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NEXT VISION DISPLAY

SPECIFICATION

CUSTOMER : _____

MODULE NO.: NT070-C001WA

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Version	
Engineer	
Date	

Customer:
Approved by

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+39 0332 1888005

Part Number: **NT070-C001WA**

7inch Capacitive Touch Display For Raspberry Pi, 800×480, DSI Interface



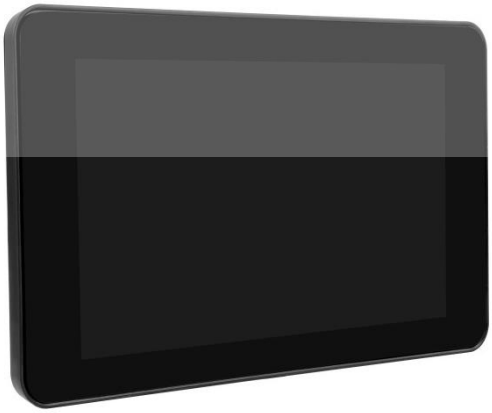


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Available also:

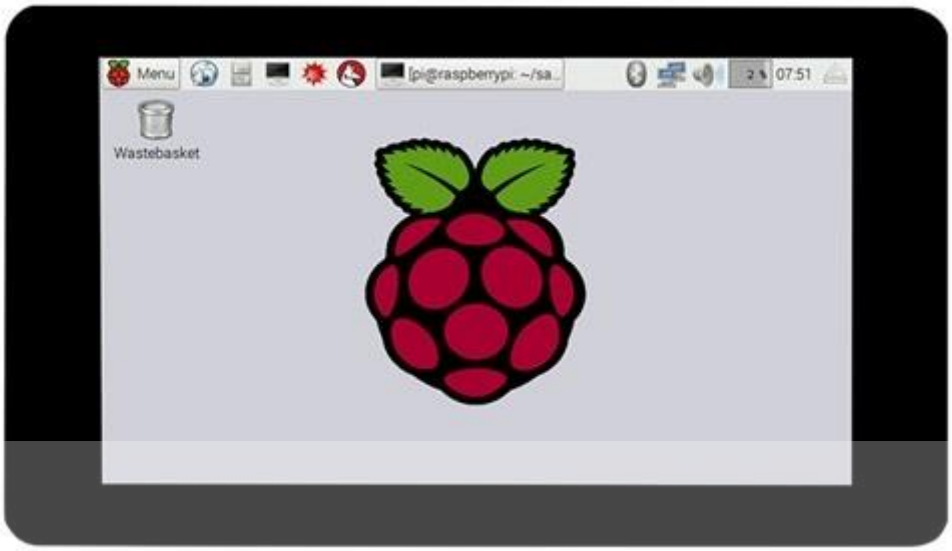
Part Number: **NT070-C002WA**

7inch Capacitive Touch Display For Raspberry Pi, 800×480, DSI Interface, with Case (A)





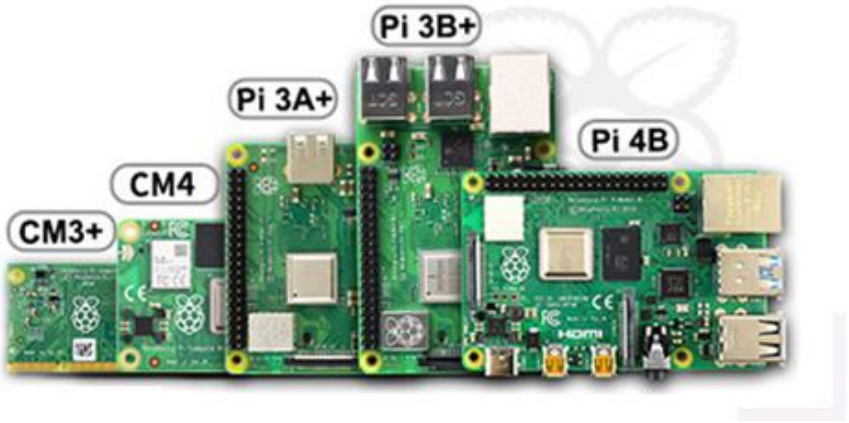
7" Touch Display



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Size	Resolution	Display Port	Power Cons.
7"	800×480	DSI	Low Power
Touch Type	**Touch Points**	**Touch Port**	**Touch Panel**
Capacitive	5-Points	I2C	Toughened Glass

Device & System Support



Raspberry Pi

Supports Raspbian, 5-points touch, driver free
Supports Ubuntu / Kali / WIN10 IoT, single point touch, driver free
Supports Retropie, driver free

