

Fasizi ELA2473

Fasizi 2.8-inch TFT LCD SPI Module User Manual

Model: ELA2473

1. INTRODUCTION

This user manual provides comprehensive instructions for the Fasizi 2.8-inch TFT LCD SPI Module. It covers product features, pin definitions, setup procedures, operational guidelines, maintenance tips, and troubleshooting information to ensure optimal performance and longevity of your module. Please read this manual carefully before using the product.

2. PRODUCT OVERVIEW

The Fasizi 2.8-inch TFT LCD SPI Module is a compact color display designed for various embedded applications. It features a high-resolution screen and uses a standard SPI communication interface for easy integration with microcontrollers.

2.1 Key Features

- **Display Size:** 2.8 inches
- **Driver Chip:** ILI9341
- **Touch Type:** Non-touch
- **Resolution:** 240 x 320 pixels
- **Communication Interface:** SPI (Serial Peripheral Interface)

2.2 Pin Definition

Understanding the pinout is crucial for correct connection and operation. The module features the following pins:

Pin	Description
1. GND	Ground connection.
2. VCC	Power supply input (3.3V).
3. CLK	SPI Clock line.
4. MOSI	Master Out Slave In (Data Input).
5. RES	Reset line.
6. DC	Data/Command selection line.
7. BLK	Backlight control.

Pin	Description
8. MISO	Master In Slave Out (Data Output).

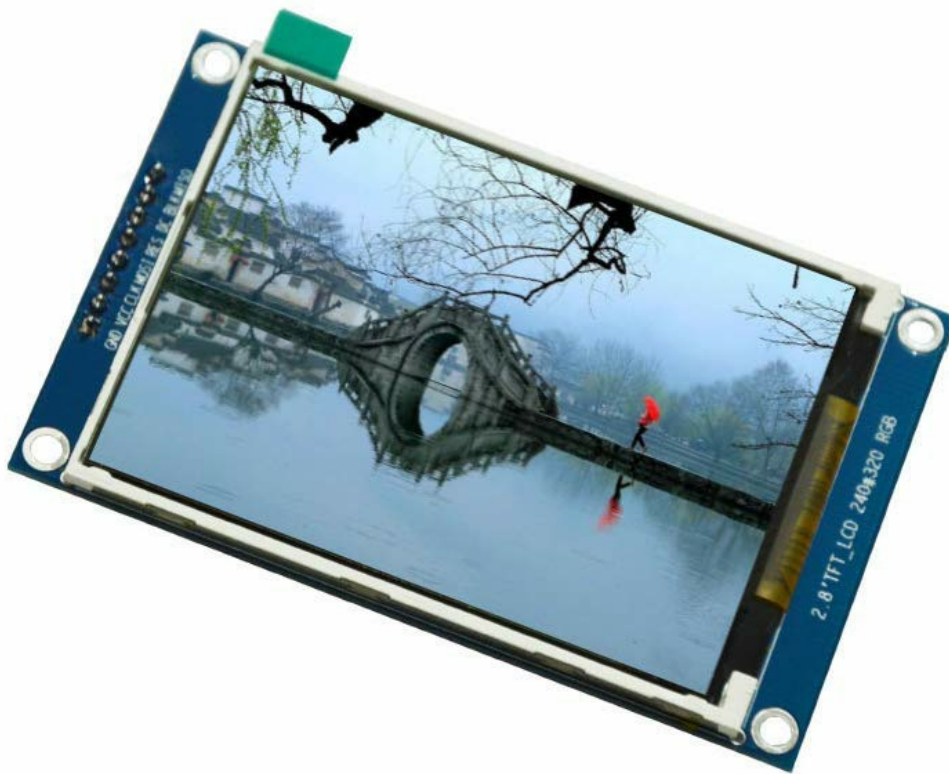


Figure 2.1: Front view of the Fasizi 2.8-inch TFT LCD SPI Module, showing the display area and mounting holes.

