

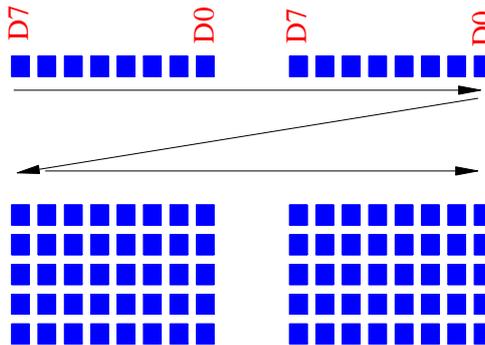
1. Generate graphics data

step 1:

Edit the graphics: Edit the graphic into a monochrome bitmap(BMP), The resolution (pixels) must be the same as the LCD resolution (Such as 240*64), You can use the built-in image editor tool in Windows operating system.

Step 2:

BIN data generation: Horizontal mode, high in the former, from left to right, from top to bottom (see below)



In accordance with the above format requirements to graphics into BIN file.

Step3

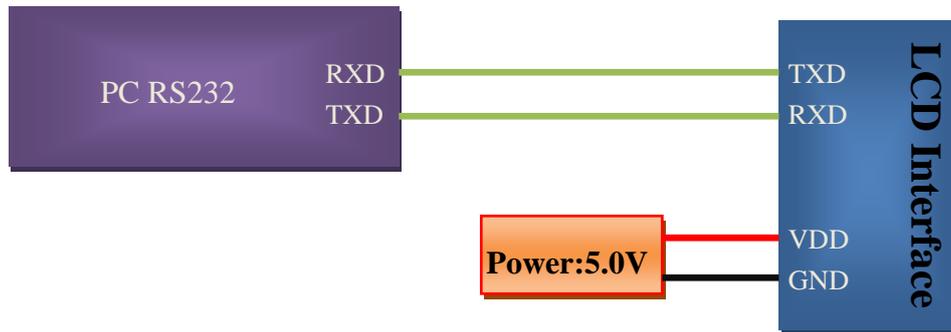
BIN data merge: When multiple pictures are displayed, you will need to merge multiple BIN files into one file with this step. In the BIN Data folder, create a new BAT file and create a copy DOS command(For example:*copy /b 1.bin + 2.bin + 3.bin + 4.bin + 5.bin data.bin*); Double-click to run the BAT file to generate the *data.bin* file, This *data.bin* file is the data to be downloaded to the LCD module.



2. Data download

Step 1:

Refer to the following figure to connect the LCD module to the PC COM port.



Step 2:

Run the download tool.

- Select the COM port and open it.
- Select the product model. Click . Is displayed on the LCD "P / S" is the model.
- LCD Turn on the power; Click , If the LCD display shows the hardware connection is successful, or check the hardware connection is wrong.
- Click Load the BIN file(The data.bin generated in the previous step)
- Click Start downloading the data until the prompt is complete.

3. Graphical display

Function 1.

void display_bmp(U16 n)

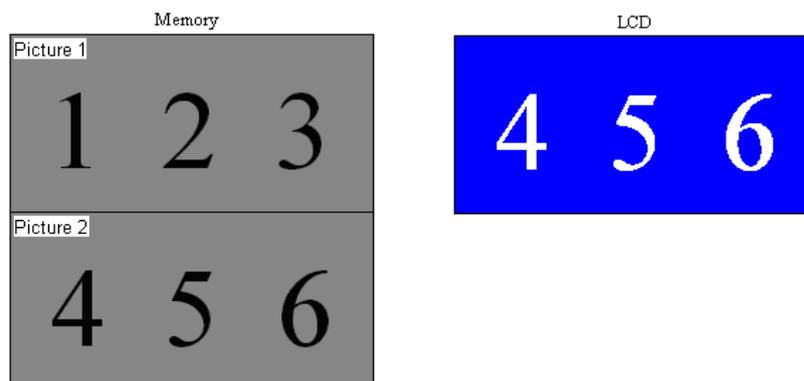
The stored graphic data is displayed

Parameter:

*n: Graphics storage number. The first is 0, the second is 2 ... and so on. The order is determined by the COPY command (Reference **Generate graphics data Step3**)*

Example:

```
void main()
{
    ...
    display_bmp(0X01);    // Display the second image in the memory, refer to the following figure
    while(1);
}
```



Function 2.

```
void display_bmp_block(U16 n,U8 px,U8 py,U8 x,U8 y,U8 w,U8 h)
```

The block copy is displayed

Parameter:

*n: Graphics storage number. The first is 0, the second is 2 ... and so on. The order is determined by the COPY command (Reference **Generate graphics data Step3**)*

px,py: The coordinates of the upper left corner of the block on the image

px:0~29 (The units are bytes) ,py:0~63 (Units are dots)。

x,y: The upper left corner of the block coordinates on the LCD.

x:0~29 (The units are bytes) ,y:0~63 (Units are dots)。

w: Block width , Ranges: 1~30 (The units are bytes), $px+w \leq 30$, $x+w \leq 30$,

h: Block height, Ranges: 1~64. $py+h \leq 64$, $y+h \leq 64$

Example:

```
void main()
{
    ...
    display_bmp(0X01,px,py,x,y,w,h);    //Display "5" at the LCD designation position
    while(1);
}
```

