2.8 Inch Lcd Tft Touch Screen 50pins SPI Interface 240x320 IPS Screen

Our Product Introduction

Basic Information

- Brand Name: Chenghao Optoelectronic
- Certification: RoHS CE FCC
- Model Number: CH280QV22H-CTB
- Minimum Order Quantity: 100 Pcs
- Packaging Details: All The Products Are Packed In Right Way To Keep It Safe. For Small Sizes Of Products We Use Tray + Carton, For Bigger Sizes We Use Foam Slot + Carton. We Also Design Packages According To Customers' Requirements
- Delivery Time: 3~7 Days
- Payment Terms: TT
- Supply Ability: 300K Pcs/month

Product Specification

- Lcd Type: 2.8" TFT+ CTP
- Active Area Size: 43.2 * 57.6 Mm
- Viewing Direction: 80/80/80/80
- Touch Interface: IIC
- Contrast: 800:1
- Storage Temperature: -30 ~ +80 °C
- Touch Type: Capacitive
- Display Mode: IPS/Transmissive/Normally Black
- Highlight: **2.8 Inch Lcd Tft Touch Screen**, **240x320 Lcd Tft Touch Screen**

More Images

Our Product Introduction

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Product Description

Product Description:

CH280QV22H-CTB is a 2.8-inch IPS capacitive touch TFT LCD display module provided by Chenghao Optoelectronic. It has a resolution of 320x240 and uses an SPI interface. It is widely used in industrial control, smart home, medical equipment, IoT terminals, and vehicle-mounted equipment. The module has excellent viewing angle performance (80 degrees up, down, left, and right), clear and colorful display, supports 262K colors, and has a brightness of up to 300 cd/m². This module has a compact structural design, with an overall size of 56 x 74 x 3.74 mm and a display area of 43.2 x 57.6 mm. It is equipped with a cover glass with a thickness of 0.7 mm, a transmittance of ≥87%, and a surface hardness of 6H. While ensuring display quality, it also has good scratch resistance. The touch panel type is capacitive, uses an I2C interface, and has an operating voltage range of 2.8V to 3.3V, which can provide sensitive and stable touch response.		
		The operating temperature range of the CH280QV22H-CTB display module is -20°C to +70°C, and the storage temperature range is -30°C to +80°C, enabling it to operate stably in a variety of complex environments. In addition, the module supports small batch sample testing and can be customized according to customer needs, including FPC cable structure adjustment, backlight brightness adjustment, interface definition reconstruction, and touch panel customization design, etc., to fully meet the differentiated application needs of various terminal devices. Whether in precision instruments, artificial intelligence terminals, or vehicle control systems, CH280QV22H-CTB has become an ideal display solution choice with its high reliability and flexible customization capabilities.

Features:

High-definition resolution display
Equipped with a high-quality TFT LCD screen with 320x240 dots, it supports delicate picture presentation and is suitable for information-intensive image display.

Full-viewing experience
Adopting IPS technology, it has a wide viewing angle of 80° in four directions, up, down, left, and right, ensuring that there is no color cast and dark corners when viewing the image from any direction.

Multi-point capacitive touch
Built-in capacitive touch panel, responsive, easy to operate, supports multi-point touch, suitable for complex interactive application

scenarios.

High-strength touch glass
The touch layer uses a glass cover with a hardness of 6H, which has excellent scratch and pressure resistance and is suitable for outdoor or industrial environments.

Excellent light transmittance
The light transmittance of the touch glass reaches more than 87%, and it can still maintain good display effects in strong light environments.

Lightweight and compact structure
The overall thickness of the module is controlled within 3.74mm, which is suitable for space-sensitive embedded applications.

Energy-saving backlight design
Built-in high-efficiency backlight source, while providing stable brightness, reduces power consumption and extends device life.