3. SETUP AND CONNECTION

Follow these steps to correctly connect your Fasizi 2.8-inch TFT LCD SPI Module to your microcontroller or development board.

1. **Power Connection:** Connect the **VCC** pin to a 3.3V power supply and the **GND** pin to the ground of your system. Ensure stable power to prevent display issues.
2. **SPI Communication:** Connect the **CLK**, **MOSI**, **MISO**, **RES**, and **DC** pins to the corresponding SPI pins on your microcontroller. Refer to your microcontroller's datasheet for specific pin assignments.
3. **Backlight Control:** Connect the **BLK** pin to a suitable control pin on your microcontroller if you wish to dynamically control the backlight. Otherwise, it can be connected to 3.3V for constant illumination.

4. **Secure Mounting:** Ensure the module is securely mounted to prevent physical damage or loose connections.

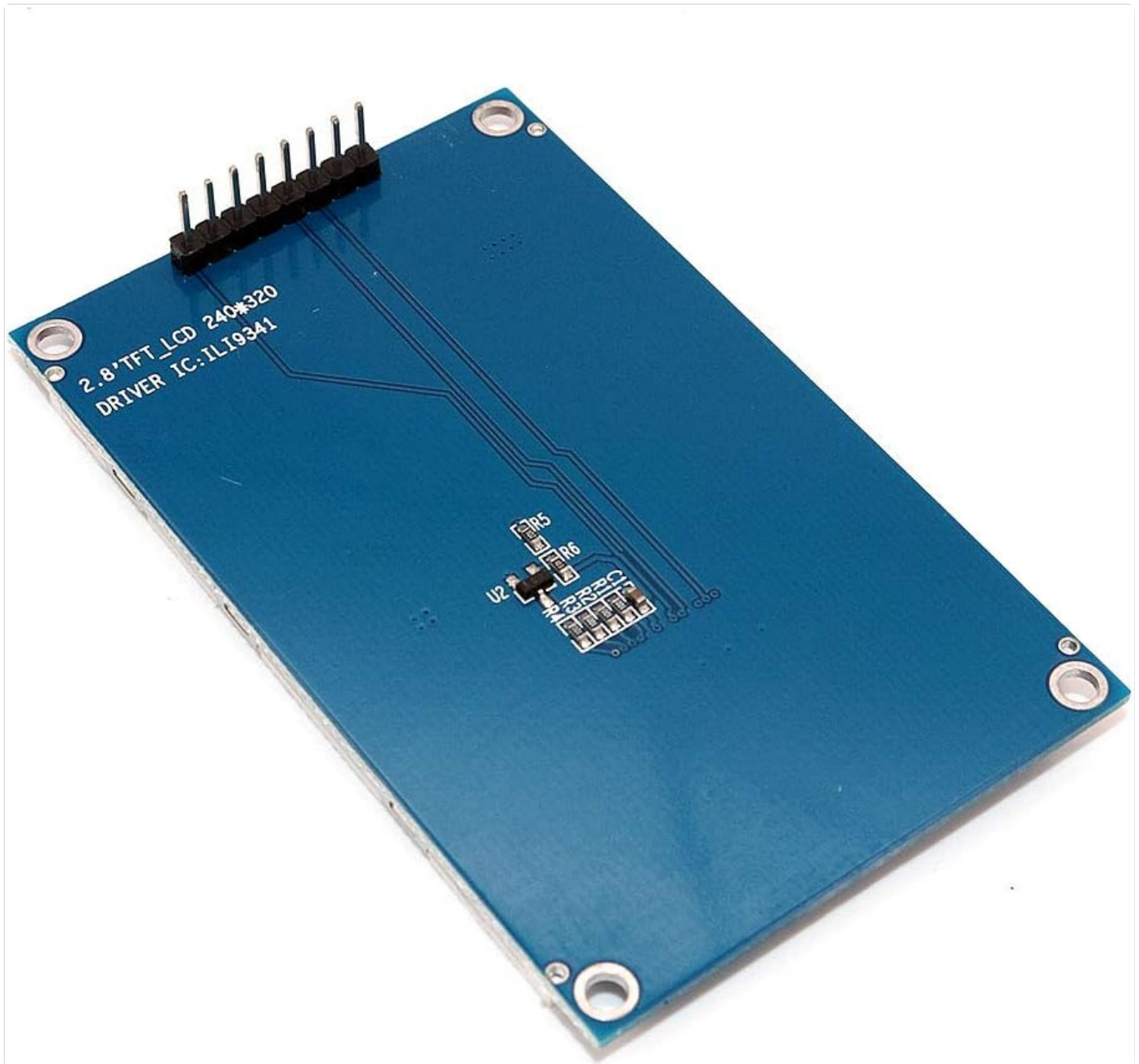


Figure 3.1: Back view of the Fasizi 2.8-inch TFT LCD SPI Module, illustrating the pin headers for connection.

4. OPERATING INSTRUCTIONS

Once the module is correctly connected, you can begin programming your microcontroller to display graphics and text. The ILI9341 driver chip requires specific commands for initialization and data transfer via the SPI interface.

4.1 Initialization

Before sending display data, the ILI9341 driver needs to be initialized. This typically involves a sequence of commands to set display parameters such as resolution, orientation, and color mode. Refer to the ILI9341 datasheet or common open-source libraries for detailed initialization sequences.

4.2 Displaying Content

To display pixels, send pixel data over the SPI bus. The DC pin differentiates between command bytes and data bytes. Libraries often abstract these low-level operations, providing functions for drawing shapes, text, and images.



Figure 4.1: The Fasizi 2.8-inch TFT LCD SPI Module displaying an example image, demonstrating its color capabilities.

5. MAINTENANCE

Proper maintenance ensures the longevity and reliable operation of your LCD module.

- **Cleaning:** Use a soft, lint-free cloth slightly dampened with water or a specialized screen cleaner to gently wipe the display surface. Avoid abrasive materials or harsh chemicals.
