Image2LCD Software

Bitmap Conversion Instructions

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1. 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 and red-and-white, as shown in the image below:

2. 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://www.e-paper-display.com/download_detail/downloadsId=625.html).

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.

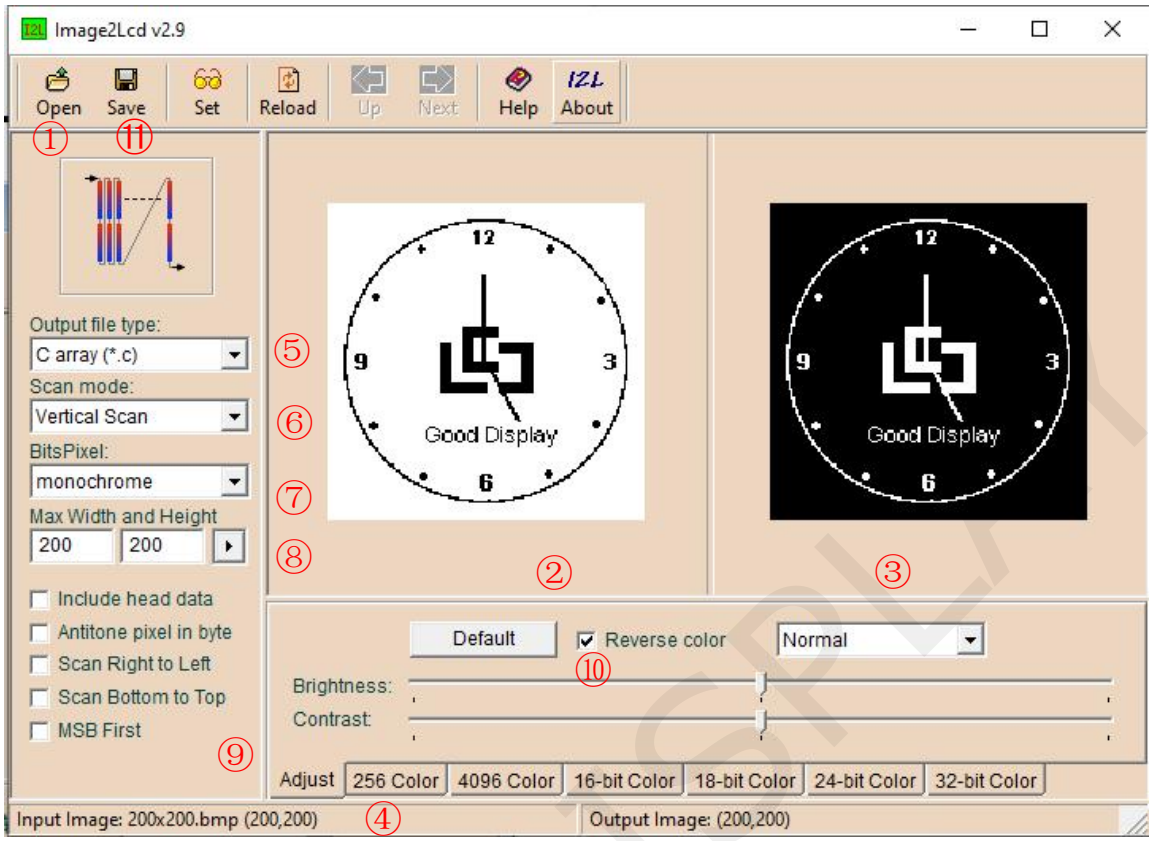


Figure 1: Software Interface

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.

④Image 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.

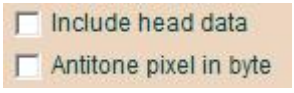
⑦ Output Gray Scale

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

-  : These two options are not selected by default.
-  : Left-right mirror.
-  : Up-down mirror.
-  : Byte data mirror.

⑩ Color Inversion

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: Color inversion.

