2x2 Vertical Video Wall Controller 4K@60Hz

Model: LM-TV04HV

User Manual

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Dear Customer

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

1. The product is labeled with fragile label. Please protect it as it will serve as the warranty certificate.
2. This product does not support direct touch screen. The connected output is HDMI interfaces.
3. If you have any questions during use, please refer to this manual first. There are detailed description of the operation. Please follow the instructions for correct operation. If you still have questions, please contact us. We will provide you with a satisfactory response as soon as possible.
4. Product information is subject to change without prior notice.

NOTES:

1. Please use DC 12V 1.5A power supply and ensure that the entire engineering system uses the same protective ground.
2. DO NOT press or put items on cables such as power cables, signal cables, and communication cables. Avoid trampling or squeezing cables to prevent potential hazards such as electric leakage or short circuit.
3. To ensure the safety of the device and prevent damage, it is necessary to power off the device before inserting or removing any signal cables. Please be aware that any damage caused by hot-plugging the cables while the device is powered on will not be covered under warranty.
4. DO NOT block any ventilation openings (for heat dissipation) on the surface of the device to to avoid heat accumulation, which may damage the device or cause fire.
5. To avoid damaging the product, DO NOT dismantle it by yourself, the device should be repaired and maintained by the professional and qualified personnel in the designated service center.
6. The working environment of the equipment should be kept free from dust and moisture. It is particularly important to prevent liquids from soaking or splashing into the equipment. Moisture and liquid contact can cause damage to the equipment and potentially lead to malfunctions or electrical hazards.
7. Operating relative humidity: ≤ 80%, storage temperature: -10°C to +80°C
8. Operating temperature: 0°C to +70°C.
9. Pay attention to ESD prevention during the assembly and transportation of the whole machine.
10. During the assembly of the whole machine, it can be installed either underneath or on the side, but it should not be subjected to heavy pressure.

The connection line between this product and the supporting module board should not be too long, otherwise the performance and image quality may be affected.

1. Product Overview

The LM-TV04HV is a professional-grade 4K vertical video wall controller designed to support up to 4K@60Hz HDMI 2.0 input (4:4:4) with HDCP 2.2 compliance. It routes any of its four HDMI inputs to any of the four HDMI outputs and enables flexible video wall configurations such as 2×2, 1×4, 4×1, and more. The controller supports both landscape and portrait splicing modes and offers versatile signal rotation (0°, 90°, 180°, 270°).

This unit is an ideal solution for home theaters, office setups, digital signage, command centers, conference rooms, educational institutions, KTVs, and various Pro AV applications.

2. Features

➢ Supports 2x HDMI 1.4 and 2x HDMI 2.0 inputs.
➢ Maximum input resolution: 3840x2160@60Hz (HDMI 2.0), HDCP 2.2 compliant.
➢ Supports both landscape and portrait video wall mode and signal rotation (0° / 90° / 180° / 270°).
➢ Supports multiple video wall modes like 1x1, 1x2, 1x3, 1x4, 2x1, 2x2, 3x1, 4x1.
➢ Built-in 3.5mm stereo analog audio output.
➢ Support bezel adjustment and image cropping, ensuring display with no black borders.
➢ Smart temperature control ensures efficient heat dissipation for durability and stability.
➢ Silent intelligent fan for noise-free operation.
➢ Quick switching between splicing modes via IR remote or front panel buttons.
➢ Full-function IR remote and panel control.
➢ Supports multi-window viewing: PIP (Picture-in-Picture), POP (Picture-outside-Picture), PBP (Picture-by-Picture), and 4P (Quad View).

3. Specification

Brand Name	LINK-MI
Model No.	LM-TV04HV
Technical	
HDCP Compliant	HDCP 2.2
Input Resolution	**HDMI input 1-2:** 640×480 to 3840×2160@30Hz **HDMI input 3-4:** 640×480 to 3840×2160@60Hz
Output Resolution	**Each HDMI output:** 1920×1080@60Hz (max 1920×1200@60Hz)

Interfaces	
Input Ports	2× HDMI 1.4 inputs (with embedded audio)
	2× HDMI 2.0 inputs (with embedded audio)
Output Ports	4× HDMI outputs (with embedded audio)
	1× 3.5mm stereo jack, supports L/R channel audio sync with video
Functions	
Control Ways	Front panel buttons, IR remote
Video Wall Modes	Both landscape and portrait modes 1x1, 1x2, 1x3, 1x4, 2x1, 2x2, 3x1, 4x1 *(One-Key Quick Setup by remote)*
Multi-window viewing	PIP, POP, PBP, 4P
Signal Rotation	0° / 90° / 180° / 270°
Other Functions	Bezel adjustment, image cropping...etc
Mechanical	
Power Supply	DC 12V 1.5A
Power Consumption	16W
Housing	Metal Enclosure
Color	Black
Net Weight	1.0kg
Product Dimensions	230×172×47mm (L×W×H)
Packaging Info	
Gross Weight	1.5kg
Box Dimensions	380×227×102mm (L×W×H)

