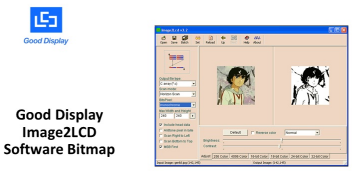

Good Display Image2LCD Software Bitmap Conversion Instructions

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Good Display

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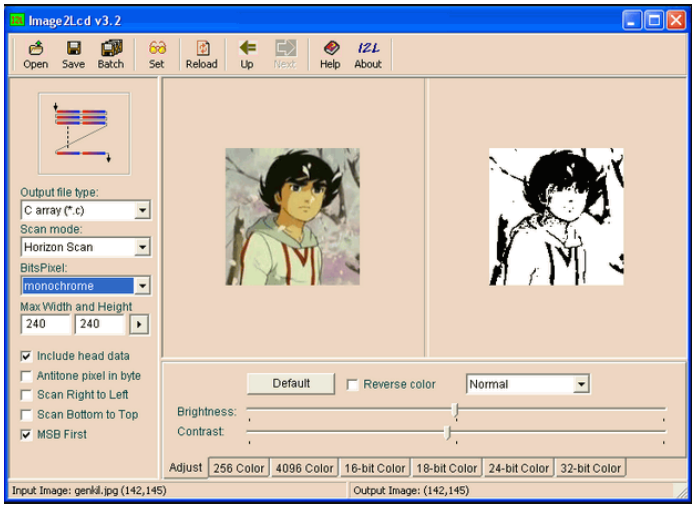


Specifications:

- **Supported ePaper images:** Monochrome, Three-color, Four-color, Six-color, Seven-color
- **Color table:** Windows Color Table
- **Output Data Types:** Monochrome, 4-gray, 16-gray, 256-color grayscale
- **Maximum Width and Height:** Customizable to match screen resolution

Product Usage Instructions:

ePaper Image Creation:

When creating ePaper images, refer to the color table provided by the Paint software that comes with Windows. Create an image with the same resolution as the ePaper and save it in bmp or jpg format.

Note: For three-color ePaper images, split the image into two separate images: black-and-white and red-and-white.

An Introduction to ePaper Bitmap Conversion Software:

To convert ePaper bitmaps, use the Image2LCD software. Follow these steps:

1. Download the software from **this link**.
2. Install the software by running the .exe file.
3. Register the software using the provided registration code: 0000-0000-0000-0000-6A3B.
4. Import your prepared image into the software for conversion.
5. Adjust settings such as Output Data Type, Maximum Width and Height, and Color Inversion as needed.
6. Save the processed image data to your desired location.

ePaper List:

Click on an ePaper model to perform the corresponding bitmap conversion operation.

FAQ:

- **Q: How can I create a three-color ePaper image?**
  A: To create a three-color ePaper image, split the image into two separate images: black-and-white and red-and-white before converting it using the Image2LCD software.
- **Q: What is the maximum grayscale mode supported by the software?**
  A: The software supports up to 256-color grayscale for seven-color images.

Dalian Good Display Co., Ltd.

ePaper Image Creation

1. Monochrome ePaper image, including black and white 

2. Three-color ePaper image, including black, white, and red or yellow  ()
3. Four-color ePaper image, including black, white, red, and yellow 
4. Six-color ePaper image, including black, white, red, yellow, blue, and green 
5. Seven-color ePaper image, including black, white, red, yellow, blue, green, and orange.
   
6. Windows Color Table  When creating ePaper images, you can refer to the color table provided by the Paint
   software that comes with the Windows system. You need to create an image with the same resolution as the ePaper and save the image in bmp or jpg format.

Note: Before the picture production and bitmap conversion for a three-color ePaper image, it needs to be split into two separate images: black-and-white andred-and-white, as shown in the image below:

An Introduction to ePaper Bitmap Conversion Software

ePaper bitmap conversion can be done using the Image2LCD software. Download the software from the following link: (**https://v4.cecdn.yun300.cn/100001_1909185148/image2lcd.zip**).
After downloading and extracting the software, you will see three files. The file with the .exe format is the installation file, and the file with the .htm format contains the registration code. Double-click the .exe file to install the software. After the software is installed, click the “Register” button in the software and enter the registration code: 0000 -0000-0000-0000-6A3B to complete the software registration.

