VSDISPLAY HD-MI VGA DVI Audio

VSDISPLAY VGA DVI Audio LCD Controller Board User Manual

Model: HD-MI VGA DVI Audio

1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of the VSDISPLAY VGA DVI Audio LCD Controller Board. This board is designed to convert specific 21.5-inch and 23.8-inch 1920x1080 30-pin LCD panels into functional displays with VGA and DVI input capabilities, along with audio output.
Please read this manual thoroughly before attempting installation or operation to ensure correct setup and optimal performance.

2. Product Components

The VSDISPLAY LCD Controller Board package typically includes the following components:

- 1 × VGA DVI LCD Controller Board (Model: M.NT68676.3, Part No: P21081893-0A02754)
- 1 × USB Cable (for LM238WF5 SSA1 Touch Screen, if applicable)
- 1 × Inverter Board
- 1 × 30Pin Signal Cable (LVDS cable)
- 1 × Keyboard With Cable (Control Panel)

Please note: A 12V DC power adapter (more than 3A) is required and is **not** included in the packing list.

Figure 2.1: Included Components (Shipping List)

3. Specifications

Feature	Detail
Model Number	VSDISPLAY HD-MI VGA DVI Audio (Board Model: M.NT68676.3)
Input Voltage	12V DC (minimum 3A recommended)
Video Inputs	VGA, DVI
Audio Output	Speaker Connector, Earphone Out
Supported LCD Resolution	1920x1080 Pixels
Supported LCD Interface	LVDS (30-pin)
Board Dimensions	Approximately 139mm x 53mm

Feature	Detail
Item Weight	4.7 ounces (approx. 133 grams)

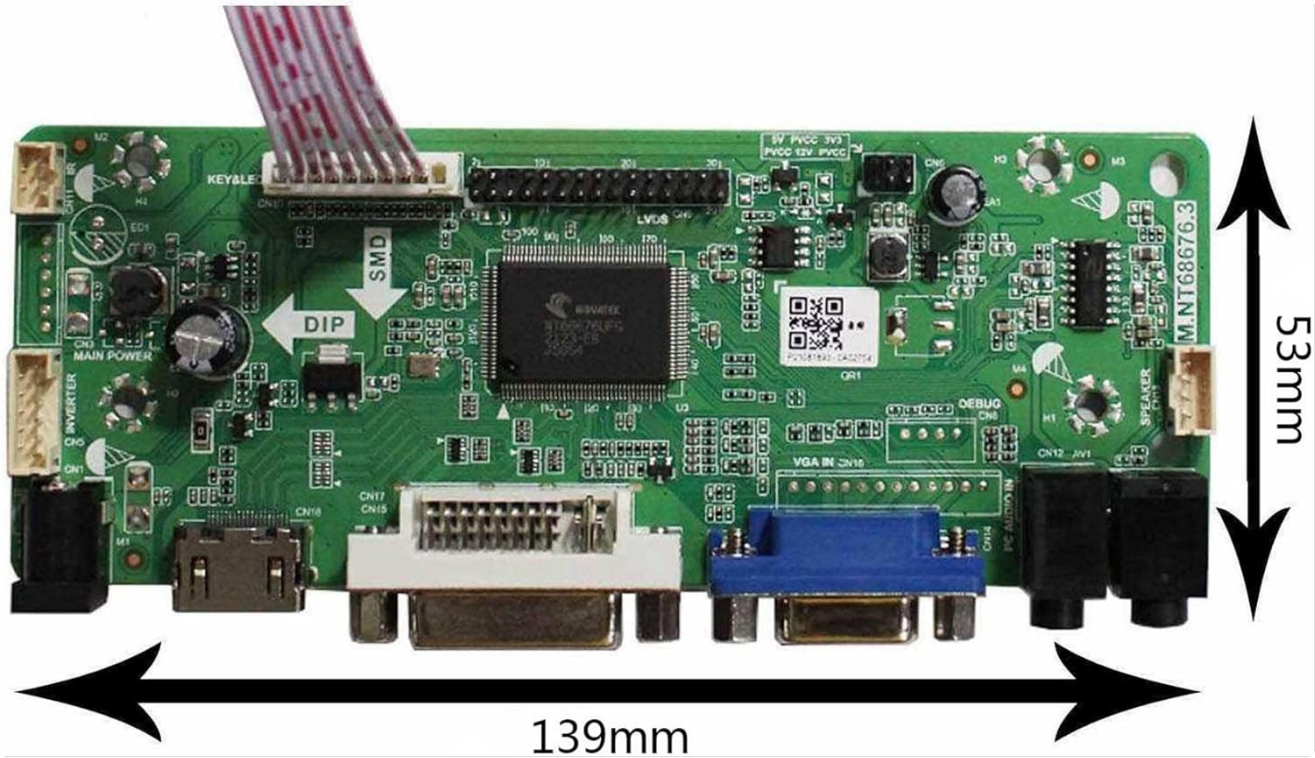

Figure 3.1: Controller Board Dimensions

4. Compatibility

This controller board is compatible with the following 21.5-inch and 23.8-inch LCD panels with a 1920x1080 resolution and 30-pin LVDS interface:

