   │ Mute  Audio  Auto │       │
│   │ ▭     ▭     ▭    │        │
│   └───────────────┘           │
│                               │
│   ┌──── INPUTS ────┐          │
│   │  1    2    3    4 │       │
│   │  ▭    ▭    ▭    ▭ │       │
│   │ Prev        Next │        │
│   │  ▭           ▭   │        │
│   └───────────────┘           │
│                               │
│      4K HD Video Switcher     │
│                               │
└───────────────────────────────┘
```

RS232 Control

RS232 Settings: 9600 baud, 8 Data bits, 1 Stop bit, Parity = None

x = Input Number

There is either a period (.), percent symbol (%) or ampersand (&) at the end of the commands. These characters must be present for the command to process correctly.

A carriage return and line feed will follow all responses.

Description	Command	Response
Switch to x input	`xB1.`	`AV: x -> 1`
Turn off audio and video output and lock Source button.	`0B0.`	`MUTE`
Turn on audio and video output and unlock Source button.	`0B2.`	`UNMUTE`
Turn on auto switch mode	`601%`	`Auto Switch`
Turn on manual switch mode	`602%`	`Manual Switch`
Turn on ARC	`ARC1&`	`Audio Return System`
Turn off ARC	`ARC0&`	`Switch Device System`
Get system status: current source, switch mode, and ARC mode	`600%`	`AV: x -> 1` **AND** `MUTE` **OR** `UNMUTE` **AND** `Auto Switch` **OR** `Manual Switch` **AND** `Audio Return System` **OR** `Switch Device System`

ARC

Audio Return Channel (ARC) allows audio from a display to pass "upstream" through an HDMI cable to an audio processing device, such as an AV receiver. When ARC mode is active on the DL-S41, the ARC stream will pass to the active HDMI source device if it can process the signal.

Audio Output

When the DL-S41 is not in ARC mode, audio from the selected input will be de-embedded to the Audio Output port. This provides a means of sending analog audio to an amplified stereo speaker system.

When the DL-S41 is in ARC mode, the ARC stream will be de-embedded to the Audio Output port.

Important notice:
- Do not attempt to disassemble or alter the switcher 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.
- Allow proper ventilation to reduce the risk of thermal failure.

Technical Specifications

I/O Connections

HDMI Inputs	Four (4) HDMI Type A Receptacle
HDMI Output	One (1) HDMI Type A Receptacle
Audio Output	One (1) 3.5mm TRS Jack
IR Input	One (1) 3.5mm TRS Jack
RS232	One (1) 3.5mm TRS Jack
EDID Selection	Four (4) Position DIP Switch
5v DC Power	One (1) 2.35 mm Outside Diameter, 0.7 mm Inside Diameter Barrel (EIAJ-1)
Source/Auto Button	One (1) 3 mm Microswitch
Firmware	One (1) Micro USB Type B Receptacle

Supported Audio and Video

Maximum Video Compatibility	Deep Color 48/36/30/24 Bit at 1080p, 3D, and 2160p/30
Video Compliance	HDMI, HDCP, CEC (Consumer Electronics Control), and ARC (Audio Return Channel)
Embedded Audio	Up to PCM 8 channel, Dolby Digital TrueHD, and DTS-HD Master Audio
Input DDC Signal	5.0 volts p-p (TTL)
Input Video Signal	0.5 to 1.0 volts p-p
IR Carrier Frequency Range	33-55kHz at 5 volts
RS232 Baud Rate	9600 baud

Chassis and Environmental

Enclosure	Painted aluminum
Dimensions (W x H x D)	193 mm x 80 mm x 11 mm (7.60 in x 3.15 in x 0.43 in)
Shipping Weight	0.82 kg (1.8 lbs.)
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
Storage Temperature (Environment)	-10° to +60° C (+14° to +140° F)
Storage Humidity (Environment)	20% to 90%, Non-condensing

Power, ESD, and Regulatory

Maximum Power Consumption	5 watts
Power Supply Input Voltage	100-240v AC at 50/60 Hz at 0.5 A
Power Supply Output Rating	5v DC at 1 A
ESD Protection	15kV
Device Regulatory	CE, RoHS
Power Supply Regulatory	CE, RoHS, TUV, UL, SGS

Other

Standard Warranty	2 Years
Diagnostic Indicators	Power, Audio Mode, Source Mode, Selected Input
Included Items	Installation guide, power supply, AC adapters (AU, EU, UK, and US), RS232 cable, IR receiver, IR remote with battery, rubber feet, mounting "L" brackets (2 ea), mounting screws (4 ea)