



800x480 Pixels 7inch Capacitive Touch Display Perfect for Smart Home -30 80C

Our Product Introduction

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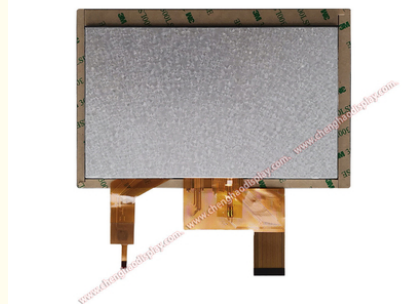
Basic Information

- Brand Name: Chenghao Optoelectronic
- Certification: CE, ISO9001, Rose, SGS
- Model Number: CH700WV03A-CTBA
- 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: T/T, AliPay, PayPal
- Supply Ability: 50000000 Pcs/month



Product Specification

- Storage Temperature: -30 ~ +80°C
- Display Mode: TN/Transmissive/Normally White
- Operating Temperature: -20 ~ +70°C
- Touch Interface: IIC
- Active Area Size: 154.08 * 85.92 Mm
- Touch Type: Capacitive
- Color: 16.7M
- Luminance: 300 Cd/m2
- Highlight: 7inch Capacitive Touch Display, Smart Home Capacitive Touch Display



More Images





Product Description

Product Description:



The CH700WV03A-CTBA is an outstanding 7-inch capacitive touch LCD display module designed to meet diverse application needs. The module combines advanced display technology with flexible user interaction functions, making it an indispensable component in equipment in various industries. Its main features include high resolution, wide temperature range and excellent response speed, which enable it to provide an excellent visual experience in different environments.

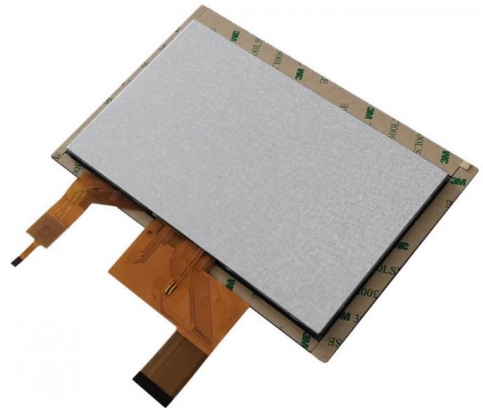
First of all, the CH700WV03A-CTBA has a resolution of 800x480, which can display clear and delicate images. This high resolution ensures that users can obtain accurate and rich visual information in various application scenarios. Whether in industrial automation, smart home or medical equipment, this module can effectively improve the readability of information and the convenience of operation.

The module uses capacitive touch technology and supports multi-touch, allowing users to interact with the device intuitively and flexibly. Its extremely short touch response time ensures smooth and immediate operation, suitable for application scenarios that require fast response, such as gaming equipment and interactive displays. The touch panel has a light transmittance of up to 87%, making the display more vivid and users can get a good experience under different lighting conditions.

The design of CH700WV03A-CTBA also takes full account of environmental adaptability. Its operating temperature range is -20°C to +70°C, and it can operate stably under extreme conditions, especially suitable for industrial environments and outdoor applications.

In addition, the thin and light design of CH700WV03A-CTBA is one of its major advantages. The thickness is only 5.27mm, making it easy to integrate into various electronic devices. This compact design not only saves space, but also adds a modern feel to the overall beauty of the product. Its appearance and structure are also carefully designed to ensure good durability and long-term reliability.

In terms of quality, CH700WV03A-CTBA has undergone strict quality inspections and meets international standards to ensure that the product meets high quality requirements when it leaves the factory. Chenghao Optoelectronics is committed to providing high-quality after-sales service to help customers solve various problems encountered during use and ensure that customers can use it without worries.



Features:

1. Display mode and color performance: TN/transflective/normally white display mode is adopted, supporting 16.7M true color display, with high color saturation and accurate restoration, meeting diverse visual needs.
2. Resolution and brightness parameters: With 800x480 pixel resolution and 300 cd/m² brightness, it takes into account both display clarity and basic environmental adaptability, and is suitable for use in conventional lighting scenes.
3. Touch performance:
 - (1) Equipped with 0.7mm thick touch glass, light transmittance ≥87%, the touch operation is sensitive and does not affect the visual effect;
 - (2) The glass hardness reaches 6H, which is wear-resistant and scratch-resistant, ensuring long-term stability;
 - (3) It adopts a capacitive touch panel, supports I2C interface, and has an operating voltage range of 2.8V-3.3V, with strong compatibility.
4. Structural design:
 - (1) The module size is 180x119x5.27mm, which is light, thin and compact, and easy to integrate into various devices;
 - (2) The visible area is 164.9x100mm, with a large effective display area, which is suitable for display requirements in multiple scenarios;
 - (3) It is composed of components such as TFT LCD panel, touch panel, driver IC, backlight and FPC, and the modular design of the structure is convenient for maintenance and upgrade.
5. Interface and compatibility: It adopts RGB liquid crystal interface, supports standardized signal transmission, adapts to mainstream

control systems, and simplifies the equipment integration process.