4. Package Contents

① 1× Main Unit (4K60Hz 2x2 Vertical Video Wall Controller)
② 1× Power Adapter (DC 12V 1.5A)
③ 1× IR Remote
④ 2× Mounting Brackets with screws
⑤ 1× User Manual

5. Panel Buttons and Rear Ports

Front Panel

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① **IR:** IR indicator light

② **POWER:** Power indicator light

③ **MODE:** Select window display mode

④ **SPLICING:** Splicing On/Off

⑤ **ROTATE:** Rotate output signal

⑥ **1x3:** Activate 1x3 vertical splicing mode

⑦ **3x1:** Activate 3x1 horizontal splicing mode

⑧ **1x4:** Activate 1x4 vertical splicing mode

⑨ **4x1:** Activate 4x1 horizontal splicing mode

⑩ **2x2:** Activate 2x2 horizontal splicing mode

Rear Panel

① **DC 12V:** Power input port

② **HDMI 1:** HDMI 1.4 input, up to 4K@30Hz

③ **HDMI 2:** HDMI 1.4 input, up to 4K@30Hz

④ **HDMI 3:** HDMI 2.0 input, up to 4K@60Hz

⑤ **HDMI 4:** HDMI 2.0 input, up to 4K@60Hz

⑥ **AUDIO Out:** 3.5mm stereo audio output

⑦ **HDMI 1-4:** HDMI output ports 1-4

⑧ HDMI 1-4 output indicator light

6. Remote Control Button Description

OFF	Standby
ON	Power On
HDMI 1	Select HDMI Input 1
HDMI 2	Select HDMI Input 2
USB	One-click firmware upgrade
RESET	Factory reset
VOL-	Volume down
VOL+	Volume up
MUTE	Mute audio
INFO	Display system information
SPLICING	Splicing On/Off
INPUT	Input source selection
MENU	Open OSD menu
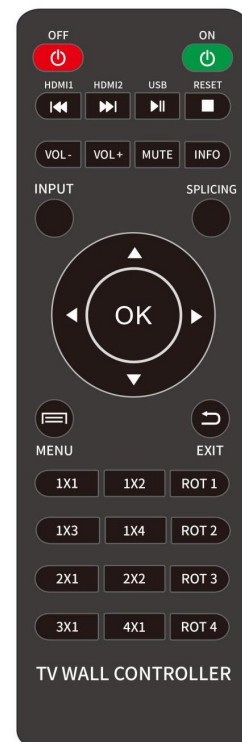
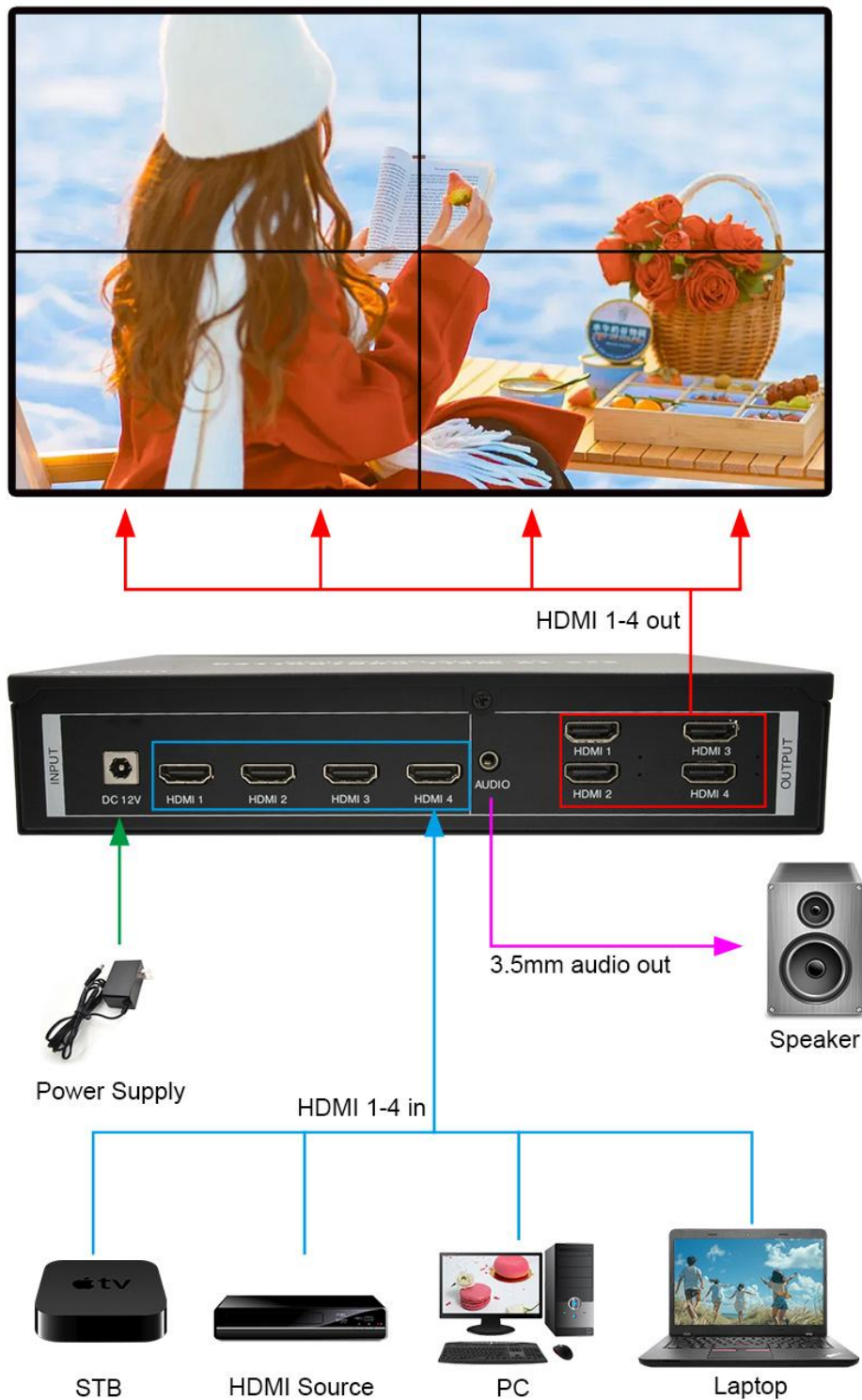| EXIT	Exit menu
OK	OK
1X1	1x1 splicing mode
1X2	1x2 splicing mode
1X3	1x3 splicing mode
1X4	1x4 splicing mode
2X1	2x1 splicing mode
2X2	2x2 splicing mode
3X1	3x1 splicing mode
4X1	4x1 splicing mode
ROT 1	Rotate Output 1 by 180°
ROT 2	Rotate Output 2 by 180°
ROT 3	Rotate Output 3 by 180°
ROT 4	Rotate Output 4 by 180°

