



# 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://v4.cecdn.yun300.cn/100001\\_1909185148/image2lcd.zip](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: **0000-0000-0000-6A3B** to complete the software registration.

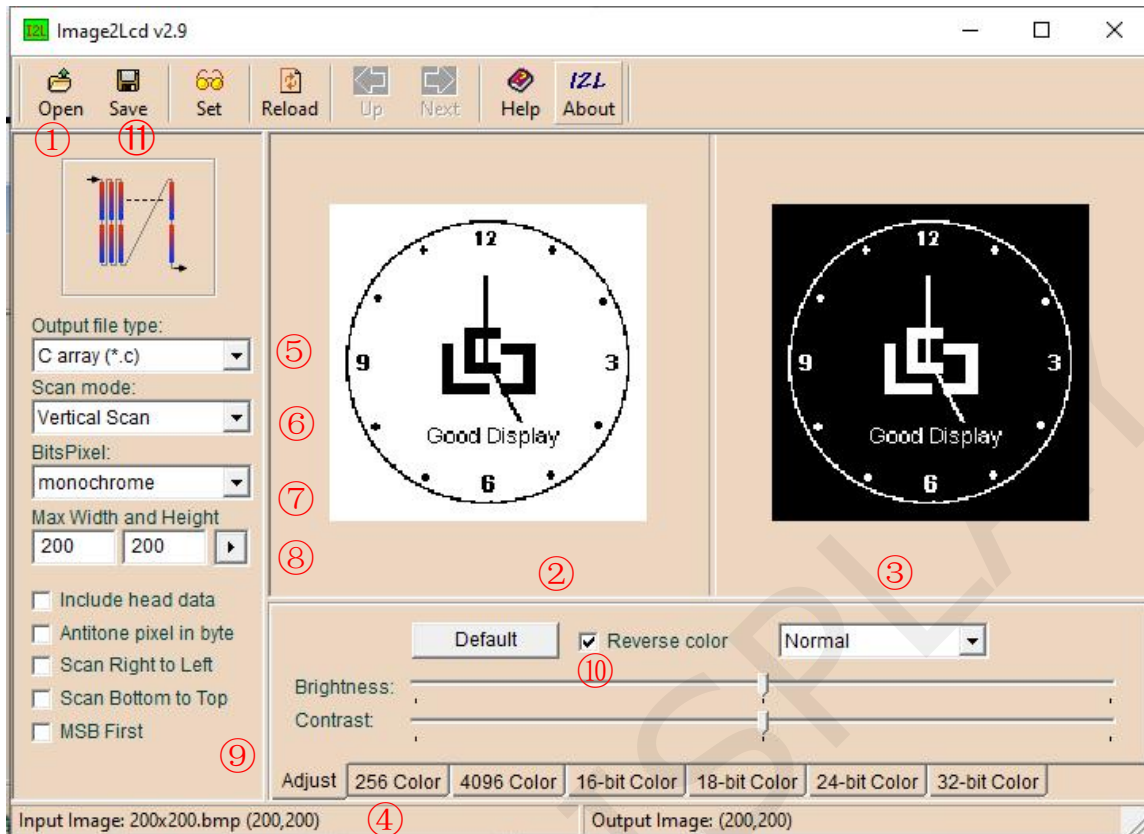
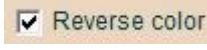


Figure 1: Software Interface

- 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

-  : Color inversion.

⑪ Data Save

-  : 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](#)、[GDEY0154D67WT](#)、[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](#)、[GDEY029T71H](#)、[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](#)、[GDEY0213F52](#)
- 2.66 inch: [GDEY0266F51](#)、[GDEY0266F51H](#)、[GDEM0266F51H](#)
- 2.9 inch: [GDEY029F51](#)、[GDEY029F51H](#)
- 3.5 inch: [GDEM035F51](#)
- 3.7 inch: [GDEM037F51](#)、[GDEM037F52](#)
- 4.2 inch: [GDEM042F51](#)、[GDEM042F52](#)
- 5.79 inch: [GDEY0579F51](#)
- 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 "Open" button, and import the image that needs bitmap conversion. The status information panel will then display the resolution and name of the imported image.

