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› DIYables 3.5 Inch TFT LCD Display Shield (ILI9486 Non-Touch) User Manual

DIYables DIY-LCD-TFT-320x480

DIYables 3.5 Inch TFT LCD Display Shield (ILI9486 Non-Touch) User Manual

INTRODUCTION

This manual provides instructions for the DIYables 3.5 Inch TFT LCD Display Shield, featuring a 320x480 full-color RGB display with an ILI9486 driver. Designed for seamless integration with various Arduino boards, this shield offers a vibrant visual interface for your projects.

PRODUCT OVERVIEW

The DIYables 3.5 Inch TFT LCD Display Shield is a non-touch screen module designed to expand the display capabilities of your Arduino projects. It utilizes an 8-bit parallel interface for efficient data transfer and a reliable ILI9486 driver for stable performance.



Figure 1: Front view of the DIYables 3.5 Inch TFT LCD Display Shield.

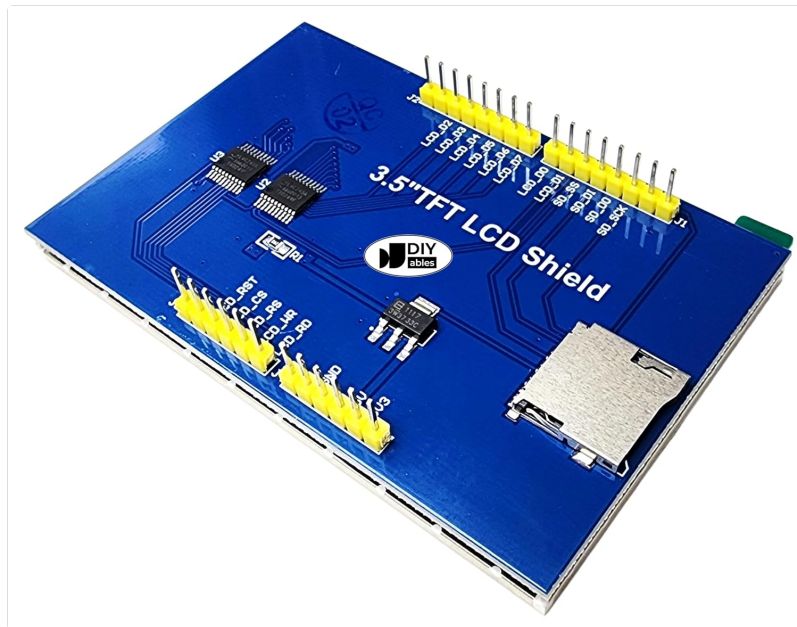


Figure 2: Back view of the display shield, illustrating the PCB layout, components, and connection pins.