- **Handling:** Always handle the module by its edges. Avoid touching the display surface or the exposed circuit board components directly.
- **Storage:** Store the module in a dry, dust-free environment, away from direct sunlight and extreme temperatures. Use anti-static packaging if available.
- **Environmental Conditions:** Operate the module within its specified temperature and humidity ranges to prevent damage.

6. TROUBLESHOOTING

If you encounter issues with your Fasizi 2.8-inch TFT LCD SPI Module, refer to the following common problems and solutions:

- **No Display/Blank Screen:**
 - Check power connections (VCC and GND) to ensure 3.3V is supplied.
 - Verify all SPI communication lines (CLK, MOSI, MISO, RES, DC) are correctly connected and not loose.
 - Ensure the backlight (BLK) pin is correctly connected and receiving power.
 - Confirm that the driver (ILI9341) initialization sequence in your code is correct.
- **Garbled or Incorrect Display:**
 - Check the SPI communication speed; it might be too high for the module or your microcontroller.
 - Verify that the data format and command sequences sent to the ILI9341 driver are correct.
 - Ensure the correct display orientation and resolution settings are applied during initialization.
- **Module Not Responding:**
 - Check for short circuits or incorrect voltage levels on any pins.
 - Try resetting the module by toggling the RES pin or power cycling.

7. TECHNICAL SPECIFICATIONS

Detailed technical specifications for the Fasizi 2.8-inch TFT LCD SPI Module:

Specification	Value
Brand	Fasizi
Model Number	ELA2473
Display Size	2.8 inches
Driver Chip	ILI9341
Touch Type	Non-touch
Resolution	240 x 320 pixels
Communication Interface	SPI
Operating Voltage	3.3V
Country of Origin	China

8. WARRANTY AND SUPPORT

Specific warranty details and direct support contact information are not provided in the product listing. For any issues or inquiries, please refer to the retailer or platform where the product was purchased for their respective return and support policies.

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