TechLogix Networx

User Manual

TL-2X1-HDVC

2x1 HDMI & VGA Switcher with Control

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Version: TL-2X1-HDVC_160630

Preface

Read this user manual carefully before using this product. Pictures shown in this manual are for reference only, slight differences may be evident on the real product.

This manual is only for operation instruction only, not for any maintenance usage.

Trademarks

Product model and logo are trademarks. Any other trademarks mentioned in this manual are acknowledged as the properties of the trademark owner. No part of this publication may be copied or reproduced without prior written consent.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.

SAFETY PRECAUTIONS

To insure the best experience from the product, please read all instructions carefully before using the device. Save this manual for further reference.

● Unpack the equipment carefully and save the original box and packing material for possible future shipment

● Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.

● Do not dismantle the housing or modify the module. It may result in electrical shock or burns.

● Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.

● Refer all servicing to qualified service personnel.

● To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.

● Do not put any heavy items on the extension cable in case of damage.

● Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.

● Install the device in a place with proper ventilation to avoid damage caused by overheat.

● Keep the module away from liquids.

● Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.

● Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

● Unplug the power cord when left unused for a long period of time.

● Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

1. Introduction

TL-2X1-HDVC is a VGA/HDMI Smart Switcher with direct CEC control, offering one HDCP compliant HDMI input, a VGA with analog stereo audio input, and a HDMI output up to 4K@60Hz (Chroma sub-sampling 4:2:0 8-bit only) without scaler.

Its built-in CEC controller allows user to directly switch the power status of CEC-supported display device, such as TV or projector, eliminating the need of IR Remote or RS232 control. Select buttons in the front panel help users to choose input sources, or power on/off display device. Two groups of Contact Closure are also provided for 3rd party key pad controlling, with LED indication to show the status

1.1 Features

- 1 x VGA + 3.5mm stereo audio input, up to 1920x1200@60Hz.
- 1 x HDMI input, up to 4k@60Hz (Chroma sub-sampling 4:2:0 8-bit only).
- Auto-sense and switching to the latest input.
- CEC controller built in to power on/off sink device by auto-detecting the source status.
- Switch source devices or power on/off of display devices via select buttons.
- Contact closure provided to switch source devices or power on/off of display devices
- Adjust the working mode via "Switch" and "CEC" DIP switch.
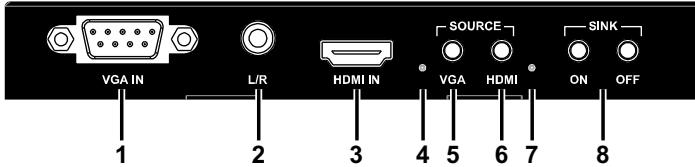- Plug & Play, no RS232 API needed to switch the source or the power status of display device.

1.2 Package List

✓ 1 x TL-2X1-HDVC	✓ 1 x Mounting ears
✓ 2 x 3.5mm 3 Pin Phoenix Connector	✓ 1 x Power Adapter (DC 12V 0.5A)
✓ 1 x 3.5mm 5 Pin Phoenix Connector	✓ 1 x User manual

📖 Check whether all the items listed above are included in your package. If not, contact your dealer.
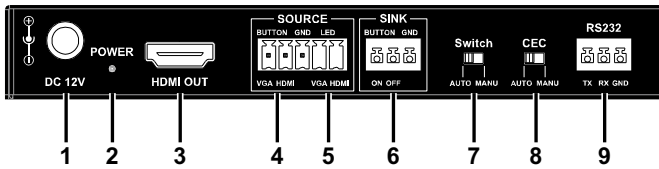
2. Appearance

