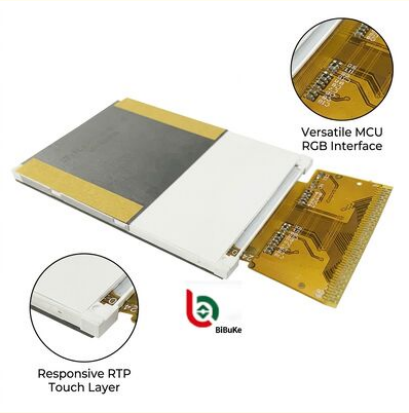
2.4 Inch 240x320 QVGA TFT LCD Display with RTP Touch Screen and MCU/RGB Interface

Our Product Introduction

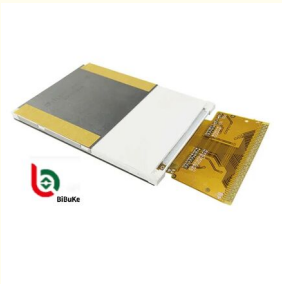
Basic Information

Product Specification

- Surface Luminance: 350 Cd/m² (typical)
- Pins Number: 48 Pins
- Resolution: 240*320 Pixels
- Interface: MCU/RGB/SPI
- Screentype: LCD TFT
- Displaysize: 2.4 Inches
- Screen Type: LCD TFT
- Touch Screen: RTP



More Images



Our Product Introduction

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Product Description

2.4" Inch 240x320 QVGA MCU/RGB Interface With RTP TFT LCD Display

A standard embedded display module integrating display and touch functions, providing a cost-effective human-computer interaction solution for small-sized portable devices.

Product Specifications

Product: 2.4 Inch TFT

Touch Screen: Resistive Touch Panel (RTP)

Resolution: 240x320 QVGA

Cover Glass: Without (Customizable)

Viewing Direction: 12 O'clock

Interface: MCU/RGB/SPI

Pin Number: 48 pins

Connection: Soldering

Surface Luminance: 350 Cd/m²

LED Lifetime: 40,000 Hours

Core Specifications

Size: Diagonal 2.4 inches (approximately 6.1 cm), standard QVGA resolution 240*320 (RGB pixel arrangement).
Display Performance: TFT true-color display, supports 65K/262K colors, brightness typically 250-400cd/m² (optional high brightness), driver IC commonly ST7789V, ILI9341.
Electrical Interfaces: Compatible with MCU 8/16/18-bit parallel interface and RGB interface, partially compatible with SPI, suitable for mainstream main controllers such as STM32, Arduino, 51 microcontroller.
Touch Part: Equipped with 4-wire resistive touch screen (RTP), pressure sensing, supports gloved / hard object touch, moderate accuracy, strong stability, low cost.
Physical Parameters: Module size approximately 42.7*60.3mm, effective display area 36.7*49.0mm, thickness 2.2-3.5mm, operating voltage 2.6-3.3V, temperature -20 ~+70 .

Core Advantages

Flexible interface: Compatible with both MCU/RGB interfaces, easy to integrate into various embedded systems, with low development threshold.

Cost-friendly: Small size + resistive touch, suitable for mass production.

Stable and reliable: TFT mature technology, resistive touch has anti-interference ability and can adapt to industrial / outdoor environments.

Compact in size: Lightweight and compact, suitable for handheld, portable, and embedded devices.

Main Applications

Industrial Control and Instrumentation: Industrial handheld terminals, PLC human-machine interfaces, portable detectors, multimeters/oscilloscopes, sensor display modules. Used for displaying data, curves, menus, alarms and status, supporting glove operation.

Medical and Health Electronics: Blood glucose meters, blood pressure monitors, heart rate monitors, portable therapeutic equipment, home monitoring devices. Clearly display values, waveforms, results, low power consumption, long battery life.

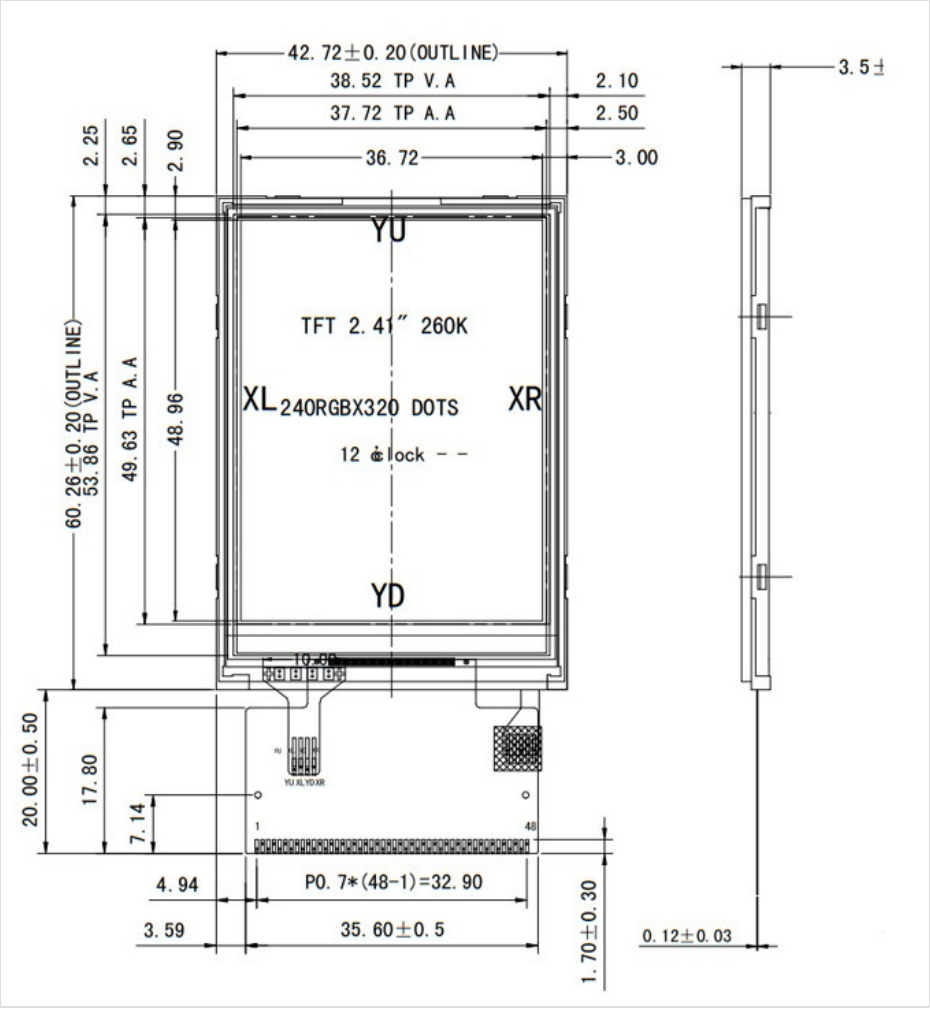
Smart Home and Security: Smart door lock panels, thermostats, light switches, video intercoms, security alarms. Serve as touch interaction and status display, intuitive and easy to use.

