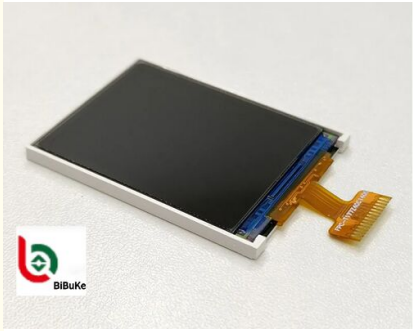
1.77 Inch TFT LCD Display with 128x160 Resolution and SPI Interface for Embedded Applications

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

- Resolution: 128x160
- Backlight Technology: LED
- Screen Type: TFT
- Connection: Soldering
- Screen Size: 1.77 Inches
- Interface: SPI
- Display Mode: Normal White
- Surface Luminance: 200 Cd/m2 Cd/m2(nits)
- Highlight: **1.77 Inch TFT LCD Display**, **128x160 Resolution TFT Screen**, **SPI Interface LCD Module**

Our Product Introduction

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Product Description

1.77 Inch TFT LCD Display SPI 128x160 ST7735 Driver Touch Screen Optional

Product:	1.77 Inch TFT Display	**Resolution:**	128x160
Touch Screen:	Optional	**Cover Glass Dimension:**	Customizable
Viewing Direction:	12:00	**Interface:**	SPI
Pin Number:	14 Pins	**Connection:**	Soldering
Surface Luminance:	200 Cd/m²	**LED Lifetime:**	40,000 Hours
Operating Temp.:	-20°C To +70°C	**Storage Temp.:**	-30°C To +80°C
Certificate:	ISO9001:2015 / ISO14001:2015	**Compliance:**	REACH & RoHS Compliant

This 1.77-inch TFT liquid crystal display is a compact and practical color display module. The core uses the ST7735 (often ST7735S) driver chip with a resolution of 128×160. It communicates via SPI interface and supports optional touch screens. It is compatible with most mainstream microcontrollers and is widely used in embedded and portable scenarios.

Product Core Introduction

Basic Specifications: Screen size 1.77 inches, mostly TN-type TFT panel, with active matrix driving, capable of presenting 65K or 260,000 colors, with a contrast ratio of approximately 800:1, fast response time, and brightness typically ranging from 300-1000 cd/m². Some models support wide temperature operation from -20°C to 70°C, suitable for different environments.

Driver and Interface: The core driver chip ST7735S integrates GRAM, power circuit, and interface logic. The maximum SPI clock rate is up to 15 MHz. It supports 3-wire or 4-wire SPI communication. The connection can be completed through VCC, GND, SCL, SDA, RES, DC pins. Some modules come with 3.3V voltage regulation and level conversion, compatible with 3.3V/5V controllers, suitable for mainstream platforms such as Arduino, ESP32, STM32, Raspberry Pi Pico, etc.

Optional Touch Screen: Some models are equipped with resistive touch screens, connected to the main controller through additional pins, enabling click, sliding and other interactions, suitable for scenarios requiring simple touch operation, without the need for additional buttons, simplifying human-computer interaction design.

Driver Program Ecosystem: The open-source community provides rich driver libraries (such as Adafruit_ST7735), supporting rapid transplantation and functions such as graphics drawing, text display, and image rendering. Some solutions also support DMA acceleration, reducing main controller overhead and shortening development cycles.