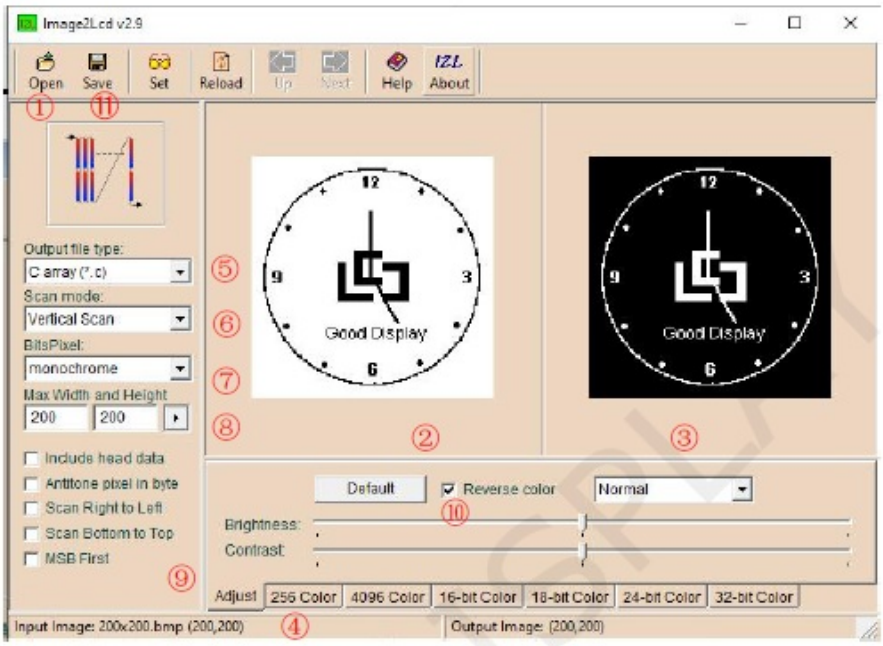


Figure 1: Software Interface

1. **Image Import Button**

Import the prepared image into the software.

2. **Image Display Interface**

   Preview of imported images.

3. **Image Preprocessing Interface**

   Preview of image processing.

4. **Image Information Panel**

   Displays information such as resolution and name of the imported image.

5. **Output Data Type**

   Data type output after image processing.

6. **Scan Mode**

   Direction of image processing scanning, typically including horizontal and vertical scanning.

7. **Output Gray Scale**

   Image grayscale includes four modes: monochrome, 4-gray, 16-gray, and 256-color grayscale. For black and white images, choose monochrome; for black and white with red and yellow, choose 4-gray; for seven-color images, choose 256-color.

8. **Maximum Width and Height**

   Set the image resolution, typically matching the screen resolution. After entering the resolution parameters, click " " to complete the setting

9. **Scan Mirror Processing**

   - Include head data / Antitone pixel in byte: These two options are not selected by default.
   - Scan Right to Left: Left-right mirror.
   - Scan Bottom to Top: Up-down mirror.
   - Scan Bottom to Top: Byte data mirror.

10. **Color Inversion**

    - Reverse color **Color inversion.**

11. Data Save

    Save Save image data, default save location is the C drive.

ePaper List

Note: Click on an ePaper model to jump to the corresponding bitmap conversion operation.

1. Monochrome EPD
   - 0.97 inch GDEM0097T61 GDEW0097T50
     1.02 inch GDEW0102T4 GDEW0102I4FC
   - 1.22 inch GDEM0122T61
   - 1.54 inch GDEY0154D67 GDEM0154I61 GDEY0154D90LT GDEW0154T8D GDEW0154I9FC
   - 2.13 inch GDEY0213B74 GDEY0213B75 GDEY0213D32LT GDEM0213I61 GDEW0213I5FD
   - 2.15 inch GDEW0215T11
   - 2.66 inch GDEY0266T90 GDEY0266T90H GDEY0266D91LT

- 2.7 inch GDEY027T91 GDEW027W3
- 2.9 inch GDEY029T94 GDEY029D57LT GDEW029I6FD
- 3.1 inch GDEQ031T10
- 3.7 inch GDEY037T03
- 4.2 inch GDEY042T81 GDEM042T31 GDEM042I31 GDEW042T2
- 4.26 inch GDEQ0426T82
- 5.79 inch GDEY0579T93
- 5.83 inch GDEY0583T81
- 7.5 inch: GDEY075T7
- 10.2 inch GDEM102T91
- 11.6 inch GDEY116T91
- 13.3 inch GDEM133T91

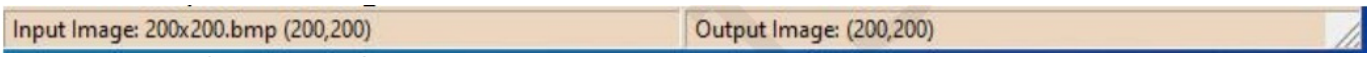
2. Three-Color ePaper
    - 0.97 inch GDEM0097Z61
    - 1.54 inch GDEM0154Z90
    - 2.13 inch GDEY0213Z98
    - 2.66 inch GDEY0266Z90
    - 2.7 inch GDEM027Z71 GDEW027C44
    - 2.9 inch GDEY029Z95
    - 3.7 inch GDEY037Z03
    - 4.2 inch GDEY042Z98
    - 5.79 inch GDEY0579Z93
    - 5.83 inch GDEY0583Z31
    - 7.5 inch: GDEY075Z08
    - 10.2 inch GDEM102Z91
    - 11.6 inch GDEY116Z91
    - 13.3 inch GDEM133Z91
3. Four-Color ePaper
    - 0.97 inch GDEM0097F51
    - 1.54 inch GDEY0154F51 GDEM00154F51H
    - 2.13 inch GDEY0213F51
    - 2.66 inch GDEY0266F51 GDEY0266F51H
    - 2.9 inch GDEY029F51 GDEY029F51H
    - 3.5 inch GDEM035F51
    - 3.7 inch GDEM037F51 GDEM037F52
    - 4.2 inch GDEM042F51
    - 7.5 inch GDEM075F52
    - 10.2 inch GDEM102F91
4. Six-Color ePaper
    - 4 inch GDEP040E01
    - 7.3 inch GDEP073E01
5. Seven-Color ePaper
    - 5.65 inch GDEP0565D90

- 7.3 inch GDEY073D46

Steps for Bitmap Conversion of ePaper Images

Importing Images for ePaper Bitmap Conversion

Open the Image2LCD software, click the “ Open ” button, and import the image that needs bitmap conversion. The status information panel will then display the resolution andneeds bitmap conversion. The status information panel will then display the resolution and name of the imported image.