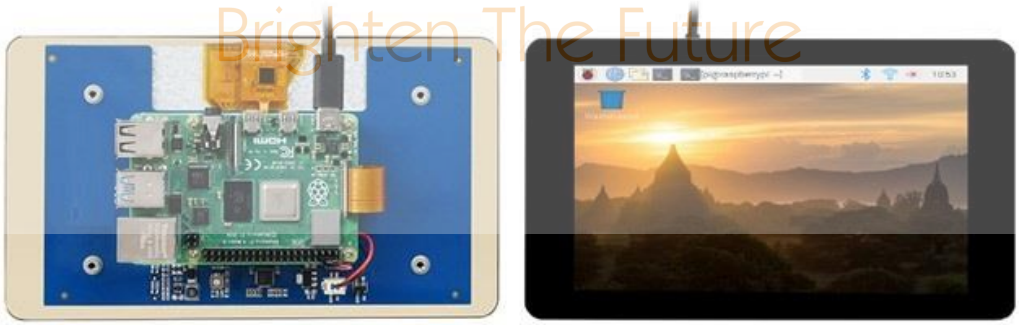
Supports Pi 4B/3B+/3A+/3B/2B/B+/A+, CM3/3+/4*

* CM3/3+/4 requires extra adapter board

Connection Examples

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Working With Raspberry Pi 4



Working With Raspberry Pi 3B+



Touch Control

Capacitive Touch

Up To 5-Points Touch[1)]



1) up to 5-points touch, depending on the operating system.

Adjustable Brightness Via Software



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Appearance And Dimensions



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Specs

7inch Capacitive Touch Display for Raspberry Pi, 800×480, TFT Wide Angle, MIPI DSI Interface

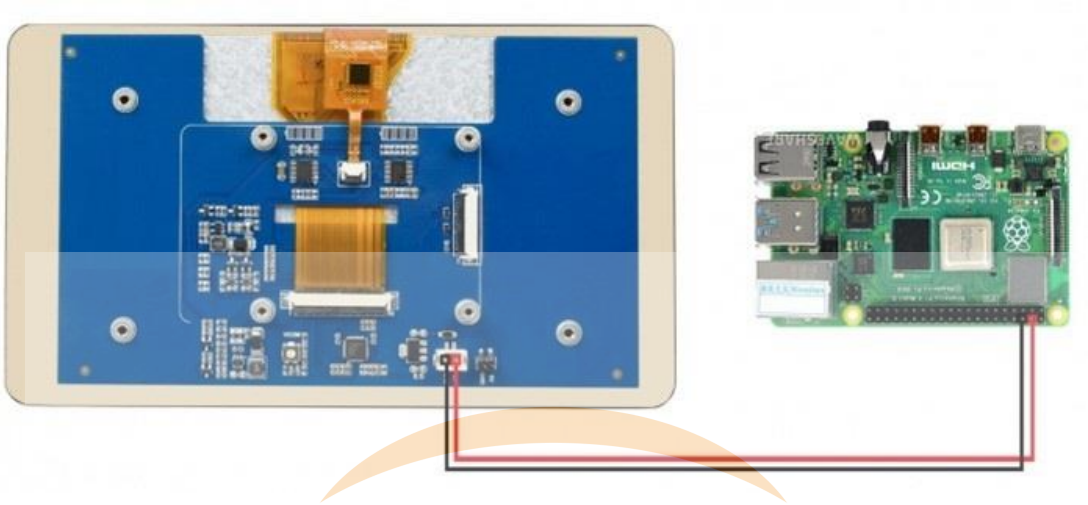
Features

- 7inch TFT screen with a hardware resolution of 800x480.
- Capacitive touch panel supports 5-point touch.
- Supports Pi 4B/3B+/3A+/3B/2B/B+/A+. Another adapter board is required for CM3/3+/4.
- As it directly drives LCD by the DSI interface of Raspberry Pi, the refreshing rate is up to 60Hz.
- Supports Raspberry Pi OS / Ubuntu / Kali and Retropie.
- Support backlight adjusts by software.

User guide

Hardware connection

- 1) Connect the DSI interface of 7inch DSI LCD to the DSI interface of Raspberry Pi through 15PIN FPC cable.
- 2) Use the 2PIN power cable to connect the power interface of the LCD to the 40PIN GPIO interface of the Raspberry Pi, as below:



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3) For easy use, you can fix the Raspberry Pi on the backside of the 7inch DSI LCD with screws

The installation effect is shown in the following figure:



Software setting

1) Download image from the Raspberry Pi website.

2) Download the compressed file to the PC, and unzip it to get the .img file.

3) Connect the TF card to the PC, use SDFormatter.exe software to format the TF card.