<u>Front Panel</u>

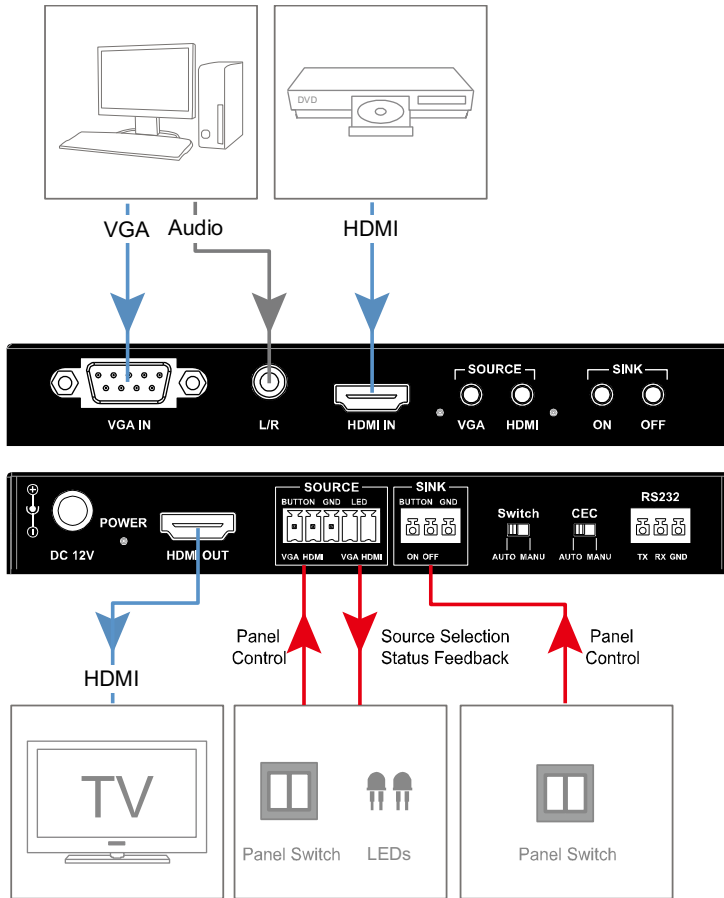| No.	Name	Description
1	VGA IN	Connects to VGA sources
2	L/R	VGA analog stereo audio input
3	HDMI IN	Connects to HDMI sources
4	VGA LED	Lit when VGA source is selected
5	Select Button	Press this button to select VGA IN
6	Select Button	Press this button to select HDMI IN
7	HDMI LED	Lit when HDMI source is selected
8	Select Buttons	Power on/off the display devices via CEC. Note: The display device must support CEC and CEC is enabled.

Rear Panel

No.	Name	Description
1	Power Input	12V 0.5A DC power input
2	Power LED	Indicates power status
3	HDMI OUT	Connects to an HDMI display devices
4	Source Input Select Button	Connects to a control device such as keypad for switching between VGA and HDMI inputs. Pin VGA and GND are used for selecting VGA IN as the input source, Pin HDMI and GND are used for selecting HDMI IN as the input source.
5	Source Input Select LED	Connects to a control device such as keypad for indicating the current input source, this is the same control device which is connected to source input select button. If the input source is VGA IN, the VGA indicator on the keypad will be on. If the input source is HDMI IN, the HDMI indicator on the keypad will be on.
6	Sink	Power on/off the display devices. Note: The display devices must support CEC and CEC is enabled.
7	Switch	Auto: it becomes an auto-switcher. MANU: manual button and contact closure switching are enabled, auto switch is disabled
8	CEC	Auto: sends CEC command to power on/off sink device by auto-detecting whether the input source status is active or not. MANU: manual button and contact closure CEC control are enabled.
9	RS232	Used for RS232 control

📖 Pictures shown in this manual are for reference only.

3. System Connection

The figure below illustrates a typical connection that can be utilized with TL-2X1-HDVC:

Step1. Connect a HDMI/VGA source (e.g. a Blu-ray DVD) to **IN** port of TL-2X1-HDVC;

Step2. Connect a HDMI display (e.g. a LCD TV) to **OUT** port of TL-2X1-HDVC;

Step3. Connect Panel switch (e.g. a LCD TV) to **SOURCE/SINK** ports of TL-2X1-HDVC;

Step4. Plug DC 12V 1A power adapter into the power port of TL-2X1-HDVC.

1)   System should be installed in a clean environment with proper temperature and humidity.

2) All of the power switches, plugs, sockets and power cords should be insulated.
3) All devices should be connected before power on.
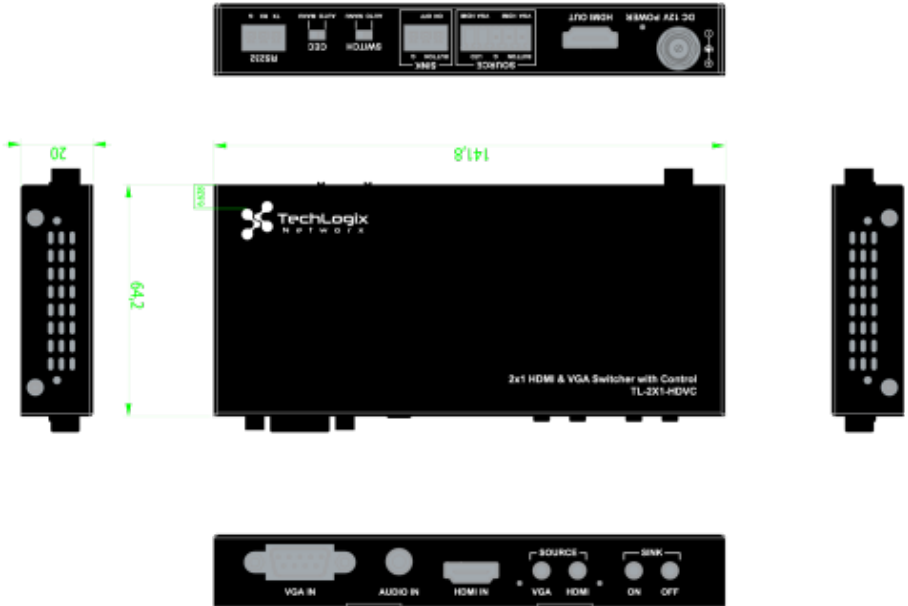
4. Specification