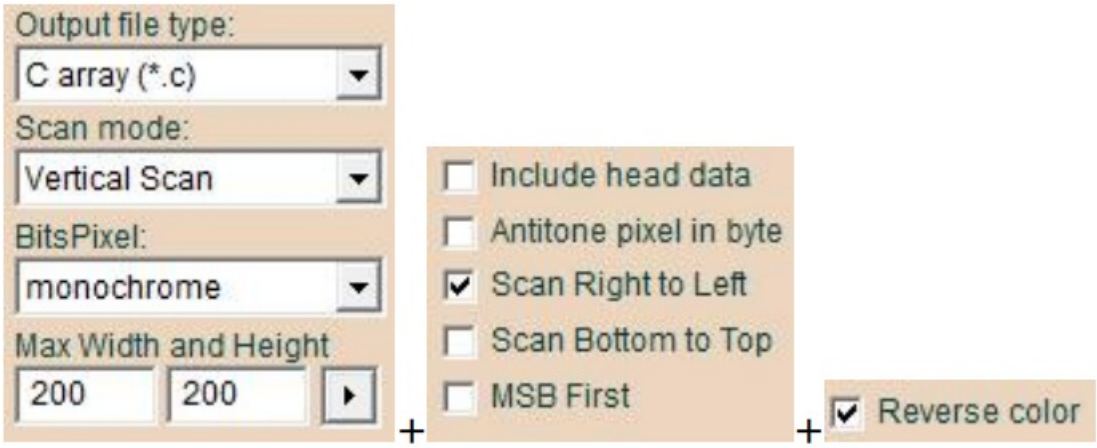
ePaper Bitmap Conversion Settings
Ultra Chip series IC models (referred to as UC): UC8151D, UC8253, UC8276, UC8179 etc
Solomon series IC models (referred to as SSD): SSD1680, SSD1681, SSD1677, SSD1683, etc.
Note: The width and height of the image should match those of the ePaper display

After setting the resolution, click ” ▸ ” to confirm.
Bitmap Conversion for UC Series Monochrome and Tricolor Paper

For monochrome and tricolor ePaper displays below 2.9 inch, you need to select”Vertical Scan,” “Monochrome,” “Scan Right to Left,” and “Reverse color.” Set the resolution corresponding to the ePaperdisplay, then click ” ▸ ” to confirm the settings

Finally, click ” Save ” to convert the image to an array and save it with the extension “.C”.

- 0.97 inch 184×88
- 1.02 inch 128×80
- 1.54 inch 152×152
- 2.13 inch 212×104
- 2.15 inch 208×112
- 2.66 inch 296×152
- 2.7 inch 264×176
- 2.9 inch 296×128

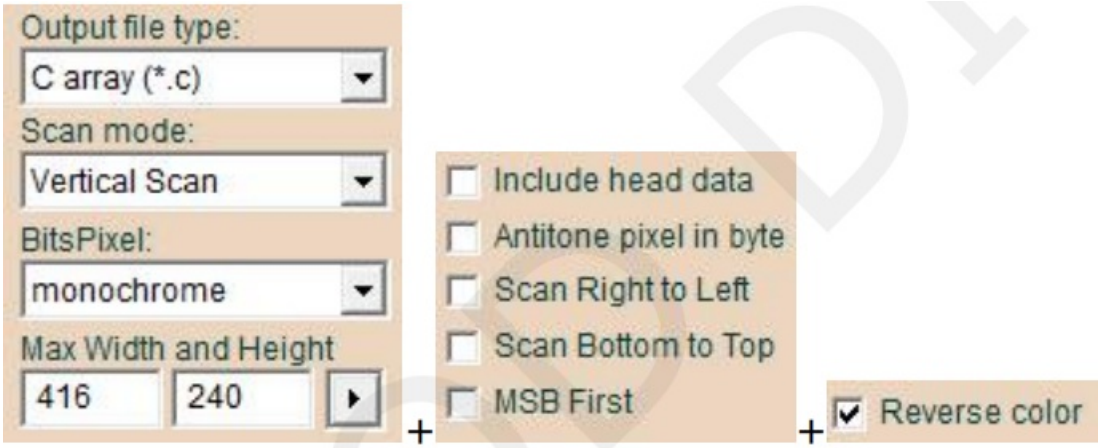


Note 1: After entering the image resolution parameters, click “ ▸ ” to confirm the settings.
Note 2: For tri-color ePaper with black, white, and red, one image needs to be split into two images: black-and-white and red-and-white. Perform the same bitmap conversion operation on both images.
For 3.1 inch and 3.7 inch monochrome and tricolor ePaper displays, select
“Vertical Scan,” “Monochrome,” and “Reverse color.” Set the resolution corresponding to the ePaper display, then