Main Applications

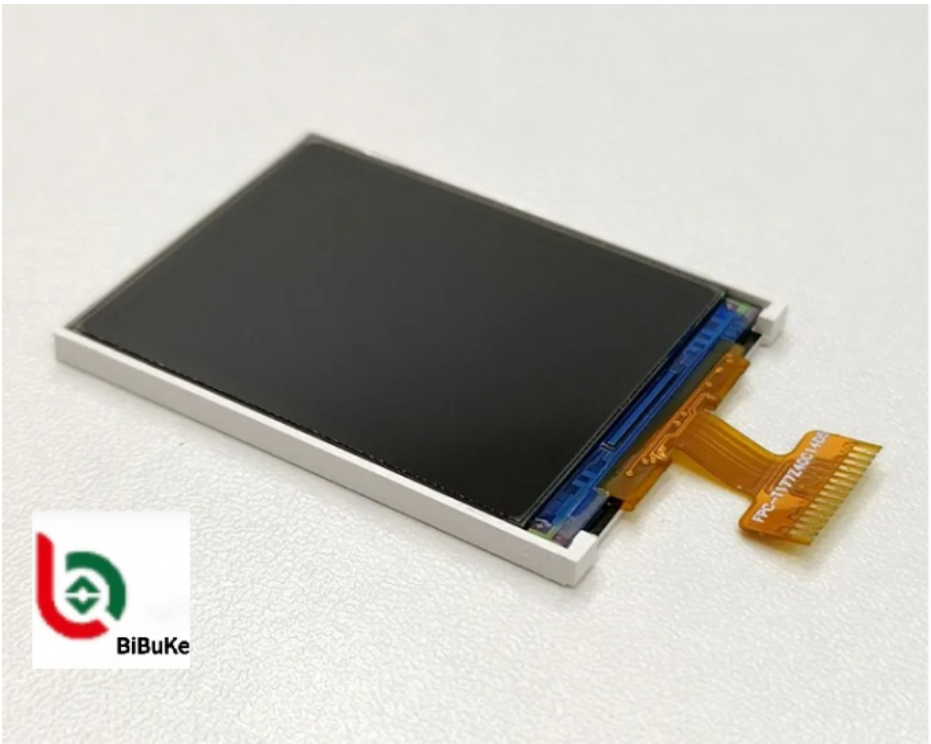
Embedded development and DIY creative projects: Suitable for making small handheld terminals, environmental monitors (displaying temperature, humidity, air pressure, etc.), mini game consoles, electronic photo albums, etc. With a few SPI interface connections, low power consumption, battery-powered compatibility, low development threshold, and quick prototype verification.

Industrial and instrumentation: Used for local display of portable industrial detection instruments, temperature and humidity controllers, flow meters, etc. Wide temperature characteristics are suitable for industrial environments, clearly presenting key data and operation menus. Optional touch screens enhance operational convenience.

Medical and health equipment: Suitable for portable pulse oximeters, heart rate monitors, small blood pressure monitors, etc. Color display can directly present waveforms, values, and status prompts. Low SPI power consumption is suitable for mobile medical scenarios with battery-powered devices.

Smart home and IoT terminals: Used for smart switch panels, temperature and humidity controllers, environmental sensor gateways, etc. Displaying device status, network information, and operation feedback. Optional touch screens simplify user operations and enhance product interaction experience.

Smart wearables and portable digital devices: Can be used for simple smart wristbands, electronic watches, Bluetooth audio players, etc. Small size and low power consumption characteristics are suitable for wearable device design. Color display presents rich information and meets users' visual needs for portable devices.



Frequently Asked Questions

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

No problem. Firstly, please kindly send us your specification/drawing paper. If you have not the specification, you can also provide your samples; we will recommend the suitable one if it is standard products. Or we can customize for you based on your own requirement.

This LCD is just what we want, but it is big size, do you have any smaller size? And the display content need to be changed a little.

For the segment type LCD module, if you need modify the outline size or display content, a new LCD glass module is need. We have to open new tooling for you.

This LCD display is HTN type, but I want STN type, can you make?

That's all right. We can change for you as per you request.

I want customize a new LCD module. Can you do?

Yes, we can. Please send your drawing paper. If you have not, please advise me the outline size of the LCD display, display information (Glass thickness, Polarizer, Display Type, Connector mode, Storage Temp., Operating Temp., Supply Voltage, Viewing direction, drive condition), we can customize for you.

What is leading time for tooling?

General speaking, it will cost 15 to 25 days after drawing paper confirmation and tooling charge payment, we can report you the exact time when you confirm the drawing paper.

Can you send us samples for checking?

Yes. Samples order is available.

What is the Leading Time?

If we have stock for the standard ones, the leading time is one day after payment. If it is the mass production for special ones, the leading time is about 15-30 days. Suppose we can finish earlier, we will report the information in advanced.

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