Technical	
Input	2 x HDMI IN 1 x VGA IN
Input Signal Type	HDMI: HDMI1.4 with HDCP VGA: VESA
Input Resolution Support	HDMI: 4096x2160@24/25/30/50/60Hz, 3840x2160@24/25/30/50/60Hz, 1080P, 1080I, 720P, 576p, 576i, 480p, 480i; VGA: 1920x1200/1920x1080/1680x1050/1600x1200/1600x900/1400x1050/1440x900/1366x768/1280x1024/1280x800/1280x768/1280x720/1024x768/800x600/640x480@60Hz
Input Video Level	0.5-1.0 V p-p
Maximum Pixel Clock	HDMI:340MHz VGA:165MHz
Output	1 x HDMI OUT
Output Signal Type	HDMI1.4 with HDCP

Output Resolution Support	VESA: 640 x 480@60Hz, 800 x 600@60Hz 1024 x 768@60Hz, 1280 x 768@60Hz 1280 x 800@60Hz, 1280 x 960@60Hz 1280 x 1024@60Hz, 1360 x 768@60Hz 1366 x 768@60Hz, 1440 x 900@60Hz 1600 x 900@60Hz, 1600 x 1200@60Hz 1680 x 1050@60Hz, 1920 x 1200@60Hz SMPTE: 720 x 480@60Hz, 720 x 576@50Hz, 1280 x 720@50/60Hz, 1920 x 1080@50/60Hz, 3840 x 2160@30Hz
General	
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	10% to 90%, non-condensing
ESD Protection	Human-body Model: ±8kV(Air-gap discharge)/ ±4kV(Contact discharge)
Surge Protection	Voltage: ±1 kV (Ten times respectively for the positive and negative voltage)
Electrical Fast Transient/Burst	Data communication cord: 1 kV Power cord : 2 kV
Power Supply	DC 12 V/0.5 A
Power Consumption (Maximum)	1.5W
Device Dimension (W x H x D)	141.8mm x 64.2mm x 20mm 5.54" x 2.53" x 0.70"

Product Weight	0.22kg
Certification	CE, FCC

📖 Use quality HDMI cable to connect the devices to ensure preferred transmission effect.

5. Panel Drawing

6. Troubleshooting & Maintenance

Problems	Causes	Solutions
Color loss or blurry/ double image on HDMI display	Poor quality of the HDMI cable	Change for qualified HDMI cable.
Power led is off, operations don't work	No power	Power up the unit
	Poor contact of power port	Make sure power adapter is properly seated
No output on the display	Source/ Display is off	Turn on the source/ display
	Poor contact of HDMI ports	Check the HDMI ports one by one to make sure they're properly seated.

📖 If your problem persists after following the above troubleshooting steps, seek further help from authorized dealer or our technical support.

7. After-sales Service

If there appear some problems when running the device, please check and deal with the problems referenced in this user manual.

4) **Product Limited Warranty:** We warrant that our products will be free from defects in materials and workmanship for **three years.**   Please see warranty page posted on www.tlnetworx.com for more info.

5) **What the warranty does not cover:**
   - Warranty expiration.
   - Factory applied serial number has been altered or removed from the product.
   - Damage, deterioration or malfunction caused by:
     - Normal wear and tear
     - Use of supplies or parts not meeting our specifications
     - No certificate or invoice as the proof of warranty.
     - The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
     - Damage caused by force majeure.
     - Non-authorized service
     - Other causes which does not relate to a product defect
   - Delivery, installation or labor charges for installation or setup of the product

6) **Technical Support:** Email to our after-sales department or make a call, please inform us the following information about your cases.
   - Product version and name.
   - Detailed failure situations.
   - The formation of the cases.

Remarks: For any questions or problems, please try to get help from your local distributor.