

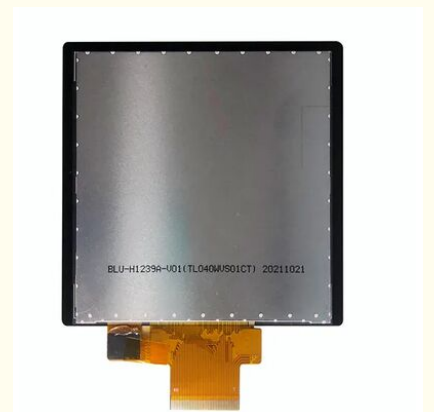
4 Inch TFT LCD Display Panel with 320x320 Resolution and MCU SPI Interface

Basic Information



Product Specification

- Screen Size: 4 Inches
- Outline Size: 84.0(W) X 84.0 (H) X 3.37 (T) Mm
- Interface: MCU SPI
- Connectivity: Plugging
- Resolution: 320*320 Pixels
- Surface Luminance: 300 Cd/m² (Customizable)
- Viewing Direction: All Viewing Angles (85/85/85/85)
- Display Type: TFT LCD
- Highlight: **4 Inch TFT LCD Display Panel ,
320x320 Resolution TFT LCD Screen,
MCU SPI Interface LCD Display Module**



Product Description

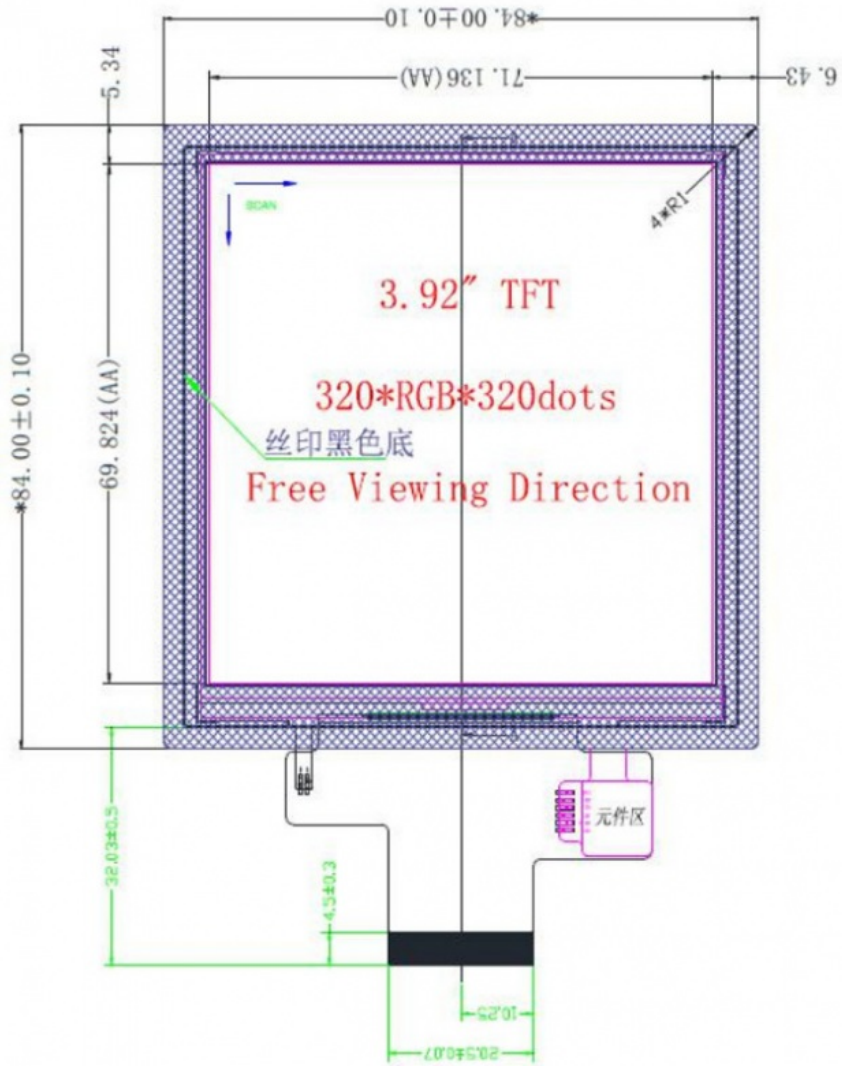
4 Inch TFT LCD Display Panel 320x320 Square Type MCU & SPI Interface With CTP

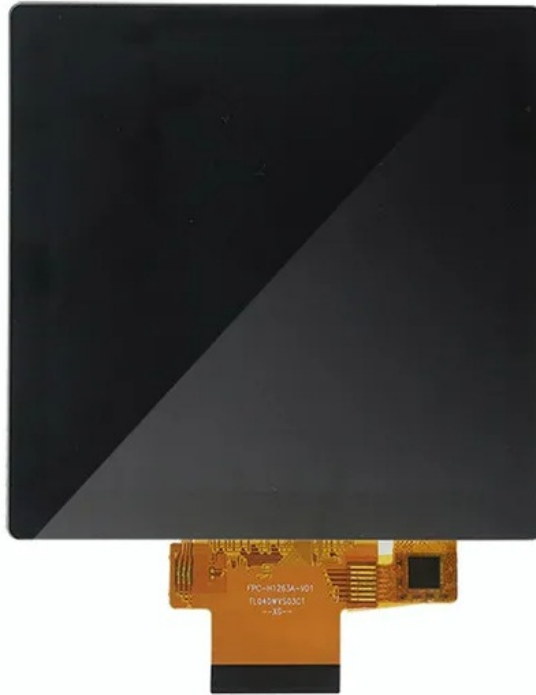
This 4-inch 320x320 square TFT LCD display panel with capacitive touch screen (CTP) and SPI/microcontroller interface is an integrated display and touch control module designed for embedded systems. It offers excellent display clarity, responsive touch interaction, low power consumption, and easy development integration.