⑪ Data Save

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

3. 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

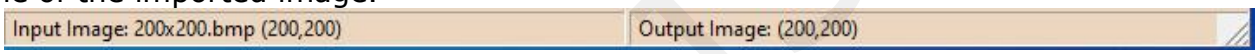
5.65 inch：GDEP0565D90
7.3 inch：GDEY073D46

4. Steps for Bitmap Conversion of ePaper Images

4.1 Importing Images for ePaper Bitmap Conversion

Open the Image2LCD software, click the " 

" button, and import the image that needs bitmap conversion. The status information panel will then display the resolution and name of the imported image.



4.2 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.

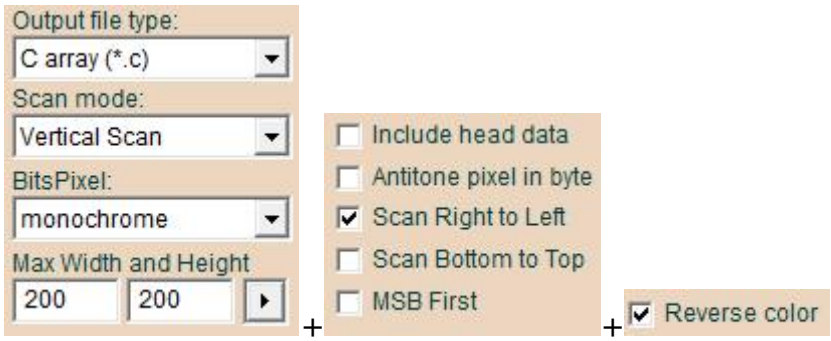
4.2.1 Bitmap Conversion for UC Series Monochrome and Tricolor ePaper

1) 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 ePaper display, then click "  " to confirm the settings.

Finally, click " 

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

0.97 inch：184x88
1.02 inch：128x80
1.54 inch：152x152
2.13 inch：212x104
2.15 inch：208x112
2.66 inch：296x152
2.7 inch：264x176
2.9 inch：296x128



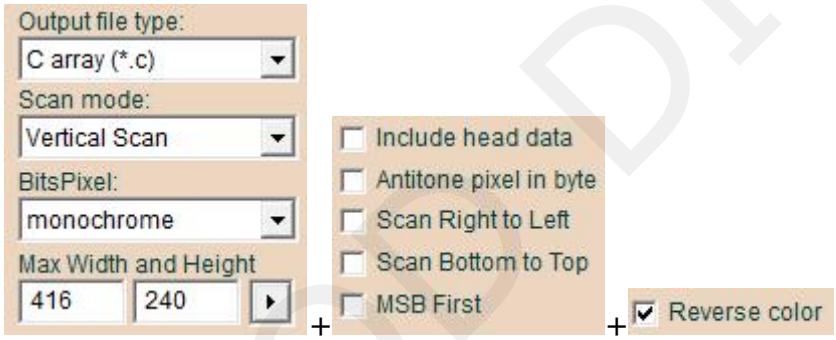
Note 1: After entering the image resolution parameters, click "▸" to confirm the settings.

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.

2）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 "▸" to confirm the settings. Finally, click "Save" to convert the image to an array and save it with the extension ".C".

3.1 inch：320x240

3.7 inch：416x240

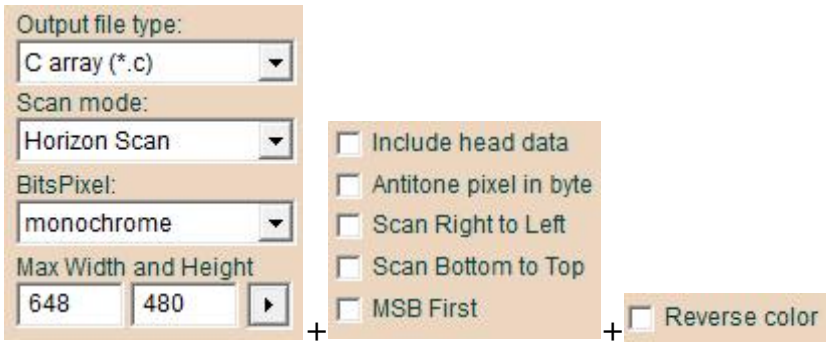


Note 1: After entering the image resolution parameters, click "▸" to confirm the settings.