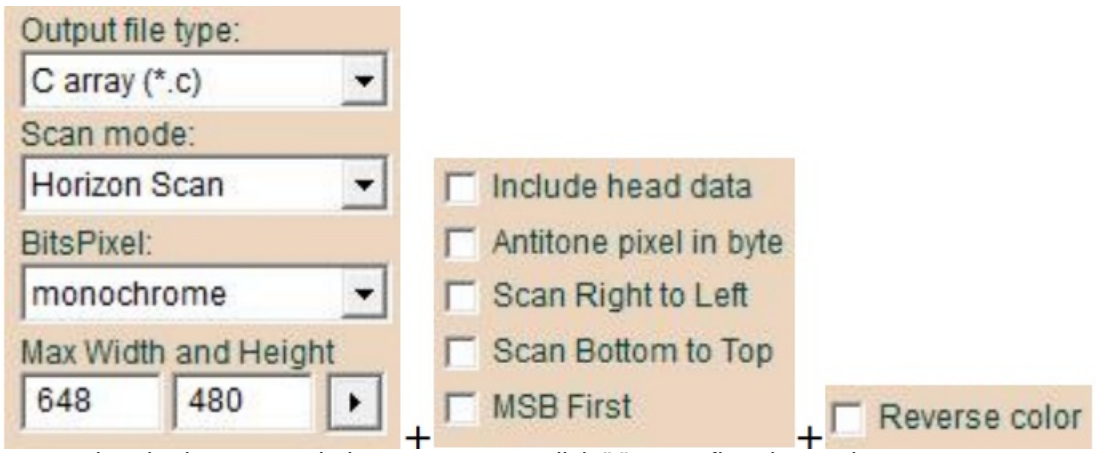
click ” Save ” to confirm the settings. Finally, click ” ” to convert the image to an array and save it with the extension “.C”.

- 3.1 inch 320×240

3.7 inch 416×240



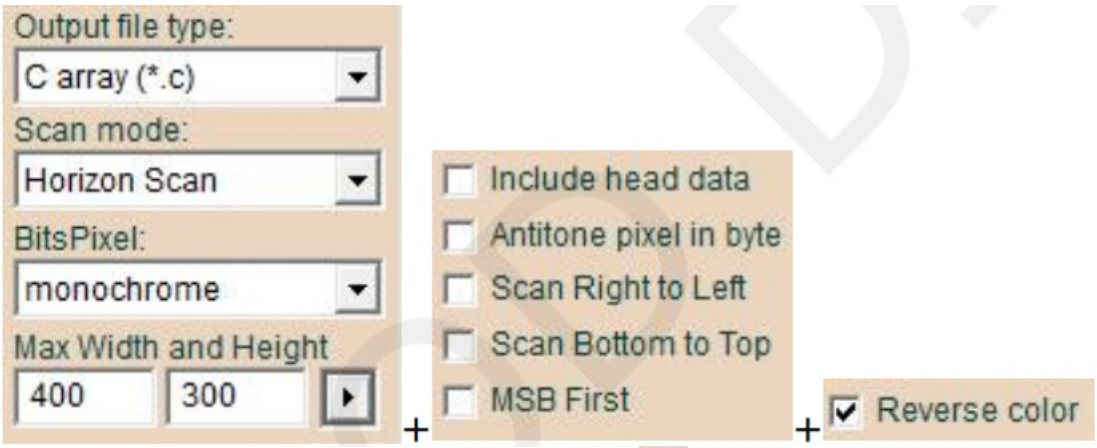
Note 1: After entering the image resolution parameters, click ” ” to confirm the settings.
Note 2: For tri-color ePaper with black, white, and red, one image needs to be split into two images: black-and-white and red-and-white. Perform the same bitmap conversion operation on both images.
For 5.83 inch monochrome and tricolor ePaper displays, select “Horizontal Scan” and “Monochrome.” Set the resolution corresponding to the ePaper display, then click ” ” to confirm the settings. Finally, click ” Save ” to convert the image to an array and save it with the extension “.C”. 5.83 inch 648 x480



Note 1: After entering the image resolution parameters, click ” ” to confirm the settings.
Note 2: For tri-color ePaper with black, white, and red, one image needs to be split into two images: black-and-white and red-and-white. Perform the same bitmap conversionoperation on both images.
For 4.2 inch and 7.5 inch monochrome and tricolor ePaper displays, select “Horizontal Scan,” “Monochrome,” and “Reverse color.” Set the resolution corresponding to the ePaper display, then click ” ” to confirm the settings. Finally, click “ Save ” to convert the image to an array and save it with the extension “.c”.