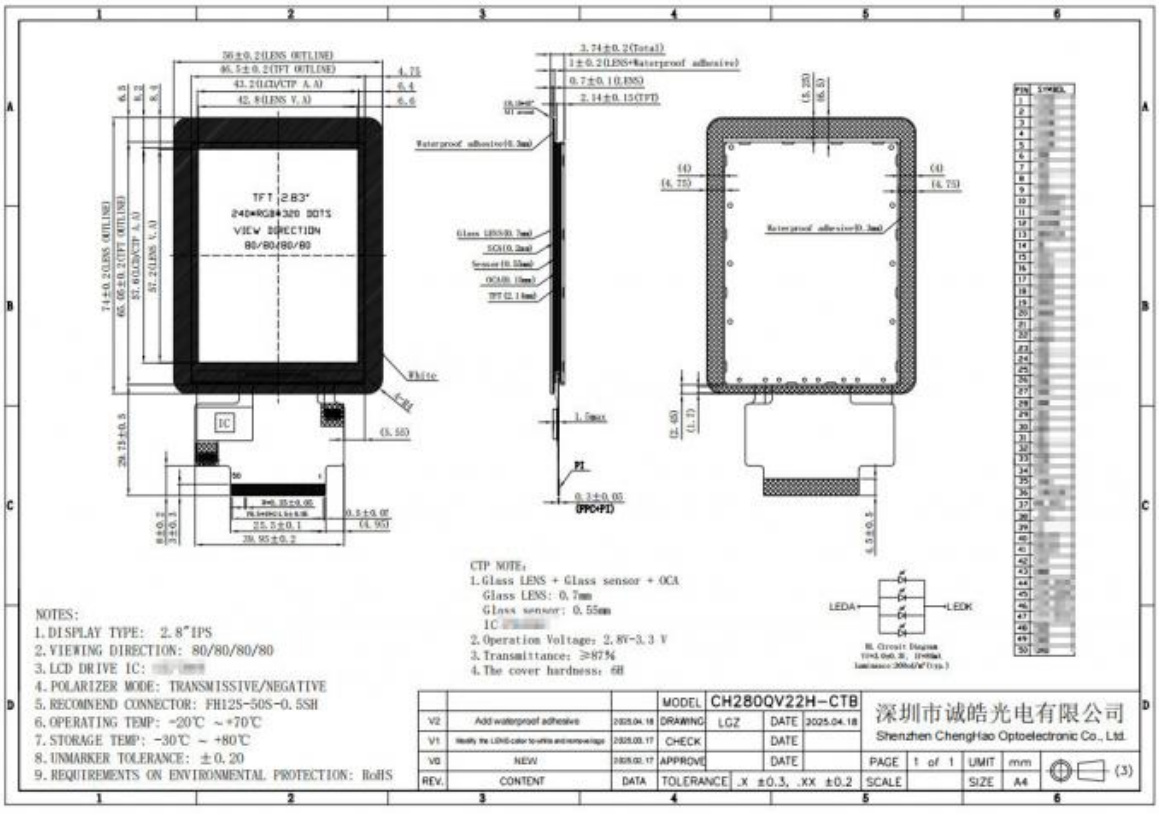
Low-power interface configuration
The display part uses SPI communication, and the touch part uses I2C interface, which simplifies system design and reduces energy consumption.

Applicable to a wide range of temperature ranges
With an operating temperature capability of -20℃ to +70℃, it supports stable operation in a variety of industrial and outdoor environments.

Support project customization and development
FPC structure, backlight brightness, interface form, touch scheme, etc. can be personalized according to customer needs to enhance product adaptability.

Technical Parameters:

Display Mode	IPS/Transmissive/Normally Black
Viewing Direction	80/80/80/80
Lcd Type	2.8” TFT+ CTP
Number of dots	240x320
Module Size	56 * 74 * 3.74 Mm
Storage Temperature	-30 ~ +80 ℃
Active Area Size	43.2 * 57.6 Mm
Lcd Interface	SPI
Brightness	300 Cd/m2 Luminance
Operating Temperature	-20 ~ +70 ℃



Applications:

CH280QV22H-CTB is a high-performance 2.8-inch TFT LCD module that integrates display and touch. With its excellent visual performance, outstanding environmental adaptability and flexible customization capabilities, it has been widely used in multiple industries and equipment systems. The following are its main application directions:

Handheld terminal equipment

The module is compact and lightweight, and is particularly suitable for handheld instruments such as field detection equipment, handheld medical scanners, portable terminals, etc., providing clear data display and convenient human-computer interaction interface.

Industrial operation interface

In the field of industrial automation, CH280QV22H-CTB is often integrated into control panels or operation terminals for equipment status display, parameter setting or fault prompt interface, with the advantages of strong anti-interference, wide viewing angle and high temperature zone adaptability.