Input Image: 200x200.bmp (200,200)      Output Image: (200,200)

### 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.

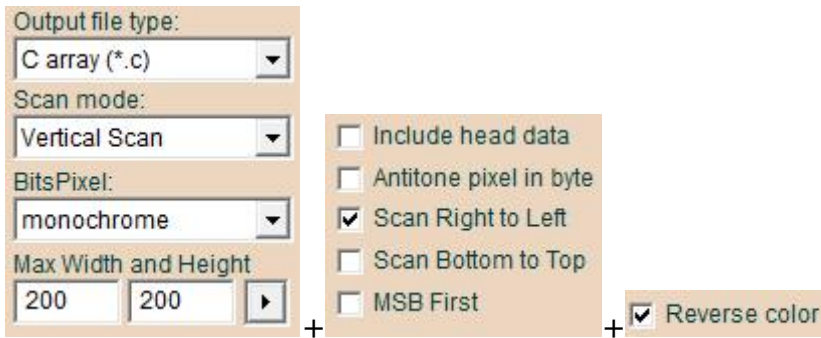
After setting the resolution, click "OK" to confirm.

#### 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 "OK" 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**
- 1.02 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.

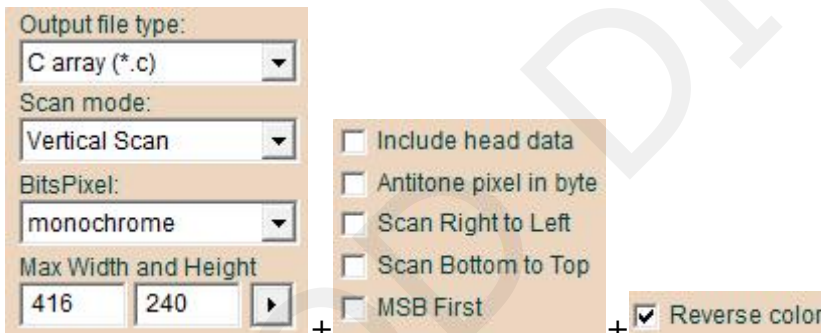
Note 2: For tri-color ePaper with black, white, and red, one image needs to be split into two images: black-and-white and red-and-white. Perform the same bitmap conversion operation on both images.

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**



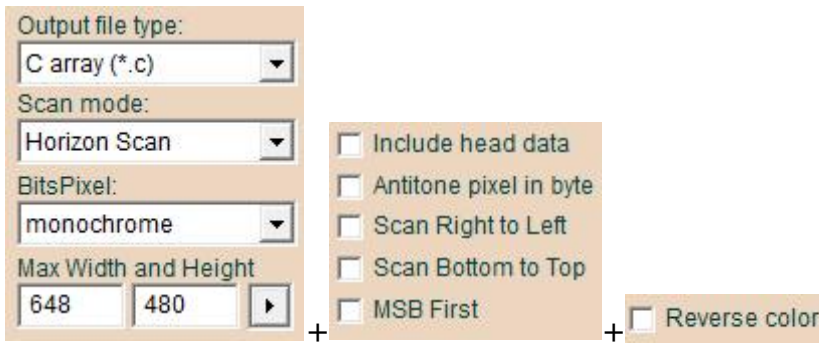
Note 1: After entering the image resolution parameters, click "▶" to confirm the settings.

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**



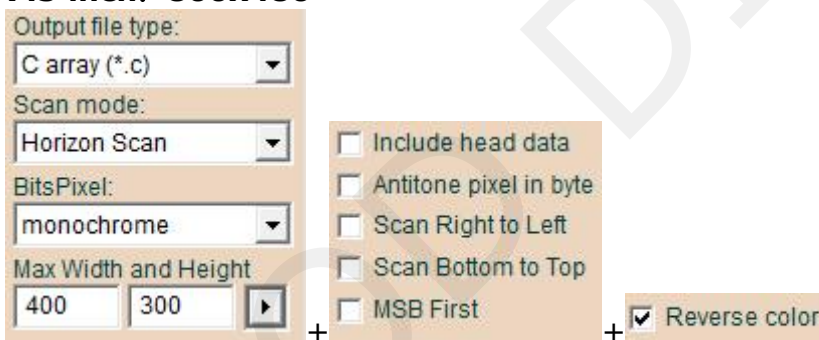
Note 1: After entering the image resolution parameters, click "▶" to confirm the settings.