7. Connection Diagram

Application 1: Portrait video wall modes

● Power Cable ●● HDMI cable ● 3.5mm Audio Cable

HDMI 1-4 out

HDMI 1-4 in

3.5mm audio out

Speaker

Power Supply

STB   HDMI Source   PC   Laptop

Application 2: Landscape video wall modes

● Power Cable   🔴🔵 HDMI cable   ● 3.5mm Audio Cable

HDMI 1-4 out

INPUT

DC 12V   HDMI 1   HDMI 2   HDMI 3   HDMI 4   AUDIO

HDMI 1   HDMI 3
HDMI 2   HDMI 4

OUTPUT

3.5mm audio out

Speaker

Power Supply

HDMI 1-4 in

STB   HDMI Source   PC   Laptop

8. Video Wall Modes Previews

Portrait video wall modes

1x2

2x2

1x3
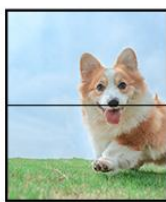

1x4

Landscape video wall modes
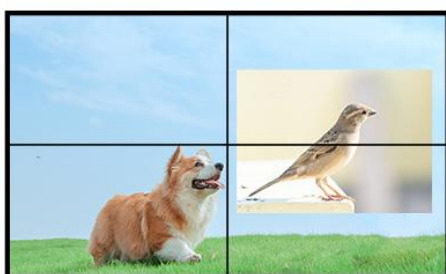
2X2

2X1

3X1

4X1

1X2

1X3

1X4

9. Multi-Window Display Mode Previews

PIP

POP

PBP

4P

10. Technical Support

For technical support – including troubleshooting, documentation, and software updates:
http://www.link-mi.com/feedback.html

Email Support: **service@link-mi.com**

When you contact us, please have the following information ready beforehand:
● Product model number, serial number, and date of purchase.
● Your source devices, display units, cable length, resolution, video wall mode...etc.
● Any error messages displayed at the time the error occurred.
● The sequence of operations that led up to the error.
● Any other information you feel may be of help.

11. Warranty

We offer a one-year limited warranty on our products starting from the date of original purchase. This warranty covers defects in materials and workmanship under normal use.

Warranty Terms:
1. The warranty is valid only for the original purchaser with proof of purchase.
2. During the warranty period, we will repair or replace defective products. No labor fees and replacement part costs will be charged (excluding damage caused by human factors or other force majeure events).
3. The warranty does not cover damage caused by misuse, accidents, unauthorized modifications, or natural disasters.

Exclusions:
1. Consumable parts, unless damage has occurred due to a defect in materials or workmanship.
2. Cosmetic damage, including but not limited to scratches, dents, and broken plastic on ports.
3. Damage caused by use with a third-party component or product that does not meet specifications.
4. Damage caused by using a non-standard power supply or one that exceeds the specified voltage and current limits.
5. Damage caused by hot-plugging cables while the device is powered on.

Warranty Request Process:
1. Contact our customer service by email.
2. Provide proof of purchase with date and a detailed description of the issue.
3. Follow the instructions from our support team for the return or repair of the product.

Mail-in Service:

This warranty includes a Mail-in Service, allowing customers to send in their defective products for free repair. Customers must mail-in the product during the warranty period.

When sending the unit, carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone and email address where you can be reached.