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.

3）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 conversion operation on both images.

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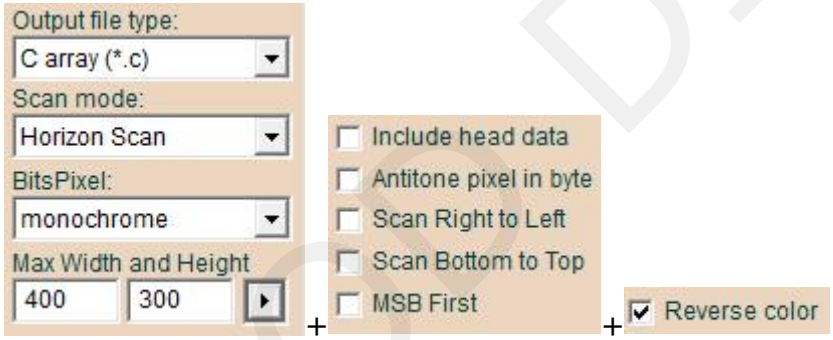
4）For 4.2 inch and 7.5 inch monochrome and tricolor ePaper displays, select "Horizontal Scan," "Monochrome," and "Reverse color." Set the resolution corresponding to the ePaper display, then click "▶" to confirm the settings. Finally, click "Save" to convert the image to an array and save it with the extension ".c".

4.2 inch：400x300

7.5 inch：800x480



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.

4.2.2 Bitmap Conversion for SSD Series Monochrome and Tri-color ePaper

1）For monochrome and tricolor ePaper displays below 2.9 inches, select "Vertical Scan," "Monochrome," and "Reverse color." Set the resolution corresponding to the ePaper 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：184x88

1.22 inch：176x192

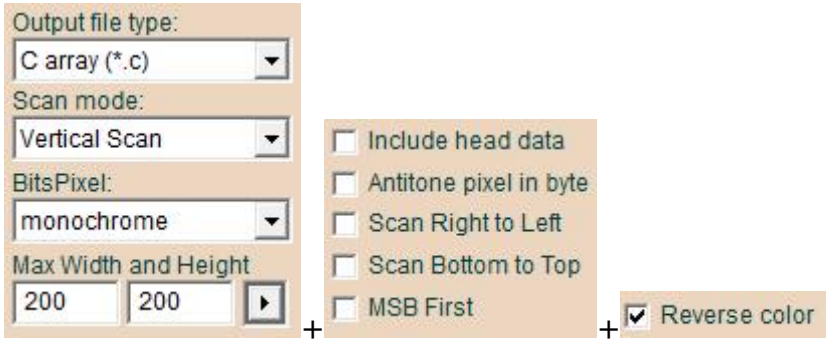
1.54 inch low resolution：152x152，1.54 inch high resolution：200x200

2.13 inch low resolution：212x104，2.13 inch high resolution：250x122

2.66 inch low resolution：296x152，2.66 inch high resolution：360x184

2.7 inch：264x176

2.9 inch low resolution：296x128，2.9 inch high resolution：384x168



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.

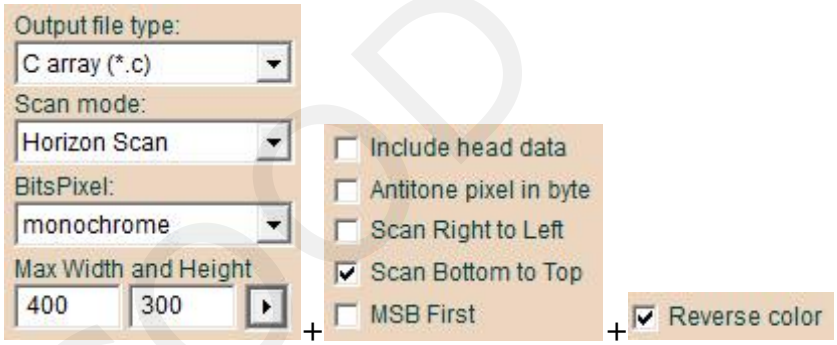
2）For monochrome and tricolor ePaper displays above 4.2 inch (excluding 4.26 inch and 5.79 inch), select "Horizontal Scan," "Monochrome," "Scan Bottom to Top," and "Reverse color." Set the resolution corresponding to the ePaper display, then click "▶" to confirm the settings. Finally, click "Save" to convert the image to an array and save it with the extension ".C".