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.

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**

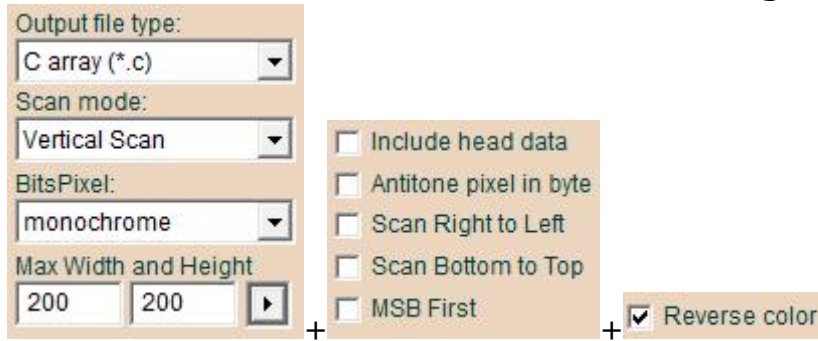
**1.54 inch low resolution: 152x152, 1.54 inch high resolution: 200x200**

**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**



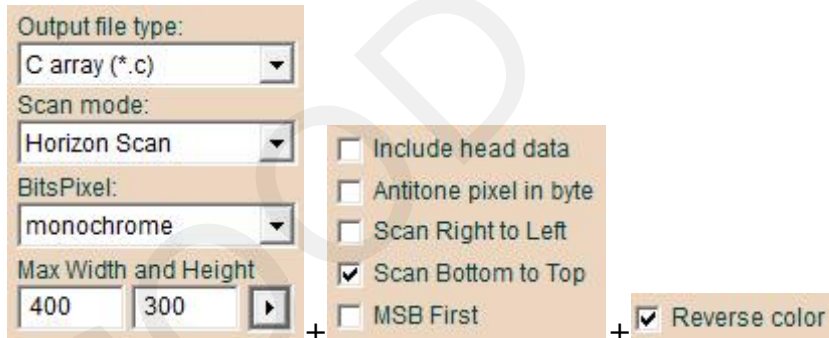
Note 1: After entering the image resolution parameters, click "▶" to confirm the settings.

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.

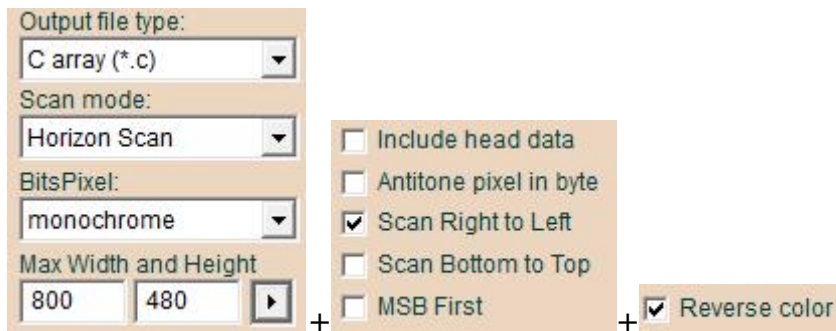
Note 2: For tri-color ePaper with black, white, and red, one image needs to be split into two images: black-and-white and red-and-white. Perform the same bitmap conversion operation on both images.

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**

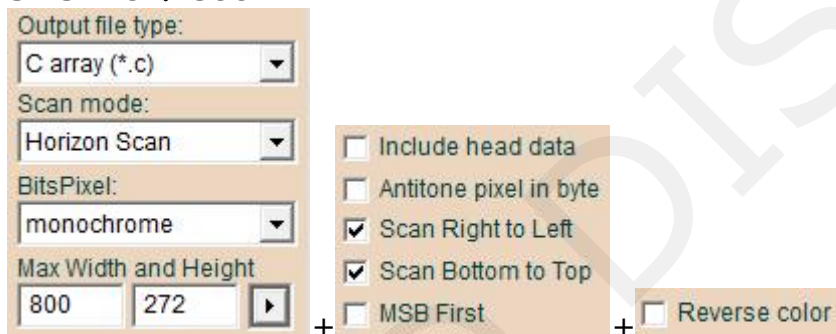




Note: After entering the image resolution parameters, click "▶" to confirm the settings.