6. Environmental adaptability:

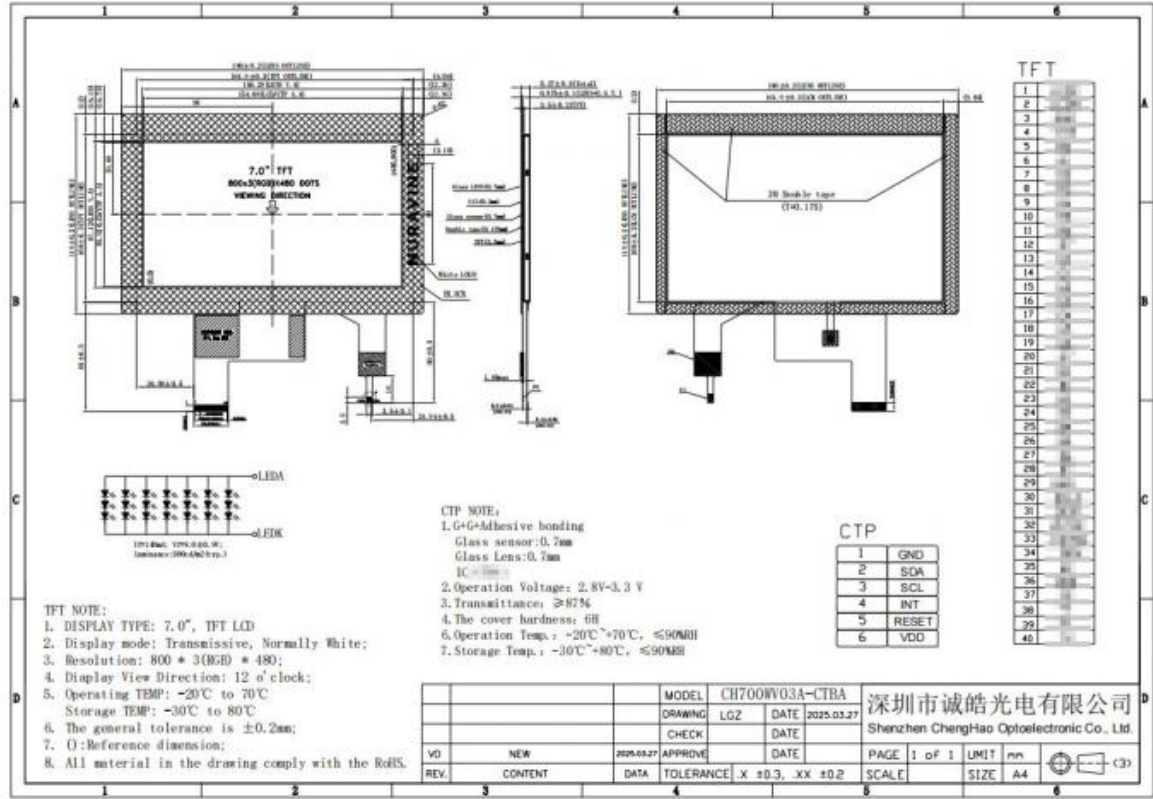
- (1) The operating temperature range is -20~+70°C, and the storage temperature is -30~+80°C. It can adapt to wide temperature environments and can be used in complex scenarios such as industry and vehicle-mounted;
- (2) The touch glass transmittance is combined with the module heat dissipation design to ensure stable operation in high and low temperature environments.

7. Customization capability: Supports FPC shape and structure modification, backlight brightness adjustment, LCD interface definition and touch panel customization, flexibly matching customer personalized needs.

8. Certification and quality assurance: Production follows ISO9001 quality management system and ISO14001 environmental management system, and strict testing is carried out from raw materials to finished products to ensure reliability and environmental protection standards.