4.2 inch：400x300

10.2 inch：960x640

11.6 inch：960x640

13.3 inch：960x680

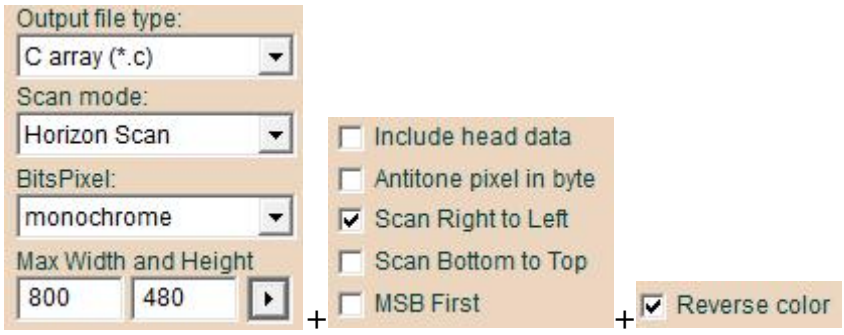


Note 1: After entering the image resolution parameters, click "▶" to confirm the settings.

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.

3） 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".

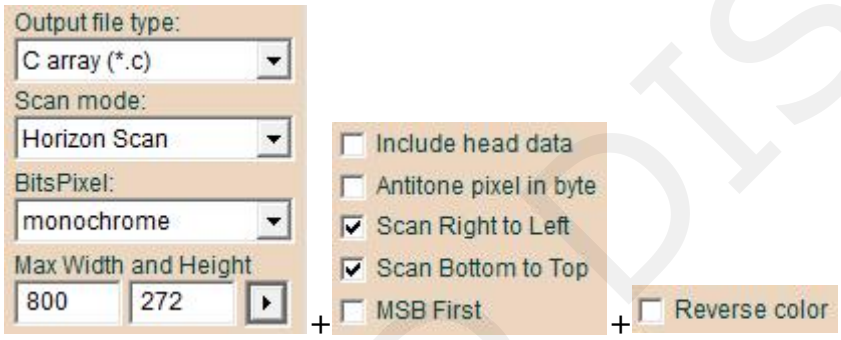
4.26 inch：800x480



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

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：800x272



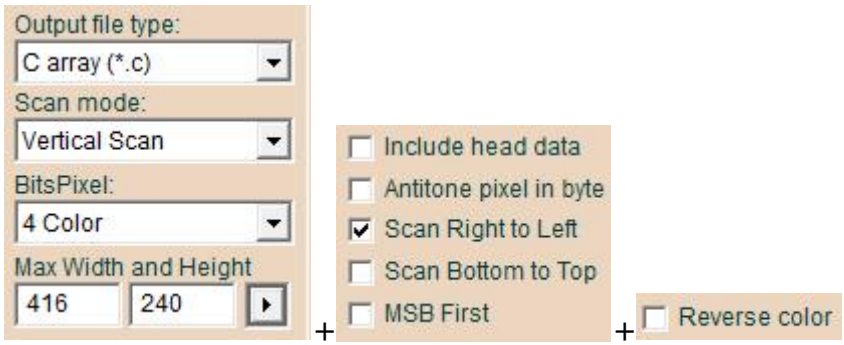
Note 1: After entering the image resolution parameters, click "▶" to confirm the settings.

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.

4.2.3 Four-Color ePaper Bitmap Conversion

1）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".