- 21.5-inch 1920x1080: T215HVN01.0, M215HW03 V1, M215HW03 V2, M215HGE-L23, M215HTN01.1
- 23.8-inch 1920x1080: LM238WF1 SLE3, LM238WF5-SSA1

Important Note: This controller board is **not** compatible with the LM215WF3-SLA1 LCD display. Always verify your LCD panel's model number before purchase and installation to ensure compatibility.

5. Installation Guide

Follow these steps carefully to install the VSDISPLAY LCD Controller Board. Ensure all power is disconnected from your LCD panel and the controller board before beginning.

5.1. Identify Board Components

Familiarize yourself with the main components and connection points on the controller board.

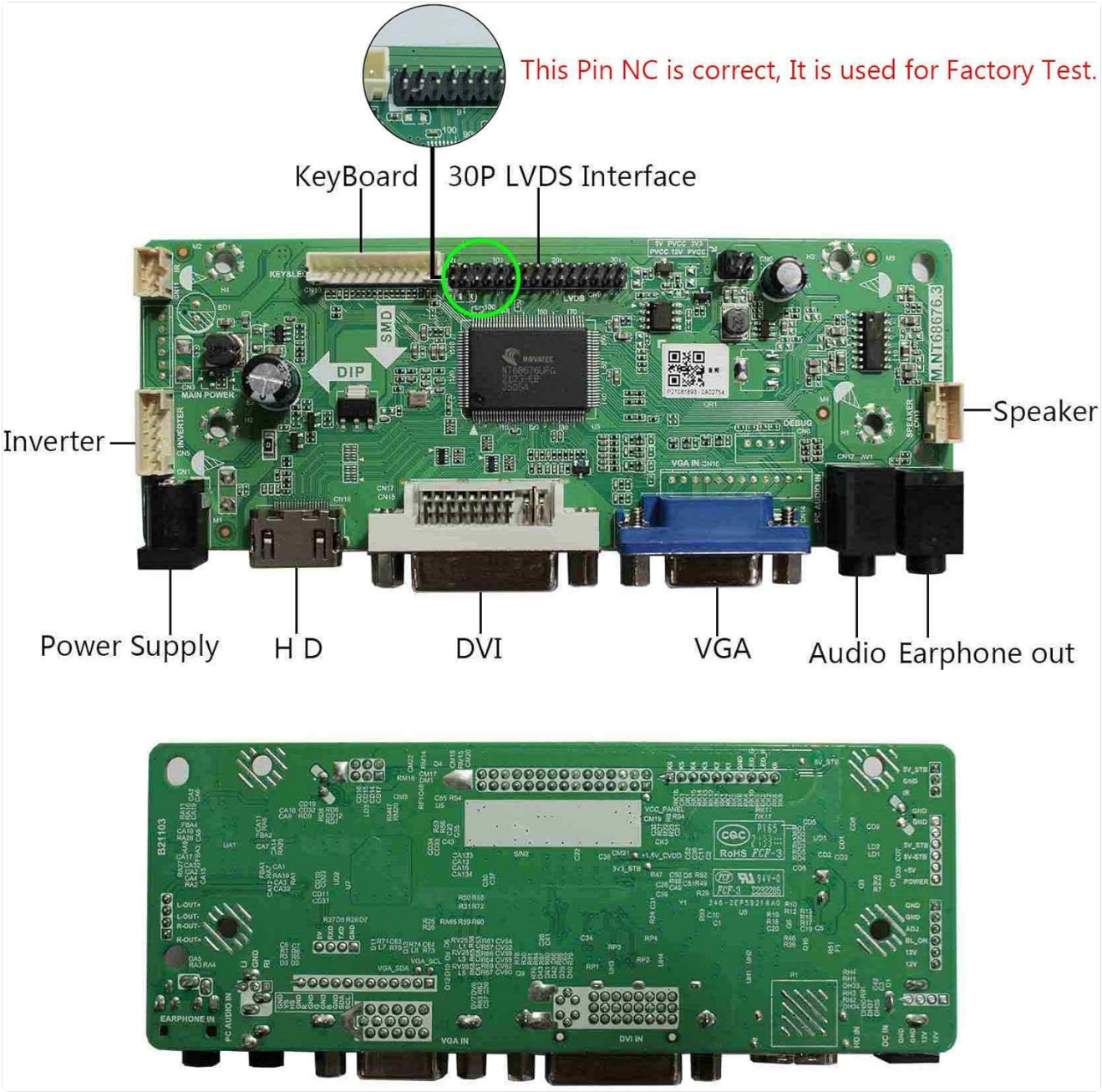

Figure 5.1: Controller Board Layout (Part No: P21081893-0A02754)

- **Power Supply:** 12V DC input.
- **HD:** HDMI input port.
- **DVI:** DVI input port.
- **VGA:** VGA input port.
- **Audio Earphone out:** 3.5mm audio output jack.
- **Speaker:** Connector for external speakers.
- **Inverter:** Connector for the inverter board (for CCFL backlights).
- **30P LVDS Interface:** Connector for the 30-pin LVDS signal cable to the LCD panel.
- **Keyboard:** Connector for the control panel.

5.2. Connect the LVDS Cable

Connect the 30-pin LVDS signal cable to the **30P LVDS Interface** on the controller board and to the corresponding port on your LCD panel. Ensure the cable is oriented correctly. The green circle in Figure 5.2 indicates the correct pin for factory testing, which helps in orientation.