Portable medical equipment

The module's high-definition display and touch operation capabilities make it suitable for medical electronic equipment such as blood glucose meters, electrocardiographs, body temperature monitors, etc., providing users with an intuitive and stable interactive experience and improving diagnosis and monitoring efficiency.

Smart security terminal

CH280QV22H-CTB can be deployed in security products such as access control systems, fingerprint recognition terminals, visitor management machines, etc., to realize functions such as information display and identity confirmation, and improve the interactivity and security of the system.

Smart home control system

In home control terminals such as smart home appliances, smart switches, and smart thermostats, this module is used as a core display touch component to enable users to centrally manage and control equipment such as lights, air conditioners, and curtains.

Consumer electronics

CH280QV22H-CTB is also used in consumer electronics such as children's learning machines, electronic dictionaries, and small game consoles. With its stable performance and sensitive touch, it improves the user's operating experience.

Agriculture and environmental monitoring system

In smart agriculture and environmental testing equipment, the module is used to display sensor data in real time, such as temperature and humidity, light intensity, soil information, etc., to help users make environmental decisions efficiently.

Traffic and energy management equipment

This module is also commonly used in the fields of status display terminals in vehicles, electric vehicle instruments, charging pile interfaces, etc., and is used to display key data such as power, speed, and fault information.

Customization:

CH280QV22H-CTB is not only a standardized display module, but also a display touch solution with highly flexible and customizable capabilities. It can widely meet the personalized needs of various customer projects in terms of function, structure, performance, etc. The following are the main customization options that this product can provide:

Personalized design of FPC cable structure

For the layout requirements of different main control boards or system interfaces, it supports customization of the length, width, routing direction, PIN pin definition and interface position of FPC (flexible circuit board) to achieve high compatibility with the hardware structure of the whole machine.

Optional configuration of touch function

You can choose whether to carry the touch function according to the actual needs of the customer, and you can also choose between capacitive and resistive touch. At the same time, the touch sensitivity, touch points and touch controller chip model can be adjusted as needed.

Exclusive customization of appearance structure

Supports personalized customization of module size, display area ratio, glass cover shape, etc. according to the requirements of customer device panel opening, fixing method, frame shielding area, etc. to ensure installation fit.

Interface type and protocol conversion

In addition to the standard SPI and I2C interfaces, it can also be customized to convert to parallel port (RGB), MCU interface, MIPI or other communication protocols according to the different requirements of the main control platform to enhance compatibility and scalability.

Backlight system brightness customization

The number of backlight beads, current driving mode and diffusion film material can be adjusted according to the terminal usage scenario (such as outdoor sunlight, high-brightness industrial environment, etc.) to achieve different levels of brightness output.

Operating temperature range expansion

If the customer application involves extremely cold or high temperature environment, the module can use enhanced liquid crystal materials and structural packaging solutions to keep stable operation under more severe climatic conditions.

Cover printing and LOGO customization

Supports printing brand LOGO, operation icons, function logos, etc. on the glass cover to help customers improve brand recognition and the professional image of terminal products.

Anti-interference and reinforcement treatment

For industrial scenarios or strong electromagnetic environment applications, the module can add EMI shielding, thickened conductive rubber frame, enhanced fixed structure and other designs to improve the overall stability of the system.

Combined module solution integration

Provide LCD+TP+backlight+driver IC integrated design, or integrate the module with the housing and main control board for proofing according to customer applications to shorten the product development cycle.

FAQ:

Q: What is the brand name of the Small LCD Touch Screen?
A: The brand name of the Small LCD Touch Screen is Chenghao Optoelectronic.
Q: What is the model number of the Small LCD Touch Screen?
A: The model number of the Small LCD Touch Screen is CH280QV22H-CTB.
Q: What certifications does the Small LCD Touch Screen have?
A: The Small LCD Touch Screen is certified with RoHS, CE, and FCC.
Q: What is the minimum order quantity for the Small LCD Touch Screen?
A: The minimum order quantity for the Small LCD Touch Screen is 100 pieces.
Q: What are the packaging details for the Small LCD Touch Screen?
A: All The Products Are Packed In Right Way To Keep It Safe. For Small Sizes Of Products We Use Tray + Carton, For Bigger Sizes We Use Foam Slot + Carton. We Also Design Packages According To Customers' Requirements.

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