Consumer Electronics and Handheld Devices: Senior citizen phones, children's learning devices, MP4/MP5, portable game consoles, electronic dictionaries, walkie-talkies, Bluetooth speakers, card readers.

Vehicle and Outdoor Equipment: Vehicle GPS, dash cameras, vehicle instruments, outdoor navigation, walkie-talkies, portable power sources, outdoor detectors. High brightness visibility, shock resistance, wide temperature stability.

Internet of Things and DIY Development: IoT nodes, environmental monitoring, smart switches, development board accessories (STM32/Arduino), maker projects. Quick prototyping, convenient secondary development.

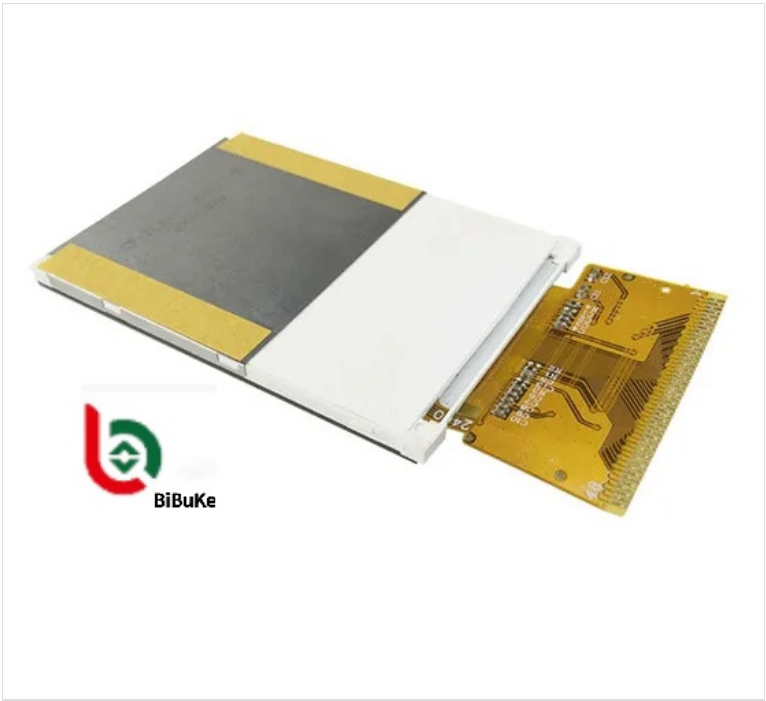
External Dimension



Interface Pin Definition

NO.	PIN NAME	I/O	Description
1	YU	I	Touch Panel Pin
2	XL	I	Touch Panel Pin
3	YD	I	Touch Panel Pin
4	XR	I	Touch Panel Pin
5	GND	I	Ground
6	VCI	I	Power Supply 2.8V Voltage
7	VDD3	I	Power Supply 2.8V/ 1.8V Voltage
8	VDD3_P(NC)	-	Set Open
9	BC_CTRL(NC)	-	Set Open
10	BC(NC)	-	Set Open
11	TE	O	Tearing effect output pin to synchronize MPU to frame writing, activated by S/W command. When this pin is not activated, this pin is low.
12-29	DB17-DB0	I/O	Display Data I/O
30	SDA	I/O	Serial input signal

NO.	PIN NAME	I/O	Description
31	DOTLCK	I	Dot Clock Signal for RGB Interface Operation
32	ENABLE	I	Data Enable Signal for RGB Interface Operation
33	HSYNC	I	Line Horizontal Synchronizing Signal
34	VSYNC	I	Frame Vertical Synchronizing Signal
35	RDX	I	Read strobe signal input pin
36	WRX	I	Write strobe signal input pin
37	DCX	I	Register select signal
38	CSX	I	Input pin for chip selection signal
39	RESET	I	LCM Reset input signal
40	IM0	I	Please refer to the fourth page, Select the MCU interface mode
41	IM1		
42	IM2		
43	IM3		
44	LED_A	I	LED Anode
45	LED_K1	I	LED Cathode
46	LED_K2	I	LED Cathode
47	LED_K3	I	LED Cathode
48	LED_K4	I	LED Cathode



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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