4.2 inch 400×300

- 7.5 inch 800×480

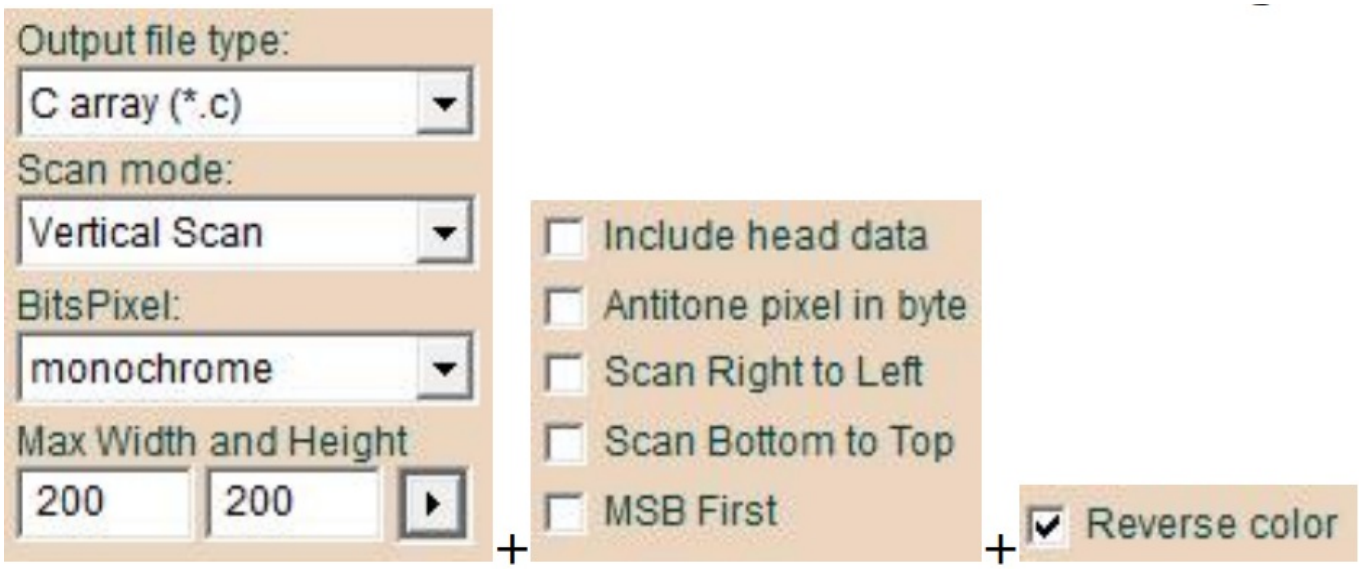


- **Note 1:** After entering the image resolution parameters, click “ ” to confirm the settings.
- **Note 2:** For tri-color ePaper with black, white, and red, one image needs to be split into two images: black-and-white and red-and-white. Perform the same bitmap conversion operation on both images

Bitmap Conversion for SSD Series Monochrome and Tri-color ePaper
For monochrome and tricolor ePaper displays below 2.9 inches, select “Vertical Scan,” “Monochrome,” and “Reverse color.” Set the resolution corresponding to the Paper display, then click “A” to confirm the settings. Finally, click “B” to convert the image to an array and save it with the extension “.C”.

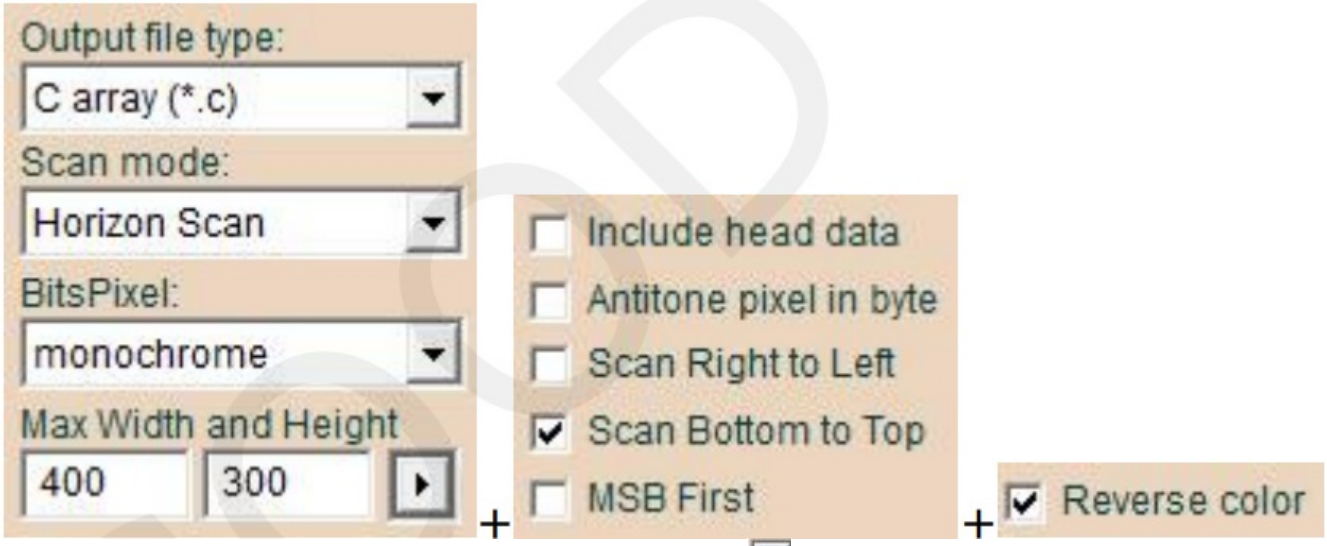
- 0.97 inch 184×88
- 1.22 inch 176×192
- 1.54 inch low resolution 152×152 1.54 inch high resolution 200×200
- 2.13 inch low resolution 212×104 2.13 inch high resolution 250×122
- 2.66 inch low resolution 296×152 2.66 inch high resolution 360×184
- 2.7 inch 264×176