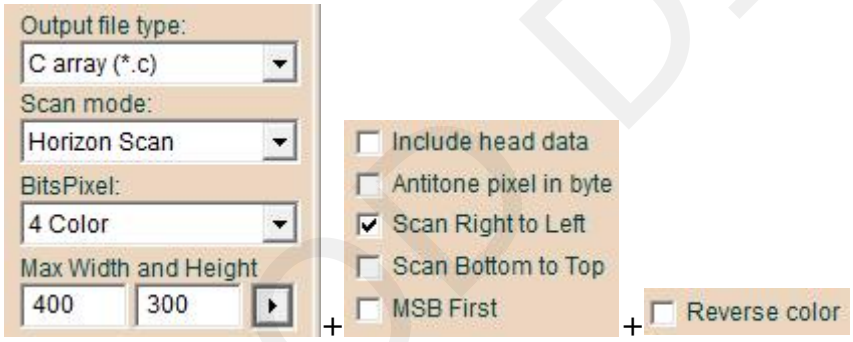
0.97 inch：184x88
1.54 inch low resolution：152x152，1.54 inch high resolution：200x200
2.13 inch：250x122
2.66 inch low resolution：296x152，2.66 inch high resolution：360x184
2.9 inch low resolution：296x128，2.9 inch high resolution：384x168
3.5 inch：384x184
3.7 inch：416x240



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

2）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 "▸" to confirm the settings. Finally, click "Save" to convert the image to an array and save it with the extension ".C".

4.2 inch：400x300
5.83 inch：648x480
7.5 inch：800x480
10.2 inch：960x640
13.3 inch：960x680

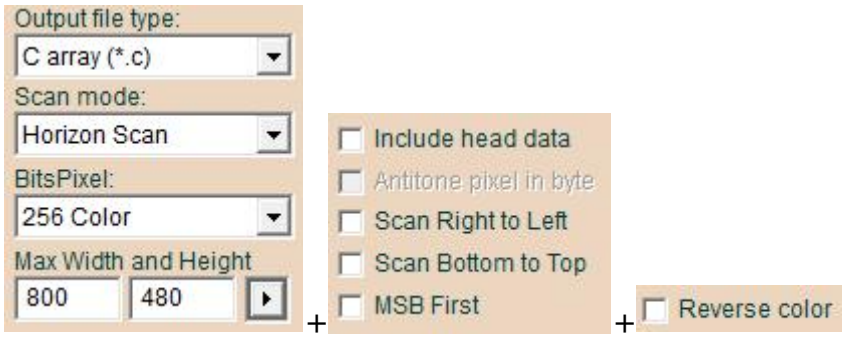


Note: After entering the image resolution parameters, click "▸" to confirm the settings.

4.2.4 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 "Save" to convert the image to an array and save it with the extension ".C".

4 inch：600x400
7.3 inch：800x480



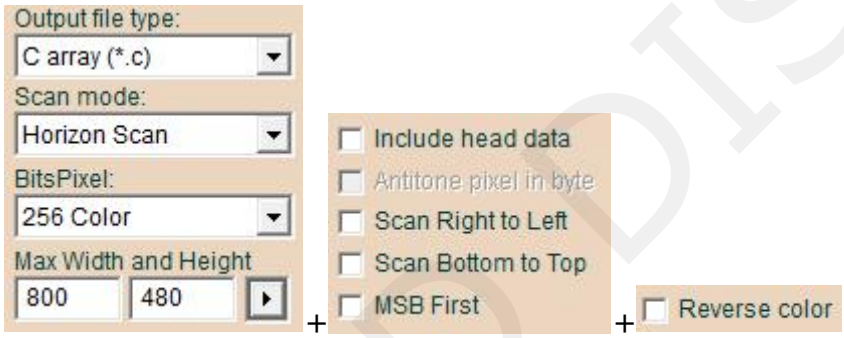
Note: After entering the image resolution parameters, click "▶" to confirm the settings.

4.2.5 Seven-Color ePaper Bitmap Conversion

For seven-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 "Save" to convert the image to an array and save it with the extension ".C".

5.65 inch：600x448

7.3 inch：800x480



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

4.3 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.