4) Open the Win32DiskImager.exe software, select the system image downloaded in step 2, and click 'Write' to write the system image.

5) After the image has finished writing, save, and quit the TF card safely.

6) Power on the Raspberry Pi and wait for a few seconds until the LCD displays normally. And the touch function can also work after the system starts.

【Note】

- On December 2, 2021, the Raspberry Pi OS was divided into two branches, the Buster branch and the Bullseye branch. The Buster branch is a continuation of the old system and is more stable. The Bullseye branch added some new features, using open source libraries and new interfaces. Since the current Bullseye branch has just been released shortly, it is not stable yet. If you are an industrial user, it is strongly recommended to use the Buster branch.
- If you are using the Buster branch system, the DSI LCD can work with Raspberry Pi directly after connecting and powering on. But if you are using the Bullseye branch system, you need to modify the config.txt as below:

  Open the config.txt file in the root directory of the TF card(/boot), comment out the following lines:

```
#camera_auto_detect=1
#dtoverlay=vc4-kms-v3d
```

  Add the following lines under [all]:

```
dtoverlay=vc4-fkms-v3d
start_x=1
```

  Then save the file and reboot the system:

```
sudo reboot
```

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- If you need to use the CSI camera under the Bullseye branch system. Since this branch uses the libcamera camera library by default, the library doesn't support FKMS drivers.

So in addition to the above modification, you also need to install the Raspicam camera library.

The installation method is as follows:

```
cd ~
sudo apt install cmake
git clone https://github.com/raspberrypi/userland
cd userland
./buildme
sudo cp build/bin/* /bin/
```

Then execute the following command to shut down the system:

```
poweroff
```

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Connect the Raspberry Pi camera to the CSI interface of the Raspberry Pi, power on the Raspberry Pi again, and after the system boots, execute the following command:

Take a picture:

```
raspistill -o image.jpg
```

Take a video:

```
raspivid -o video.h264 -t 10000
```

Backlight Controlling

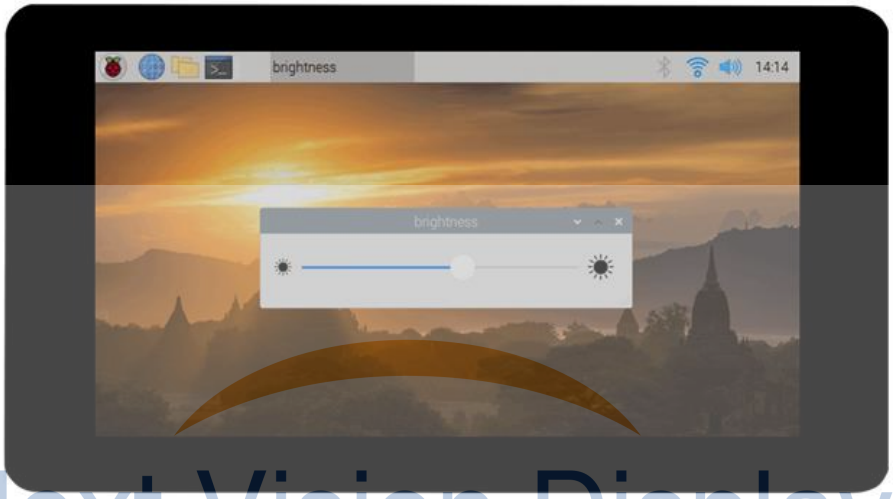
- Open a terminal and type the following command to adjust the brightness. **Note:** If the command reports the 'Permission denied' error, please switch to the 'root' user mode and execute it again.

```
echo X > /sys/class/backlight/rpi_backlight/brightness
```

X can be value in range 0~255. The backlight is darkest if you set it to 0 and the backlight is set to lightest if you set it to 255

```
echo 100 > /sys/class/backlight/rpi_backlight/brightness
echo 0 > /sys/class/backlight/rpi_backlight/brightness
echo 255 > /sys/class/backlight/rpi_backlight/brightness
```

After connecting, you can choose Menu -> Accessories -> Brightness to open the adjustment software



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Note: If you use the 2021-10-30-raspios-bullseye-armhf image or the laster version, please add the line *dtoverlay=rpi-backlight* to the config.txt file and reboot.

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Disable touching

If you want to disable the touch function, you can modify the config.txt file, add the following line to the file and reboot

```
disable_touchscreen=1
```

Note: After adding the command, it needs to be restarted to take effect.

