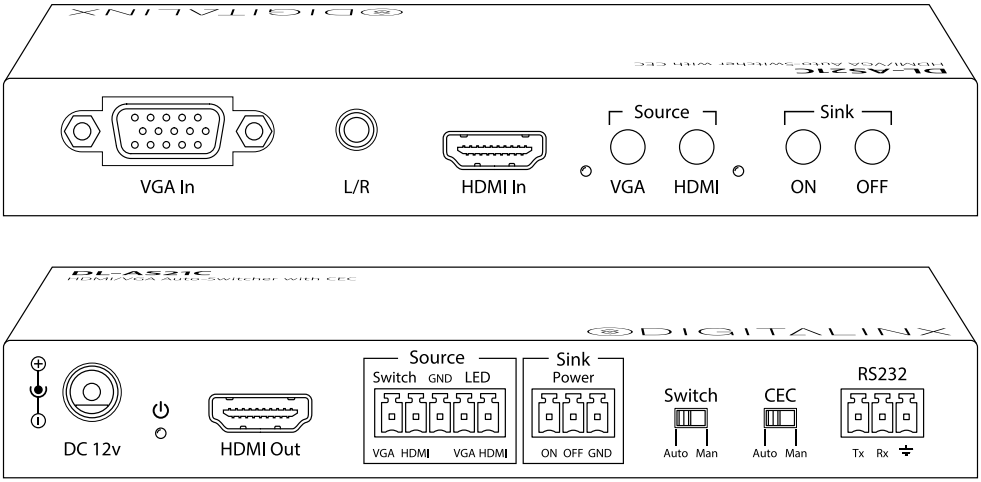
DIGITALINX

VALUE-ENGINEERED DIGITAL SOLUTIONS

DL-AS21C Installation Guide

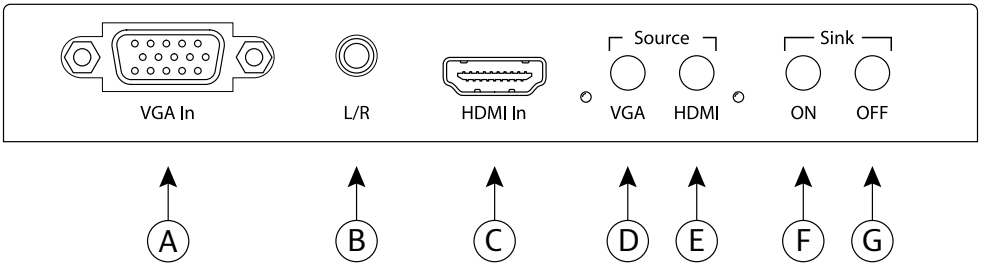


The DigitaLinx DL-AS21C is a compact multi-format switcher with support for video resolutions up to UHD (4096x2160). Featuring one HDMI input and one VGA input with stereo audio, the DL-AS21C automatically or manually switches either input to a single HDMI output.

The DL-AS21C features multiple methods of control. When set to Auto, the switcher will automatically switch to the newest source device added to the DL-AS21C with VGA taking precedence should multiple sources be live simultaneously. The DL-AS21C may be manually controlled by switching via the front panel, RS232, or contact closure.

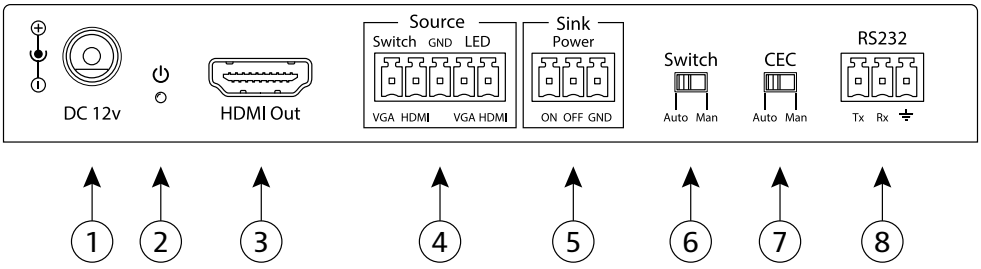
As an added benefit, the DL-AS21C features a built-in CEC controller to power on/off the connected display by auto-selecting the source device's status.