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**

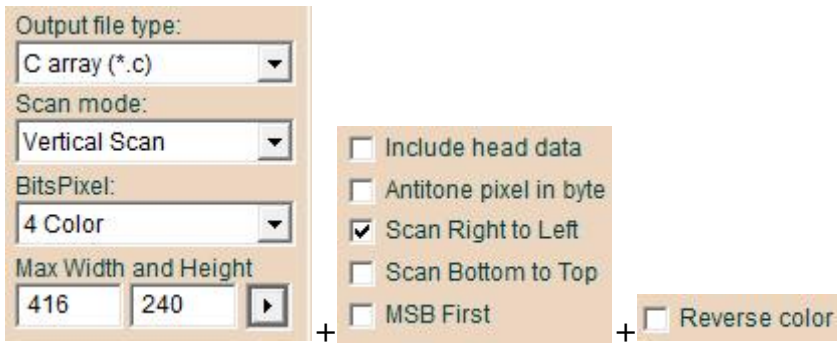
**2.13 inch: 250x122 (Make the image 250x128)**

**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**

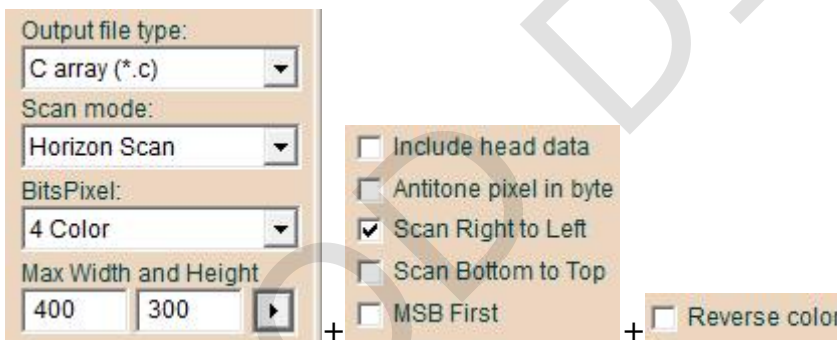


Note: After entering the image resolution parameters, click "▶" to confirm the settings.

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**

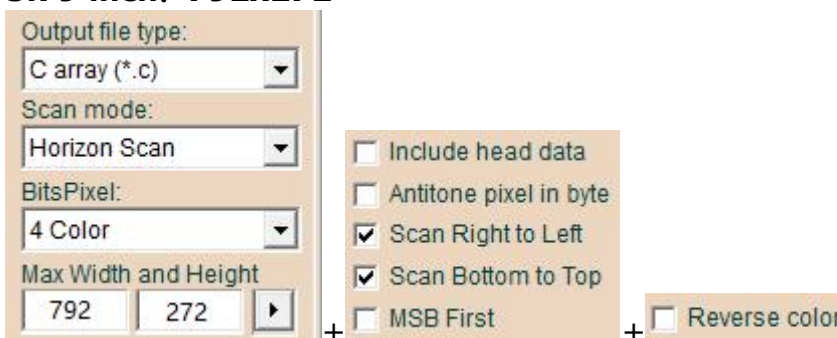


Note: After entering the image resolution parameters, click "▶" to confirm the settings.

3) For 5.79 inch four-color ePaper display, select "Horizontal Scan," "4 Color," "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: 792x272**



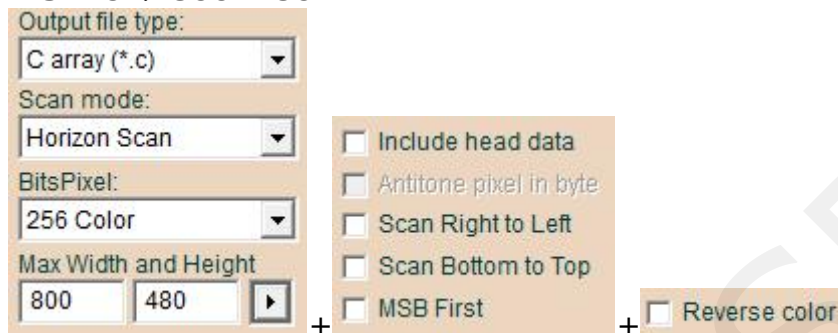
Note: After entering the image resolution parameters, click "▶" to confirm the settings.