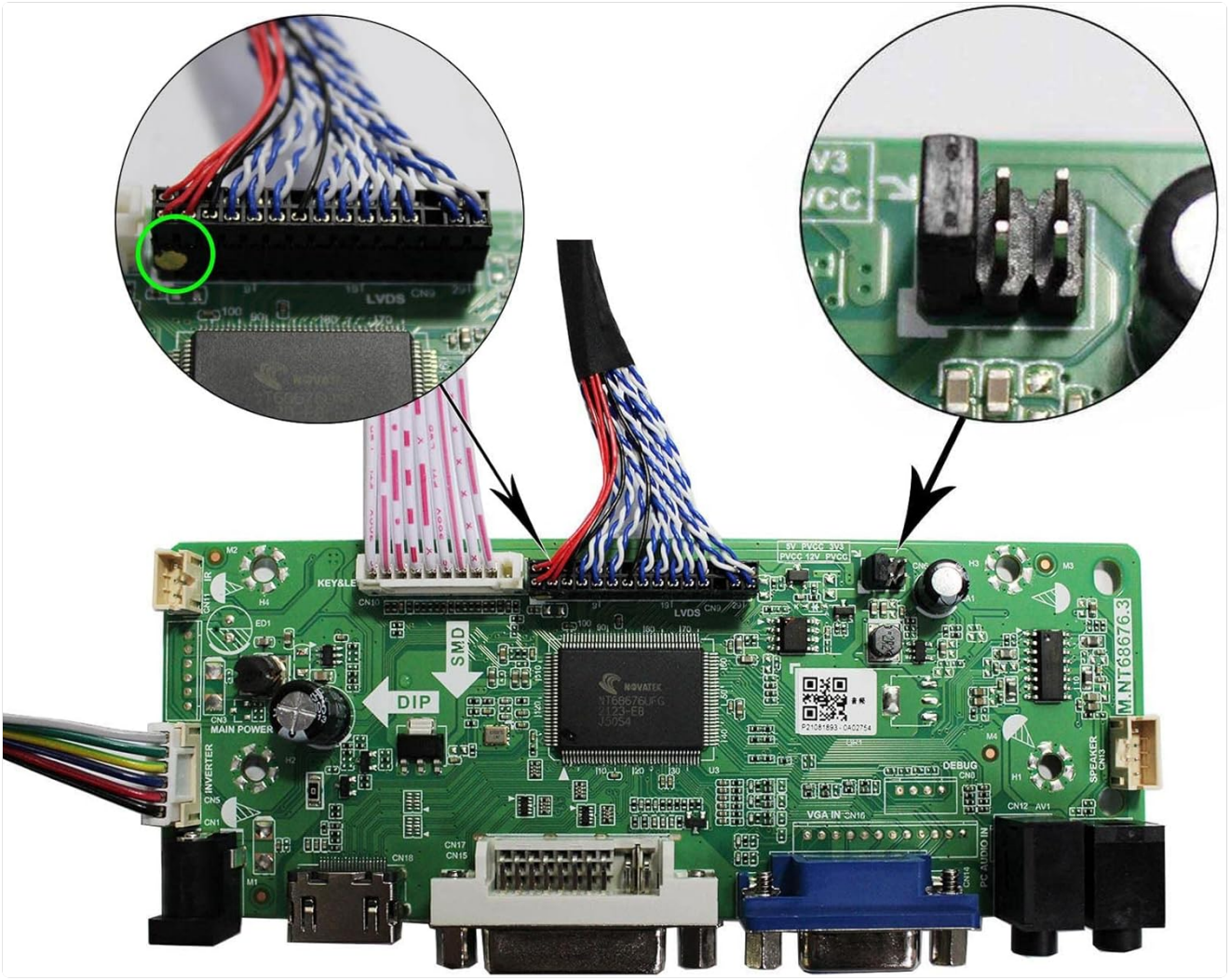

Figure 5.2: LVDS Cable Connection and Power Jumper

5.3. Connect the Inverter Board (if applicable)

If your LCD panel uses a CCFL (Cold Cathode Fluorescent Lamp) backlight, connect the provided inverter board to the **Inverter** connector on the main controller board. Then, connect the backlight cable from your LCD panel to the inverter board. For LED-backlit panels, an inverter board may not be necessary, or the backlight cable might connect directly to the main board or a dedicated LED driver board.

5.4. Connect the Control Panel

Connect the keyboard (control panel) with its cable to the **Keyboard** connector on the main controller board. This panel allows you to navigate menus and adjust settings.

5.5. Connect Power

Connect a 12V DC power adapter (minimum 3A) to the **Power Supply** input on the controller board. **Do not apply power until all other connections are secure.**

5.6. Connect Video Input

Connect your video source (e.g., computer, media player) to the desired input port on the controller board (VGA, DVI, or HD).

5.7. Mounting Considerations

When mounting the controller board, ensure it is not in direct contact with any metal surfaces of the LCD panel housing, as this can cause a short circuit. Use appropriate standoffs or insulating material if mounting to a metal chassis.

6. Operating Instructions

Once all connections are made and power is supplied, the LCD panel should power on. Use the control panel (keyboard) to navigate the on-screen display (OSD) menu. Common functions include:

- **Power On/Off:** Typically a dedicated button on the control panel.
- **Input Selection:** Cycle through VGA, DVI, and HD inputs.
- **Brightness/Contrast:** Adjust display luminosity.
- **Volume Control:** Adjust audio output level.
- **OSD Menu Navigation:** Use directional buttons (LEFT, RIGHT, FRONT, BACK) and SELECT to adjust various display settings.

7. Maintenance

The VSDISPLAY LCD Controller Board requires minimal maintenance. Follow these guidelines to ensure longevity:

- **Cleaning:** Keep the board free from dust and debris. Use a soft, dry brush or compressed air for cleaning. Do not use liquid cleaners directly on the board.
- **Environment:** Operate the board in a dry, well-ventilated area, away from extreme temperatures, humidity, and direct sunlight.
- **Connections:** Periodically check all cable connections to ensure they are secure.

8. Troubleshooting

If you encounter issues, refer to the following troubleshooting tips:

- **No Display / White Screen:**
  - Ensure the 12V DC power adapter is correctly connected and providing sufficient current (at least 3A).
  - Verify the 30-pin LVDS cable is securely connected to both the controller board and the LCD panel, with correct orientation. A loose or incorrectly seated LVDS cable is a common cause.
  - Confirm your LCD panel model is listed in the compatibility section. Incompatible panels will not display correctly.
  - Check if the inverter board (if used) is properly connected and functioning.
- **No Audio:**
  - Ensure speakers or headphones are correctly connected to the audio output.
  - Check the volume settings in the OSD menu and on your video source.
  - Verify that the video source is sending audio through the selected input (e.g., DVI does not carry audio, use a separate audio cable for VGA/DVI if needed).
- **Incorrect Colors / Distorted Image:**
  - Re-check the LVDS cable connection for proper seating and orientation.
  - Ensure the resolution and refresh rate settings on your video source match the native resolution of the LCD panel (1920x1080).
- **Control Panel Not Responding:**
  - Verify the control panel cable is securely connected to the **Keyboard** connector on the main board.

9. Support Information

For further assistance or technical support, please refer to the VSDISPLAY official website or contact their customer service.

Always provide your product model number (VSDISPLAY HD-MI VGA DVI Audio) and the specific LCD panel model you are using when seeking support.
You can visit the VSDISPLAY Store on Amazon for additional product information and resources.