Technical Parameters:

Operating Temperature	-20~+70°C
Number of dots	800x480
Touch Interface	IIC
Viewing Direction	12 O'clock
Color	16.7M
Display Mode	TN/Transmissive/Normally White
Lcd Type	7" TFT + CTP
Active Area Size	154.08 * 85.92 mm
Lcd Interface	RGB
Viewing Area Size	155.28 * 87.12 mm



Applications:

With its precise parameter design and stable performance, CH700WV03A-CTBA can be widely adapted to multiple fields such as industry, consumer electronics, automotive, and medical, and become the core display and interactive component of various devices. The following is a specific application scenario and advantage analysis:

Industrial control and automation equipment

In the industrial field, CH700WV03A-CTBA can be used as the core display module of the human-machine interface (HMI). Its **800x480 pixel resolution** and **300 cd/m² brightness** ensure that the equipment operating parameters, fault alarm information and operation guide can be clearly displayed in conventional lighting environments such as workshops and control rooms.

1. Typical applications:

- (1) Operation panel of CNC machine tools: real-time display of processing progress, coordinate data, etc., supporting capacitive touch to quickly adjust parameters;
- (2) Industrial Internet of Things (IIoT) gateway device: integrated temperature, humidity, energy consumption and other data monitoring interfaces, local interaction through I2C touch interface;
- (3) Automated production line console: combined with RGB interface and PLC control system, real-time synchronization of production line

status, improving operation and maintenance efficiency.

2. Core advantages:

- (1) Wide temperature adaptability: -20~+70°C operating temperature range, can withstand temperature fluctuations in industrial environment;
- (2) Structural durability: 6H hardness touch glass and modular design, anti-vibration, anti-dust, suitable for long-term operation in harsh working conditions.

Smart home and building automation

In the smart home scenario, this module can be used as a smart central control screen or device terminal display to achieve centralized management and visual interaction of home devices.

1. Typical applications:

- (1) Smart home control panel: integrated lighting, air conditioning, and security system control interfaces, scene mode switching through touch operation;
- (2) Smart home appliance display: parameter display and function selection interface of equipment such as ovens and washing machines, supporting graphic operation instructions;
- (3) Building intercom system: as a display screen for unit door machines or indoor extensions, it displays visitor images, access control status and other information.

2. Core advantages:

- (1) Lightweight design: compact size of 180×119×5.27mm, easy to embed into the wall or device body, saving installation space;
- (2) Low power consumption: the touch panel operating voltage is 2.8V-3.3V, suitable for battery-powered devices, and prolongs the battery life of smart home terminals.

In-vehicle electronics and mobile devices

The stability and environmental adaptability of CH700WV03A-CTBA make it an ideal choice for in-vehicle displays, especially for assisted driving and in-vehicle entertainment systems.

1. Typical applications:

- (1) Car navigation system: display map path, real-time traffic information, capacitive touch supports gesture zooming and location search;
- (2) Car audio and video system: play video and audio lists, and achieve high-definition image quality output with RGB interface;
- (3) Engineering machinery dashboard: such as forklift and excavator status monitoring screen, display key data such as oil level and speed.

2. Core advantages:

- (1) Anti-interference ability: through EMC electromagnetic compatibility design, reduce the impact of signal interference on display in the vehicle environment;
- (2) Wide viewing angle characteristics: although the viewing angle parameter is 12 (may be a specific direction viewing angle code), the TN mode has a fast response speed and is suitable for dynamic picture display.

Medical equipment and instrumentation

In the field of medical and precision instruments, this module can meet the high requirements of professional scenarios for display accuracy and reliability.

1. Typical applications:

- (1) Medical monitors: Real-time display of vital signs data such as heart rate and blood oxygen, and the touch interface supports medical staff to quickly set monitoring parameters;
- (2) Portable diagnostic equipment: Small display screens such as ultrasound machines clearly present image details and assist in on-site diagnosis;
- (3) Laboratory analysis instruments: Display experimental procedures, data curves and operation prompts, and support multi-language interface switching.

2. Core advantages:

- (1) Color accuracy: 16.7M true color display meets the high-precision color reproduction requirements of medical images;
- (2) Easy-to-clean design: The smooth touch glass surface can be quickly disinfected and meets the hygiene standards of the medical environment.

Commercial and consumer electronics

In commercial scenarios, CH700WV03A-CTBA can be used as a lightweight display terminal to help companies improve service efficiency and user experience.

1. Typical applications:

- (1) Retail POS system: display order details, payment amount and promotion information, touch operation supports fast checkout;
- (2) Self-service terminal equipment: such as queuing machines and information inquiry machines, provide graphic guidance interface to reduce the pressure of manual service;
- (3) Electronic price tags and shelf display screens: dynamically update product prices, inventory and promotional activities to improve store operation flexibility.

2. Core advantages:

- (1) Low cost and high efficiency: factory direct supply model reduces procurement costs, standardized RGB interface shortens development cycle;
- (2) Flexible customization capabilities: support FPC structure modification and backlight adjustment, adapt to commercial equipment of different sizes and installation methods.



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