#### 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**



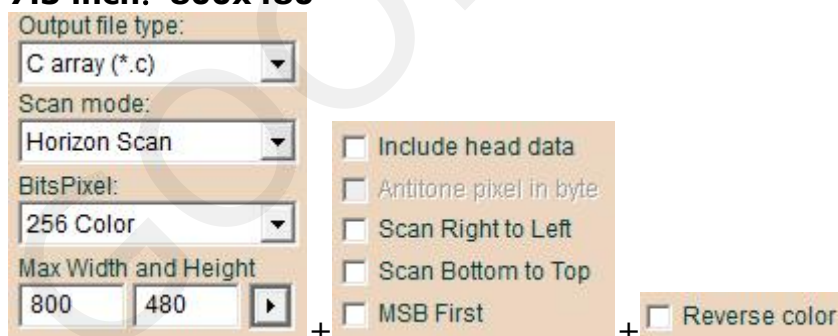
Note: After entering the image resolution parameters, click "▶" to confirm the settings.

#### 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.

```

main.c  Ap_29demo.h
142 const unsigned char gImage_1[15000] = { /* 0X00,0X01,0X90,0X01,0X2C,0X01, */
143 0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,
144 0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X07,0X86,0X70,0X3C,0XC3,0X81,0XE7,
145 0XC0,0X3F,0X07,0XE6,0X10,0XFF,0X37,0X86,0X01,0X0C,0XC3,0X81,0XE6,0X03,0X03,0X0E,
146 0X60,0X7B,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,
147 0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X07,0X86,0X70,0X3C,0XC3,
148 0X81,0XE7,0XC0,0X3F,0X07,0XE6,0X10,0XFF,0X37,0X86,0X01,0X0C,0XC3,0X81,0XE6,0X03,
149 0X03,0X0E,0X60,0X7B,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,
150 0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X07,0X86,0X70,
151 0X3C,0XC3,0X81,0XE7,0XC0,0X3F,0X07,0XE6,0X10,0XFF,0X37,0X86,0X01,0X0C,0XC3,0X81,
152 0XE6,0X03,0X03,0X0E,0X60,0X7B,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,
153 0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X07,
154 0X86,0X70,0X3C,0XC3,0X81,0XE7,0XC0,0X3F,0X07,0XE6,0X10,0XFF,0X37,0X86,0X01,0X0C,
155 0XC3,0X81,0XE6,0X03,0X03,0X0E,0X60,0X7B,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,
156 0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,
157 0X00,0X07,0X86,0X70,0X3C,0XC3,0X81,0XE7,0XC0,0X3F,0X07,0XE6,0X10,0XFF,0X37,0X86,
158 0X01,0X0C,0XC3,0X81,0XE6,0X03,0X03,0X0E,0X60,0X7B,0X00,0X00,0X00,0X00,0X00,0X00,
159 0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,
160 0X00,0X00,0X00,0X07,0X86,0X70,0X3C,0XC3,0X81,0XE7,0XC0,0X3F,0X07,0XE6,0X10,0XFF,
161 0X37,0X86,0X01,0X0C,0XC3,0X81,0XE6,0X03,0X03,0X0E,0X60,0X7B,0X00,0X00,0X00,0X00,
162 0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,
163 0X00,0X00,0X00,0X00,0X07,0X86,0X70,0X3C,0XC3,0X81,0XE7,0XC0,0X3F,0X07,0XE6,
164 0X10,0XFF,0X37,0X86,0X01,0X0C,0XC3,0X81,0XE6,0X03,0X03,0X0E,0X60,0X7B,0X00,0X00,
165 0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,
166 0X00,0X00,0X00,0X00,0X00,0X00,0X07,0X86,0X70,0X3C,0XC3,0X81,0XE7,0XC0,0X3F,
167 0X07,0XE6,0X10,0XFF,0X37,0X86,0X01,0X0C,0XC3,0X81,0XE6,0X03,0X03,0X0E,0X60,0X7B,
168 0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,
169 0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X00,0X07,0X86,0X70,0X3C,0XC3,0X81,0XE7,
170 0XC0,0X3F,0X07,0XE6,0X10,0XFF,0X37,0X86,0X01,0X0C,0XC3,0X81,0XE6,0X03,0X03,0X0E,
    
```