2.9 inch low resolution 296×128 2.9 inch high resolution 384×168

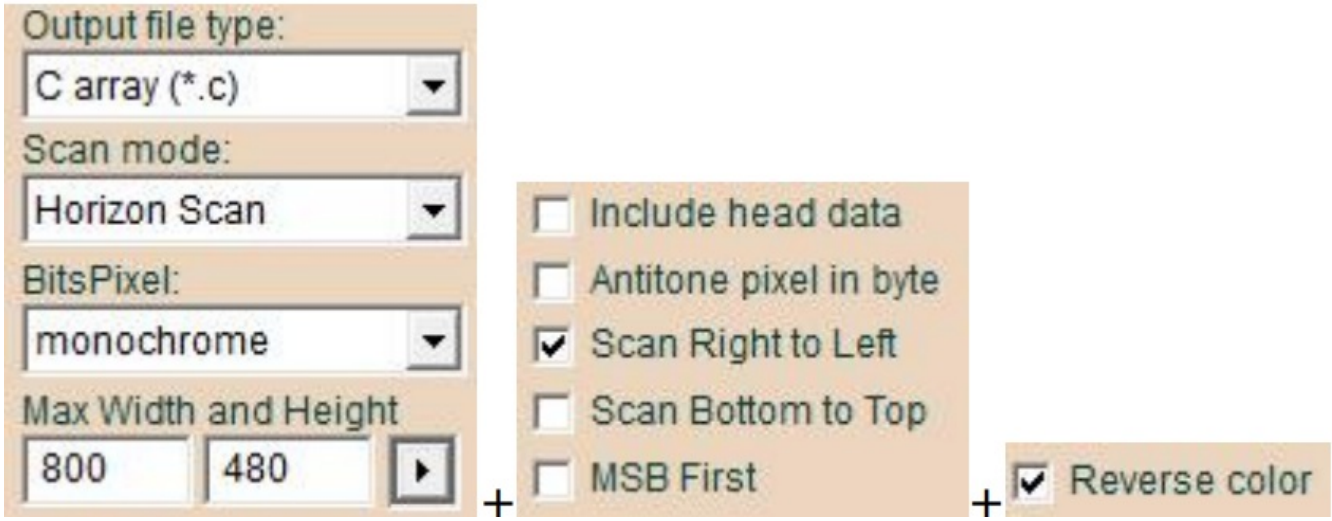


Note 1: After entering the image resolution parameters, click ” ” to confirm the settings.
Note 2: For tri-color ePaper with black, white, and red, one image needs to be split into two images: black-and-white and red-and-white. Perform the same bitmap conversion operation on both images.
For monochrome and tricolor ePaper displays above 4.2 inch (excluding 4.26 inch and 5.79 inch), select “Horizontal Scan,” “Monochrome,” “Scan Bottom to Top,” and “Reverse color.” Set the resolution corresponding to the ePaper display, then click ” ” to confirm the settings. Finally, click ” Save ” to convert the image to an array and save it with the extension “.C”.

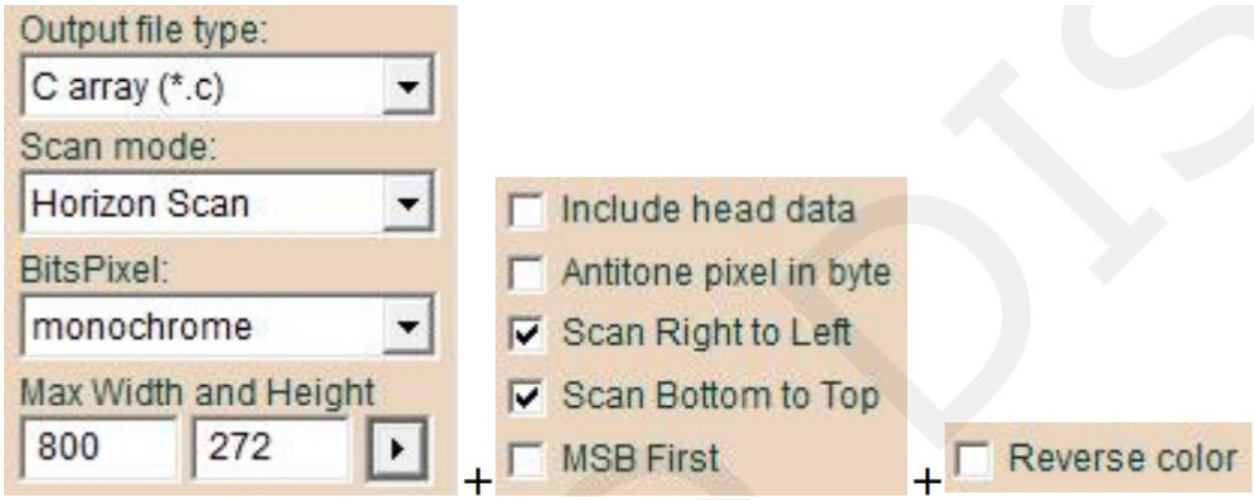
- 4.2 inch 400×300
- 10.2 inch 960×640
- 11.6 inch 960×640
- 13.3 inch 960×680



- **Note 1:** After entering the image resolution parameters, click “ ” to confirm the settings.
- **Note 2:** For tri-color ePaper with black, white, and red, one image needs to be split into two images: black-and-white and red-and-white. Perform the same bitmap conversion operation on both images.
- For 4.26 inch monochrome ePaper displays, select “Horizontal Scan,” “Monochrome,” “Scan Right to Left,” and “Reverse color.” Set the resolution corresponding to the ePaper display, then click ” ” to confirm the settings. Finally, click “ Save ” to convert the image to an array and save it with the extension “.C”.
- 4.26 inch 800×480



- **Note:** After entering the image resolution parameters, click ” ” to confirm thesettings.4
- For 5.79 inch monochrome and tricolor ePaper displays, select “Horizontal Scan,”
- “Monochrome,” “Scan Right to Left,” and “Scan Bottom to Top.” Set the resolution
- corresponding to the ePaper display, then click “ ” to confirm the settings. Finally, click” Save to convert the image to an array and save it with the extension “.C”.
    - 5.79 inch 800×272