Front Panel



A. VGA Input
B. Analog Audio Input (VGA only)
C. HDMI Input with Embedded Audio
D. VGA Select Button with LED
E. HDMI Select Button with LED
F. Sink (Display) On Button
G. Sink (Display) Off Button

Rear Panel



1. 12v DC Input
2. Power LED
3. HDMI Output with Embedded Audio
4. Source Select Contact Closures with LED Indicators
5. CEC On/Off Contact Closures
6. Switch Mode Selector
7. CEC Mode Switch
8. RS232 Control

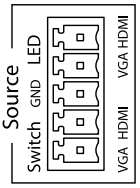
Included Accessories

- Installation guide
- Power supply with AC adapter (US)
- Mounting "L" brackets (2 ea)
- Mounting screws (4 ea)
- 3-pole terminal blocks (2 ea)
- 5-pole terminal block (1 ea)

Installation Instructions

1. Verify all components included with the product are present before installation.
2. Turn off power and disconnect the audio/video equipment by following the manufacturer's instructions.
3. Connect an HDMI cable between the digital source and an available input on the DL-AS21C.
4. Connect a VGA cable between the analog source and the VGA input.
5. Connect an audio cable with 3.5 mm end between the analog source and the analog audio input. Audio will not pass without a video signal present.
6. Connect an HDMI cable between the display and the HDMI output.
7. Connect the appropriate audio output cable to any of the available audio output ports of the DL-AS21C.
8. Connect an RS232 cable between a control device and the RS232 port.
9. Connect switches and LEDs to the Source and CEC contact closure connections.
10. Connect the included power supply to the DL-AS21C and lock the power supply to the power connector by twisting the locking collar clockwise.
11. Power on all audio/video devices.

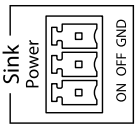
Contact Closure Wiring



HDMI LED +
VGA LED +
Ground for all connections
HDMI contact closure
VGA contact closure

LED connections will indicate selected source input.

Contact closure connections will manually switch source input.



Ground for all connections
CEC Off
CEC On

CEC connections allows remote access to manually turn on and off a CEC enabled display.

Input Selection

Automatic Switching:

To enable automatic switching, slide the Switch mode selector switch to the Auto position. When in auto-switch mode, the DL-AS21C 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, it will automatically reconnect the active input. If both inputs are active, it will switch to the VGA input.

Source Removed: When an active source is removed, the DL-AS21C will switch to the first available active input.

Manual Switching:

To enable manual switching, slide the Switch mode selector switch to the Man position. When in manual switch mode, the select the input of the DL-AS21C by using one of the following methods:

Front Panel: Press either the HDMI or VGA buttons.

Contact Closure: Make a contact closure between the HDMI and GND contacts or the VGA and ground contacts.

RS232: Transmit the `SET HDMI` or `SET VGA` RS232 commands.

Display On/Off

Automatic display on:

To automatically turn on the display when an active input is connected, slide the CEC mode switch to the Auto position. When in Auto mode, the DL-AS21C will turn on the display once an active source has been connected.

Automatic display off:

To automatically turn off the display when no active input is connected, slide the CEC mode switch to the Auto position. When in Auto mode, the DL-AS21C will turn off the display after no sources have been connected for three (3) minutes. To increase the time before power off, send the `CEC OFF XX` command via RS232.

Manual display on/off:

To manually turn on or off the display, slide the CEC mode switch to the Man position. When in Man mode, the DL-AS21C can turn on and off the display with active sources connected to the inputs.

Front Panel: Press either the ON or OFF buttons.

Contact Closure: Make a contact closure between the ON and GND contacts or the OFF and ground contacts.

RS232: Transmit the `DISPLAY ON` or `DISPLAY OFF` RS232 commands.

RS232 Control

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

A carriage return and line feed must follow all RS232 commands. A carriage return and line feed will follow all responses.

Input Switching

Description	Command	Response
Switch to HDMI Input	`SET HDMI`	`HDMI`
Switch to VGA input	`SET VGA`	`VGA`
Get active input	`GET INPUT`	`HDMI` or `VGA`

HDMI EDID

The EDID for the HDMI input is passed directly from the display.