Product Specifications

Parameter	Specification
Product	TFT 4" Inch
Resolution	320x320 Pixels
Interface	MCU SPI
Touch Screen	PCAP Capacitive Touch Screen
Lens Dimension	84.0(W) × 84.0(H) × 3.37(T) mm
Viewing Direction	All Viewing Angles (85/85/85/85)
Pin Number	40 Pins
Connection	Plugging
Surface Luminance	300 Cd/m ²
Supply Power	3.3 V
Current Consumption	20 mA
Operating Temperature	-20 to +70
Life Time	40000 Hrs
Compliance	REACH & RoHS Compliant

External Dimensions





Interface Pin Definition

Pin No.	Symbol	Description	When not in use
1	LEDA	B/L positive pin	--
2	LEDK	B/L negative pin	--
3	LEDK	B/L negative pin	--
4	GND	Ground	--
5	VCI	Power supply (2.8-3.3V)	--
6	IOVCC	I/O power supply (1.8-3.3V)	--
7	TE	Tearing effect output	Open
8	CS	Chip selection pin. Low-active.	--
9	RS	Display data/command selection DCX='1': display data or parameter. DCX='0': register index / command.	--
10	WR/SCK	Write enable in MCU interface. In SPI mode, this pin is SCK	--
11	RD	Read enable	GND
12	SDI	SPI interface input/output pin.	--
13	SDO	SPI interface output pin.	--
14	GND	Ground	--
15-30	D0-D15	Horizontal sync input	GND
31	RESET	This signal will reset the device and it must be applied to properly initialize the chip	--
32	IM2	IM0=0 IM2=0 MCU 16 BIT D[15:0] is used IM0=1 IM2=0 MCU 8 BIT D[7:0] is used	--
33	IM0	IM0=1 IM2=1 4Line SPI CS,RS,SCK,SDI IM0=0 IM2=1 Reserve -	--
34	GND	Ground	--
35	TP_INT	TP Interrupt to the host	Open

36	TP_SD A	TP I2C data input and output	Open
37	TP_SC L	TP I2C clock input	Open
38	TP_RE S	TP external reset, Low is active	Open
39	TP_VCI	TP power supply (2.8-3.3V)	Open
40	GND	Ground	--

Product Features

Square Screen Design: 320×320 square ratio ideal for symmetrical UI layouts on dashboards, control panels, and intelligent interfaces

Dual Interface Compatibility: Supports both SPI (simplified wiring) and MCU parallel interfaces for high-speed refresh scenarios

Integrated Touch Control: Seamlessly integrated CTP capacitive touch screen with precise multi-touch control and gesture support

Wide Temperature Range: Industrial-grade operating temperature (-20 to +70) with anti-static protection for harsh environments

Easy Development: Compatible with mainstream microcontrollers (STM32, Arduino, ESP32) with mature driver libraries and sample codes

Compact Design: FPC flexible ribbon cable (40 pins) with thin profile (2.0-3.5mm) for space-constrained applications

Main Applications

Industrial Control and Instrumentation

Industrial HMI, PLC touch screens, sensor data displays, portable testers, oscilloscope/multimeter color screens, CNC equipment control panels

Smart Home and Internet of Things

Smart switch panels (86-box compatible), thermostats, HVAC controllers, gateway central control, security monitoring displays

Medical and Health Equipment

Portable detectors (blood glucose, ECG, blood oxygen), rehabilitation equipment, medical monitors, infusion pump displays

Vehicle and Transportation Electronics

Vehicle instruments, tire pressure monitoring, dashcam screens, electric vehicle central control, marine navigation terminals

Consumer and Portable Electronics

Smart speaker displays, educational devices, handheld game consoles, media players, outdoor equipment interfaces

Other Applications

Security access control, POS systems, smart locker displays, charging station interfaces, agricultural IoT monitoring terminals

Frequently Asked Questions

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

Yes, we can accommodate your requirements. Please send us your specifications or drawing. If you don't have specifications, you can provide samples and we'll recommend suitable options or customize based on your requirements.

This LCD is what we want, but the size is too big. Do you have smaller sizes? Can the display content be modified?

For segment type LCD modules, modifying outline size or display content requires a new LCD glass module with custom tooling.

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

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

Can you customize a new LCD module?

Yes, we provide full customization services. Please send your drawing or provide specifications including outline size, display information, glass thickness, polarizer type, display type, connector mode, temperature ranges, supply voltage, viewing direction, and drive conditions.

What is the lead time for tooling?

Typically 15 to 25 days after drawing confirmation and tooling charge payment. We'll provide exact timing upon drawing approval.

Can you send samples for evaluation?

Yes, sample orders are available for testing and evaluation.

What is the production lead time?

For standard products in stock: 1 day after payment. For mass production of custom orders: approximately 15-30 days. We'll notify you if we

can complete earlier.



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