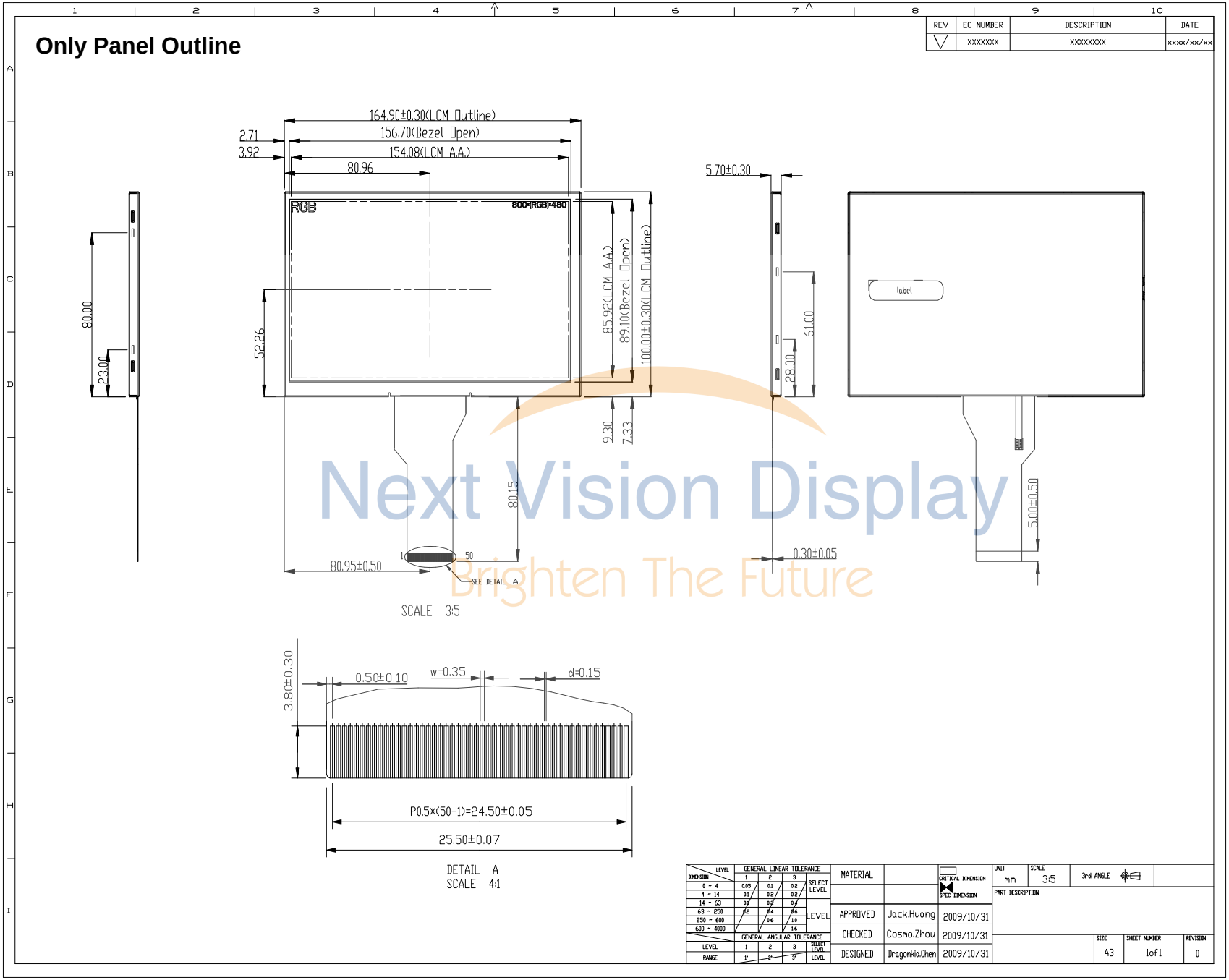
Handling

Display supplied with double-sided adhesive on the edge of the capacitive touch for an easy assembly.



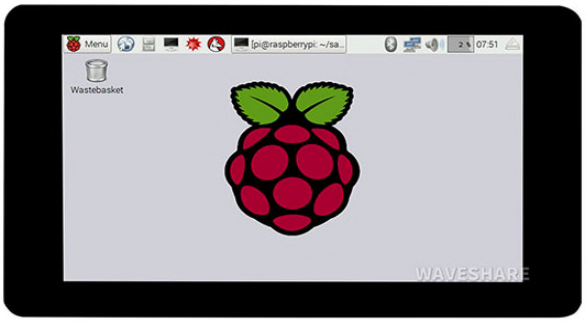
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Only Panel Outline



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Package content

7inch DSI LCD x1	
FPC 15PIN 1.0 pitch 50mm (opposite sides) x2	
PH2.0 2PIN wire 10cm x1	
Screws pack x1	

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