VGA EDID Settings

Description	Command	Response
1920x1080/60 (Full HD)	`EDID FHD`	`FHD`
1280x720/60 (HD)	`EDID HD`	`HD`
1920x1200/60 (WUXGA)	`EDID WUXGA`	`WUXGA`
1600x1200/60 (UXGA)	`EDID UXGA`	`UXGA`
1280x800/60 (WXGA)	`EDID WXGA`	`WXGA`
1024x768/60 (XGA)	`EDID XGA`	`XGA`
Get VGA EDID	`GET EDID`	`the current value is:` EDID

CEC Commands

Description	Command	Response
Turn display (sink) on	`DISPLAY ON`	`DISPLAY ON`
Turn display (sink) off	`DISPLAY OFF`	`DISPLAY OFF`
Set CEC auto off time (XX = minutes) (default = 03)	`CEC OFF XX`	`CEC OFF Delay XX minutes`

Factory Reset

Description	Command	Response
Reset to factory defaults (VGA at FHD; CEC at 3 mins)	`RST`	`Reset to Factory defaults`

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.

Technical Specifications

Supported Audio, Video, and Control	
Supported Broadcast HDMI Input Resolutions	480p: 59.94/60 Hz, 576p: 50 Hz, 720p: 25/29.97/30/50/59.94/60 Hz; 1080i: 50/59.94/60 Hz; 1080p: 23.98/24/25/29.97/30 /50/59.94/60 Hz; 4096x2160/3840x2160: 24/25/30 Hz; 4096x2160/3840x2160 (4:2:0): 50/60 Hz
Supported DVI-based HDMI Input Resolutions (all at 60 Hz)	640x480, 720x576, 800x600, 1024x768, 1280x720, 1280x800, 1280x1024, 1360x768, 1366x768, 1440x900, 1400x1050, 1600x900, 1600x1200, 1680x1050, 1920x1080, 1920x1200
Supported VGA Input Resolutions (all at 60 Hz)	640x480, 720x576, 800x600, 1024x768, 1280x720, 1280x800, 1280x1024, 1360x768, 1366x768, 1440x900, 1400x1050, 1600x900, 1600x1200, 1680x1050, 1920x1080, 1920x1200
Video Compliance	HDMI, HDCP
HDMI EDID	Pass-through from Display
VGA EDID (set via RS232)	1024x768, 1280x720, 1280x800, 1600x1200, 1920x1080 (default), 1920x1200
Embedded Audio Input/Output	PCM 2 channel; AAC 5.1
Analog Audio Frequency Response	20Hz-20KHz
Analog Audio Input Impedance	>10k ohm
Analog Audio Output Impedance	50 ohm
Input DDC Signal	5.0 volts p-p (TTL)
Input Video Signal	0.5 to 1.0 volts p-p
Maximum Passive HDMI Distance	5 m (16 ft)
RS232 Baud Rate	9600 baud
CEC	On and Off to display only
Chassis and Environmental	
Enclosure	Painted steel
Dimensions (H x W x D)	20 mm x 142 mm x 64 mm (0.78 in x 5.59 in x 2.52 in)
Operating Temperature (Environment)	0° to +40° C (+32° to +104° F)
Operating Humidity (Environment)	20% to 90%, Non-condensing
Power, ESD, and Regulatory	
Maximum Power Consumption	3.8 watts
Power Supply Input Voltage	100-240v AC at 50/60 Hz at 0.45 A
Power Supply Output Rating	5V DC at 3 A
ESD Protection	15kV
Device Regulatory	RoHS
Power Supply Regulatory	CE, RoHS, UL, TUV, FCC
Other	
Standard Warranty	2 Years
Diagnostic Indicators	Power, Selected Input
Included Items	Installation guide, power supply, AC adapter (US), three pole terminal blocks (2 ea), five pole terminal blocks (1 ea), mounting “L” brackets (2 ea), mounting screws (4 ea)

Distances and picture quality may be affected by cable grade, cable quality, source and destination equipment, RF and electrical interference, and cable patches.

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