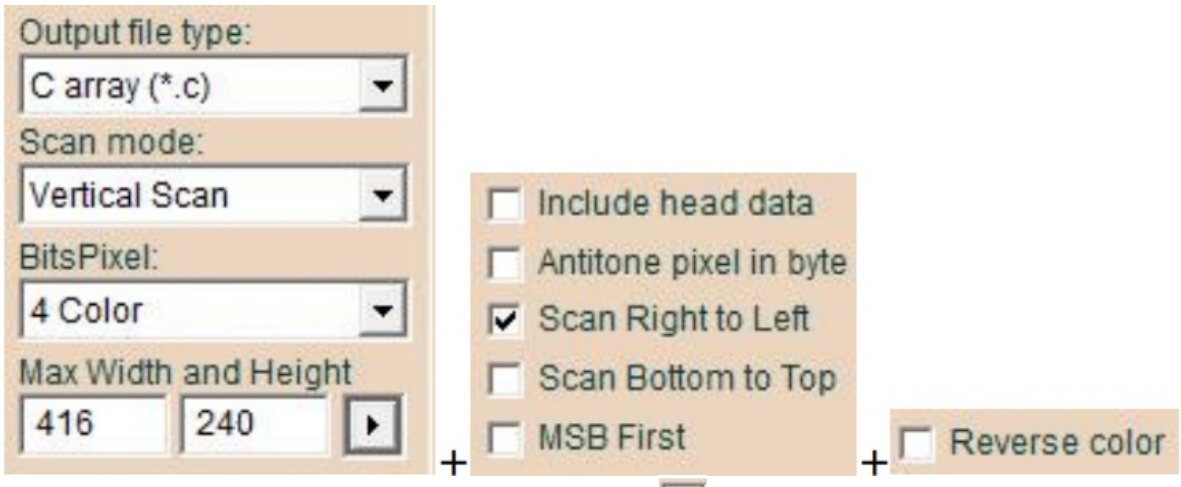


- **Note 1:** After entering the image resolution parameters, click " " to confirm the settings.
- **Note 2:** For tri-color ePaper with black, white, and red, one image needs to be split into two images: black-and-white and red-and-white. Perform the same bitmap conversion operation on both images.

Four-Color ePaper Bitmap Conversion

For four-color ePaper displays below 3.7 inch, select "Vertical Scan," "4 Color," and "Scan Right to Left." Set the resolution corresponding to the ePaper display, then click" " to confirm the settings. Finally, click " Save " to convert the image to an array and save it with the extension ".C".

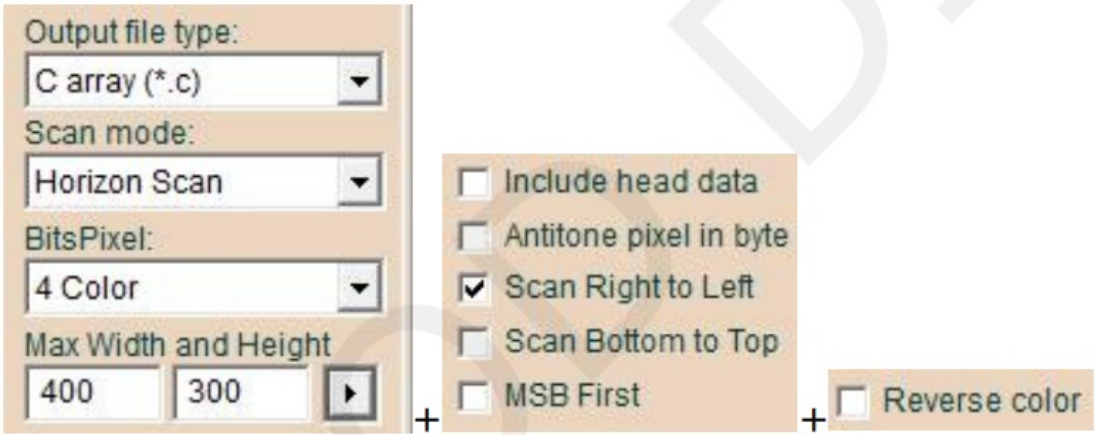
- 0.97 inch 184×88
- 1.54 inch low resolution 152×152 1.54 inch high resolution 200×200
- 2.13 inch 250×122
- 2.66 inch low resolution 296×152 2.66 inch high resolution 360×184
- 2.9 inch low resolution 296×128 2.9 inch high resolution 384×168
- 3.5 inch 384×184
- 3.7 inch 416×240



- Note: After entering the image resolution parameters, click " " to confirm the settings.

For four-color ePaper displays above 4.2 inch, select "Horizontal Scan," "4 Color," and "Scan Right to Left." Set the resolution corresponding to the ePaper display, then click" Save " to confirm the settings. Finally, click " " to convert the image to an array andsave it with the extension ".C".

