



4 Inch 480X480 RGB SPI Interface Square TFT LCD Touch Screen Display with IPS Panel

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: BBI
- Certification: ISO9001 RoHS
- Minimum Order Quantity: 1000
- Price: 0.78-7USD
- Packaging Details: CARTON
- Delivery Time: 3-4WEEKS
- Payment Terms: T/T
- Supply Ability: 300000/MONTH



Product Specification

- Brightness: 420 Cd/m²
- Viewing Direction: All Viewing Angle, IPS
- Connector: ZIF
- Interface: RGB+SPI(MIPI Interface Optional)
- Display Size: 4 Inches
- Fpc Connect: ZIF FPC 25.47mm
- Touch Screen: Yes
- Screentype: LCD TFT
- Highlight: **4 Inch TFT LCD Display ,
480X480 Resolution LCD TFT Screen ,
RGB SPI Interface TFT Touch Screen**



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4 Inch 480×480 RGB SPI Interface Square TFT Touch LCD Display

This 4-inch square TFT touch screen module features a 480×480 resolution with RGB and SPI dual interfaces, powered by the ST7701S driver IC. Equipped with an IPS panel and optional capacitive/resistive touch, it delivers excellent display quality, interface flexibility, and drive stability—making it an ideal solution for embedded and portable devices.

Product	4 Inch TFT Square Display	Touch Screen	Without Touch (With CTP Optional)
Resolution	480×480	Cover Glass Dimension	Customizable
Viewing Direction	All Viewing Angle, IPS	Interface	RGB+SPI (MIPI interface optional)
Pin Number	40 Pins	Connection	ZIF
Surface Luminance	420 Cd/m ² (nits) Typical	LED Lifetime	40,000 Hours

Core Parameters and Hardware Characteristics

Size and Display

4-inch square format with 480×480 pixel resolution and 1:1 aspect ratio. IPS panel provides full viewing angles (approximately 80° each direction) with 800:1 contrast ratio and 300-500 nits brightness (indoor model). Supports 16 million colors (RGB888) with consistent color quality across all viewing angles.

Interfaces and Driving

Dual interface support for RGB parallel (16/18/24 bits) and SPI serial (3-wire/4-wire) modes. ST7701S driver IC integrates power management, gamma correction, and timing control. Interface power supply 2.5-3.6V (typical 2.8V) with compatibility for STM32, ESP32, and Arduino platforms. Simple initialization process with DCX pin for command/data switching.

Touch and Connectivity

Optional capacitive touch (some models support resistive) with multi-touch capability and sensitive response. ZIF connector with FPC flexible cable enables easy installation and maintenance, ideal for compact device layouts.

Environment and Reliability

Operating temperature range of -30°C to +80°C (industrial models: -40°C to +80°C). LED backlight lifespan of approximately 40,000 hours ensures long-term stable operation in indoor, outdoor, and industrial environments.

Core Advantages of ST7701S Driver IC

Flexible dual-mode driving: Switch between RGB or SPI modes via pin level for optimal resource utilization

Integrated power management: Built-in LDO and charge pump simplify peripheral power design and reduce system power consumption

Image enhancement capabilities: Gamma correction, color space conversion (RGB565/RGB888), and timing optimization for superior picture quality

Product Core Advantages

Integrated display and touch: Eliminates need for additional touch modules, reducing development and assembly costs

Dual interface compatibility: SPI for low-pin MCUs, RGB for high-performance controllers

Wide temperature range and long lifespan: Suitable for harsh industrial and outdoor environments

Low power consumption design: Extends battery life in portable devices

Typical Application Scenarios

Industrial control: PLC human-machine interfaces, intelligent sensor panels, handheld inspection instruments

Smart home: Smart switch panels, thermostats, home security terminals

Medical equipment: Portable monitors, blood glucose meters, diagnostic instruments

Consumer electronics: Smart wearable expandable screens, portable game consoles, navigation devices



Frequently Asked Questions

I want the LCD display 8 digits and the outline size is 65x30x2.8mm. Is this possible?

Yes, we can accommodate custom specifications. Please provide your detailed specification drawings or samples for evaluation and recommendation.

This LCD is what we want, but it's too large. Do you have smaller sizes with modified display content?

For segment type LCD modules requiring size or content modifications, we can create new tooling to produce custom glass modules according to your requirements.

This LCD display is HTN type, but I want STN type. Can you make this change?

Yes, we can modify the display type according to your specific requirements.

Can you customize a new LCD module for our application?

Absolutely. Please provide your drawing specifications or detailed requirements including outline size, glass thickness, polarizer type, display specifications, connector mode, temperature ranges, supply voltage, viewing direction, and drive conditions.

What is the lead time for tooling development?

Typically 15 to 25 days after drawing confirmation and tooling payment. We will provide exact timelines upon project confirmation.

Can you provide samples for evaluation?

Yes, sample orders are available for testing and verification.

What is the production lead time?

Standard products in stock ship within one day after payment. Mass production of custom orders typically requires 15-30 days, with earlier completion communicated in advance when possible.



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