MicroSD Card Socket

- Connected to Uno-formed boards
- NOT connected to Mega-formed board

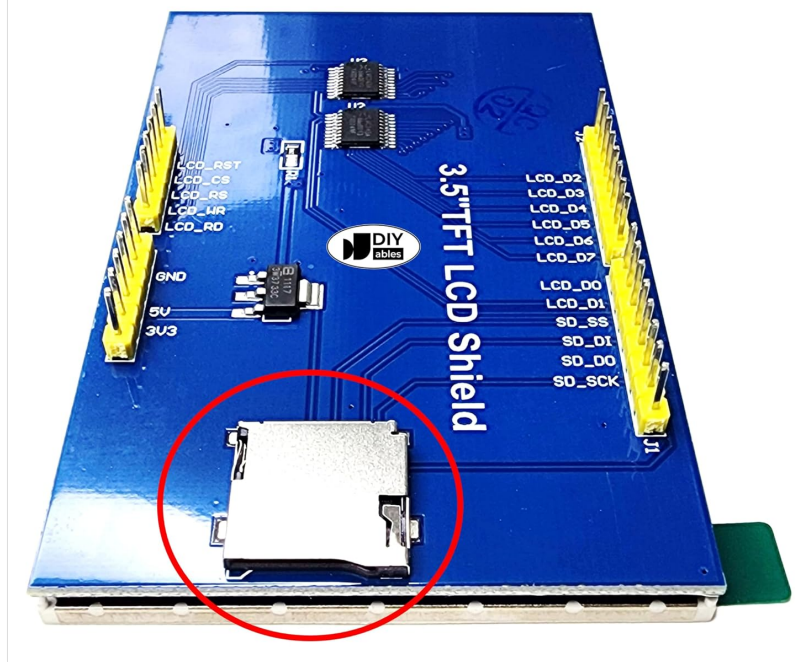


Figure 3: Detail of the MicroSD card socket located on the display shield, used for storing display data or project assets.

SETUP INSTRUCTIONS

Hardware Connection

The display shield is designed to directly plug into compatible Arduino boards. Ensure proper alignment of the pins before gently pressing the shield into place. The shield will sit atop the Arduino board, connecting via its header pins.



Figure 4: The display shield correctly mounted onto an Arduino board, ready for programming. Note that the Arduino board is not included.

Software Library Installation

To operate the display, a specific software library is required. Search online for **DIYables TFT LCD Display** to find step-by-step tutorials and the necessary library files. The library typically includes the header file:

```
#include <DIYables_TFT_Shield.h>
```

Online Tutorials

Please Search for: DIYables TFT LCD Display

Library

```
#include <DIYables_TFT_Shield.h>
```

Tested Hardware

Board	Tested	Notes
Arduino Uno R3	✓	Fully supported
Arduino Uno R4 WiFi	✓	Fully supported
Arduino Uno R4 Minima	✓	Fully supported
Arduino Mega	✓	Fully supported
Arduino Giga	✓	Fully supported
DIYables R3 Mega328P Development Board	✓	Fully supported

Figure 5: Example of online tutorial search query and the required library include statement for software setup.

OPERATING INSTRUCTIONS

After successful hardware connection and library installation, you can begin programming your Arduino to display graphics and text. Refer to the provided library examples for basic operations such as initializing the display, drawing shapes, and displaying text. The 8-bit parallel interface ensures quick data transfer for dynamic applications.

MAINTENANCE

This display shield requires minimal maintenance. Keep the screen clean and free from dust using a soft, dry cloth. Avoid applying excessive pressure to the screen surface. Store the module in a dry environment away from extreme temperatures and direct sunlight.

TROUBLESHOOTING

If the display does not function as expected, consider the following troubleshooting steps:

- Verify all pin connections are secure and correctly aligned with your Arduino board.
- Ensure the correct software library is installed and included in your Arduino sketch.
- Check that the power supply to your Arduino board is sufficient.
- Consult the online tutorials by searching for "DIYables TFT LCD Display" for detailed troubleshooting guides and common issues.

SPECIFICATIONS

The following table details the technical specifications of the DIYables 3.5 Inch TFT LCD Display Shield:

Feature	Detail
Display Size	3.5 Inches
Resolution	320x480 pixels
Color Depth	Full Color RGB
Driver IC	ILI9486
Interface	8-Bit Parallel
Item Weight	2.08 ounces (approx. 59 grams)
Package Dimensions	4.96 x 3.03 x 0.87 inches

COMPATIBILITY

This display shield is compatible with a range of Arduino boards, including:

- Arduino Uno R3
- Arduino Uno R4 WiFi
- Arduino Uno R4 Minima
- Arduino Mega 2560
- Arduino Due
- Arduino Giga R1
- Other Uno or Mega form-factor boards

Note: The MicroSD card socket on the shield is connected to Uno-formed boards but not to Mega-formed boards.

WARRANTY INFORMATION

This product comes with a standard manufacturer's warranty. For details regarding warranty coverage and terms, please refer to the DIYables official website or contact customer support directly.

SUPPORT

For further assistance, technical support, or to access additional resources, please visit the DIYables official website or search for "DIYables TFT LCD Display" online for comprehensive tutorials and community forums.

Manufacturer: DIYables

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

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