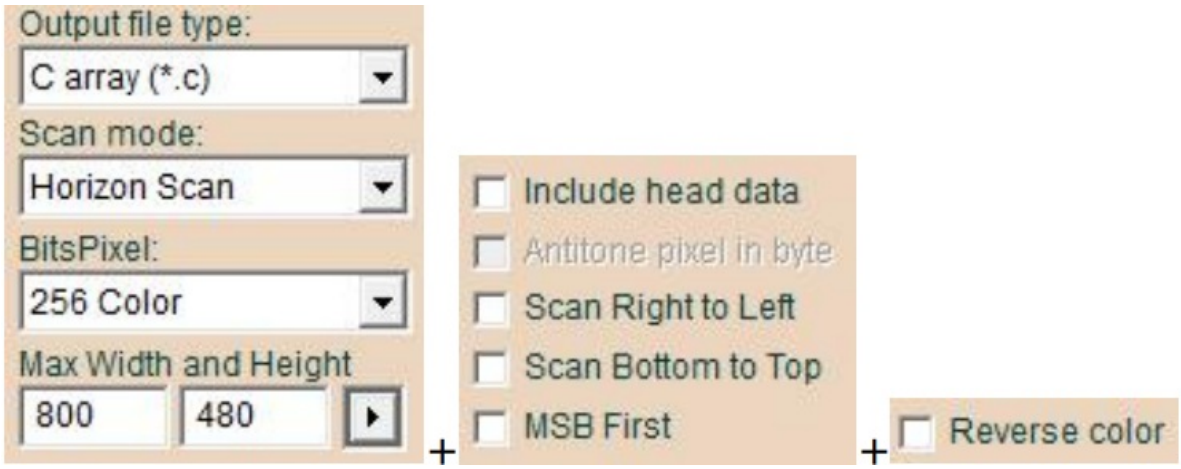
- 4.2 inch 400×300
- 5.83 inch 648×480
- 7.5 inch 800×480
- 10.2 inch 960×640
- 13.3 inch 960×680
-



Note: After entering the image resolution parameters, click " " to confirm the settings.

Six-Color ePaper Bitmap Conversion

- For six-color ePaper displays, select "Horizontal Scan" and "256 Color." Set the resolution corresponding to the ePaper display, then click "  " to confirm the settings.
- Finally, click "  " to convert the image to an array and save it with the extension ".C".
- 4 inch 600×400
- 7.3 inch 800×480



- **Note:** After entering the image resolution parameters, click " " to confirm the settings.

Seven-Color ePaper Bitmap Conversion

For seven-color ePaper displays, select "Horizontal Scan" and "256 Color." Set theresolution corresponding to the ePaper display, then click "  " to confirm the settings.

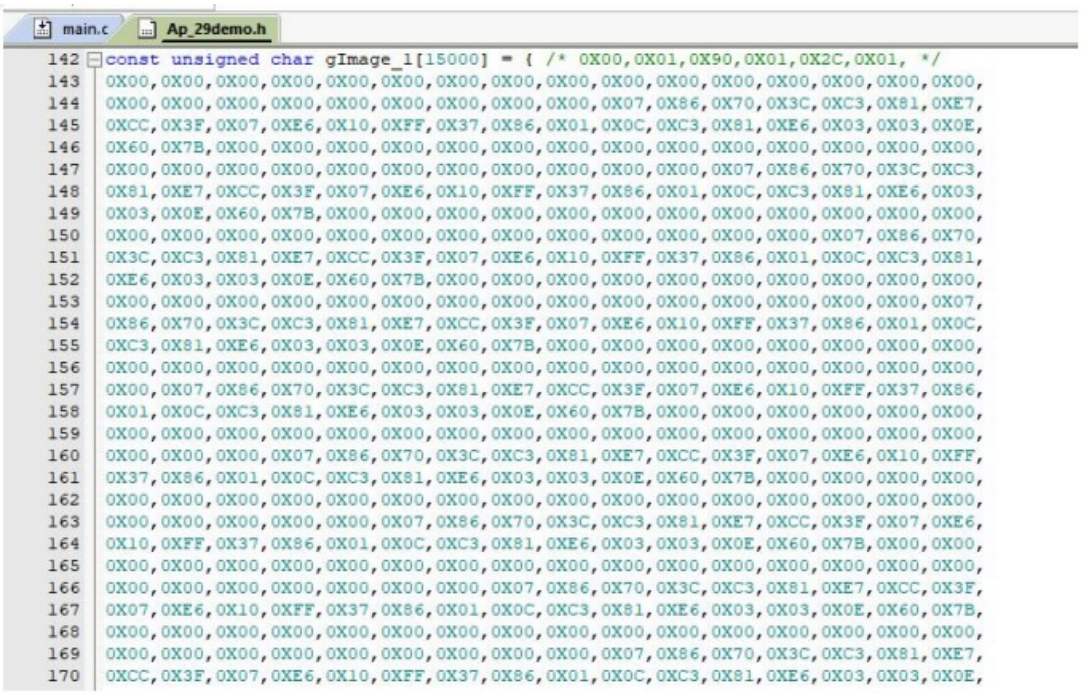
Finally, click "  " to convert the image to an array and save it with the extension ".C".

- 5.65 inch 600×448

- 7.3 inch 800×480

Array Replacement in Driver Program

Replace the arrays from the ".C " file into the corresponding arrays in the "Ap_29demo.h" file in the driver program. Ensure that the array names match those in the main function. Recompile the program and download it to the microcontroller.



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Documents / Resources

	Good Display Image2LCD Software Bitmap Conversion [pdf] Instructions Image2LCD Software Bitmap Conversion, Image2LCD, Software Bitmap Conversion, Bitmap Conversion, Conversion

References

- User Manual