

## SPI TFT 2.25 LCD 76x284 Display Module ST7789P3 Breakout Board for Arduino

The **SPI TFT 2.25 Inch LCD 76x284 Display Module with ST7789P3 driver** is a high-quality, full-color screen designed for **Arduino and other microcontroller projects**. It provides exceptional visual clarity, compact design, and simple interfacing through the **SPI communication protocol**, making it perfect for hobbyists, developers, and engineers who want to add rich graphical displays to their electronic creations.

With its **76x284 pixel resolution**, bright color output, and **ST7789P3 driver IC**, this display module delivers crisp images, smooth animation, and reliable performance — ideal for a wide range of embedded applications such as handheld instruments, IoT displays, wearables, and smart devices.



### Vivid Color Display with High Contrast

The **2.25-inch TFT LCD** offers excellent color reproduction and brightness, providing **a clear and vibrant display even in bright environments**. With a **76x284 resolution**, it supports high-quality

text, graphics, and icons suitable for both simple indicators and complex graphical user interfaces.

Thanks to its **IPS (In-Plane Switching) technology**, the display provides **wide viewing angles**, ensuring consistent visibility from multiple directions. This feature is particularly useful for portable and handheld devices where viewing positions can vary.

### **Advanced ST7789P3 Driver for Reliable Performance**

At the core of this display is the **ST7789P3 controller**, a reliable and widely supported driver that handles all the display operations efficiently. It provides **fast refresh rates, smooth transitions, and stable image performance**. The ST7789P3 driver is compatible with various platforms including **Arduino, Raspberry Pi, STM32, ESP32, and other microcontrollers** that support SPI communication.

Because of its widespread support, developers can easily integrate this module into their existing projects using ready-made libraries and example codes available online.

### **Simple SPI Interface for Easy Integration**

The **Serial Peripheral Interface (SPI)** connection makes this display extremely easy to use and efficient. With fewer pins required for communication, you can easily connect it to microcontrollers even when GPIO pins are limited. The SPI interface ensures **fast data transfer**, which allows for smooth display rendering and responsive updates.





Typical connection pins include:

- **VCC:** Power supply (3.3V–5V compatible)
- **GND:** Ground
- **SCL:** Serial Clock Input
- **SDA:** Serial Data Input
- **RES:** Reset Signal
- **DC:** Data/Command Control
- **CS:** Chip Select

These straightforward connections make the module suitable for beginners and advanced users alike.

### Compact Design for Portable Projects

With its **compact 2.25-inch form factor**, the module fits perfectly into small enclosures and handheld projects. It's lightweight, durable, and designed for **low power consumption**, making it a great choice for **battery-powered devices** like portable meters, smartwatches, IoT gadgets, and sensor display units.

The **breakout board format** also includes mounting holes and labeled pins for easy soldering or breadboard testing, ensuring smooth integration into prototypes and final projects.

### Wide Range of Applications

The **SPI TFT 2.25 LCD ST7789P3 Display Module** is suitable for numerous electronic applications, including:

- **Arduino Display Projects** – Create colorful user interfaces or dashboards.
- **IoT Devices** – Display real-time data, sensor readings, or notifications.
- **Portable Instruments** – Use as a readout for multimeters, testers, or handheld analyzers.
- **Wearable Electronics** – Integrate into compact wearable devices and smart accessories.
- **Educational Projects** – Perfect for learning about SPI communication and display programming.
- **Embedded Systems** – Add professional-quality visual output to industrial or custom control systems.

With support for popular programming environments, including **Arduino IDE**, **MicroPython**, and **PlatformIO**, this module allows developers to start displaying graphics with just a few lines of code.

### Easy Programming and Customization

This display supports a wide range of **graphics functions** including pixel drawing, text rendering, line and shape creation, and full-color bitmap display. The available libraries for **ST7789** or **Adafruit GFX** make coding straightforward and highly flexible.

You can easily:

- Display custom graphics or company logos.
- Show sensor readings in real-time.

- Build interactive menu systems or GUIs.
- Animate icons or graphs for visual feedback.

The **ST7789P3 driver** ensures smooth frame transitions and sharp text rendering, providing a polished look to any DIY or professional project.

## Conclusion

The **SPI TFT 2.25 Inch LCD 76x284 Display Module ST7789P3 Breakout Board** is the perfect solution for makers and engineers who need a **compact, high-quality, and easy-to-use color display**. Offering brilliant visuals, a reliable controller, and effortless SPI connectivity, it's suitable for both beginners learning electronics and professionals developing advanced embedded systems.

Its **bright colors, wide viewing angles, and simple integration** make it a standout choice for IoT devices, portable instruments, and display-based projects. Enhance your electronic designs with this vibrant TFT display and bring your ideas to life with professional-grade graphics and performance.