Introduce

This manual mainly introduced the function examples from the LCD-2000 driver library. Every driving function is included in the driver file. We have a total of three electronic screen, they are LCD-2000-3916/LCD-2000-9225/LCD-2000-7775. The driver of them is not exactly the same, but the driving way is the same. We can call function in the same way. So this manual is suitable for three kinds of LCD screen.

We can description the functional use the format as fellow:

Table 1.Function Description format

Function Name	The name of the Function
Function Prototypes	Prototypes of the statement
Function Description	Briefly explain the functions can be executed
Input Parameters	Description the input parameters
Return	The return value of the function

Table 2.Function drawLine

Function Name	drawLine
Function Prototypes	void drawLine(int16_t x0, int16_t y0, int16_t x1, int16_t y1, uint16_t color);
Function Description	Draw a line
Input Parameters	x0,y0 is the start coordinates of the line ，x1,y1 is the end coordinates of the line, color is the line color
Return	No

Example：/*draw a black line between（0，0）and（100,100）*/

drawline（0,0,100,100，RGB（0,0,0））;

Table 3.Function drawFastVLine

Function Name	drawFastVLine
Function Prototypes	void drawFastVLine(int16_t x, int16_t y, int16_t h, uint16_t color);
Function Description	Draw a vertical line
Input Parameters	x, y is the start coordinate of the line, h is the length of the line, color is the color of the line
Return	No

Example：/*draw a black line which length is 50 and start with（0,100）*/

drawFastVLine（0,100,50，RGB（0,0,0））;

Table 4.Function drawFastHLine

Function Name	drawFastHLine
Function Prototypes	void drawFastHLine(int16_t x, int16_t y, int16_t w, uint16_t color);
Function Description	Draw a horizontal line
Input Parameters	x, y is the start coordinate of the line, w is the length of the line, color is the color of the line
Return	No

Example：/* draw a black line which length is 80 and start with（20,0）*/

drawFastHLine（20,0,80，RGB（0,0,0））;

Table 5.Function fillRect

Function Name	fillRect
Function Prototypes	void fillRect(int16_t x, int16_t y, int16_t w, int16_t h, uint16_t color);
Function Description	Fill a rectangle
Input Parameters	x, y is the start coordinate of the rectangle, w is the length of the rectangle，y is width of the rectangle，color is the color of the rectangle
Return	No

Example：/*fill a black rectangle start with (0,0)，its length is 100，the width is 50 */

fillRect(0,0,100,50,RGB(0,0,0));

Table 6.Function fillScreen

Function Name	fillScreen
Function Prototypes	void fillScreen(uint16_t color)；
Function Description	Fill the screen with a kind of color
Input Parameters	Color is the color of filling the screen
Return	No

Example：/*fill the screen with red*/

fillScreen(RGB(255,0,0));

Table 7.Function drawCircle

Function Name	drawCircle
Function Prototypes	void drawCircle(int16_t x0, int16_t y0, int16_t r, uint16_t color);
Function Description	Draw a circle
Input Parameters	x0,y0 is the centre coordinate, r is the radius, color is the color of the circle
Return	No

Example ：/*draw a red circle*/

drawCircle(50,100,50,RGB(255,0,0));

Table 8.Function drawCircleHelper

Function Name	drawCircleHelper
Function Prototypes	void drawCircleHelper(int16_t x0, int16_t y0,int16_t r, uint8_t cornername, uint16_t color);
Function Description	Draw a circle
Input Parameters	x0,y0 is the centre coordinate, r is the radius, cornername is the part where you select to draw，color is the color of the circle
Return	No

Table 9.cornername value

t cornername	description
0x01	Select the top of the circle on the right
0x02	Select the down of the circle on the right
0x04	Select the top of the circle on the left
0x08	Select the down of the circle on the left

Example：/*draw the top of the circle*/

drawCircleHelper(50,100,50,1+8, RGB(255,0,0);

Table 10.Function fillCircle

Function Name	fillCircle
Function Prototypes	void fillCircle(int16_t x0, int16_t y0, int16_t r, uint16_t color);
Function Description	Fill a circle
Input Parameters	x0,y0 is the centre coordinate , r is the radius, color is the color of the circle
Return	No

Example：/*fill a red circle*/

fillCircle(50,100,50, RGB(255,0,0));

Table 11.Function fillCircleHelper

Function Name	fillCircleHelper
Function Prototypes	void fillCircleHelper(int16_t x0, int16_t y0, int16_t r,uint8_t cornername, int16_t delta, uint16_t color);
Function Description	fill a circle
Input Parameters	x0,y0 is the centre coordinate, r is the radius, cornername is the part where you select to draw，delta is the distance between the two centre of the semicircle ,color is the color of the circle
Return	No

Example：/*fill a circle*/

fillCircleHelper(50,100,50,1, 20,RGB(255,0,0));

Table 12.Function drawTriangle

Function Name	drawTriangle
Function Prototypes	void drawTriangle(int16_t x0, int16_t y0, int16_t x1, int16_t y1,int16_t x2, int16_t y2, uint16_t color);
Function Description	draw a triangle
Input Parameters	x0,y0,x1,y1,x2,y2 are the triangle's three vertices, color is the color of the triangle
Return	No

Example: /*draw a rad triangle*/

drawTriangle(0,0,0,100,50,0, RGB(255,0,0));

Table 13.Function fillTriangle

Function Name	fillTriangle
Function Prototypes	void fillTriangle (int16_t x0, int16_t y0, int16_t x1, int16_t y1,int16_t x2, int16_t y2, uint16_t color);
Function Description	Fill a red triangle
Input Parameters	x0,y0,x1y1,x2,y2 are the triangle's three vertices, color means the color of the triangle
Return	No

Example: /*fill a triangle use red*/

fillTriangle(0,0,0,100,50,0, RGB(255,0,0));

Table14.Function drawRoundRect

Function Name	drawRoundRect
Function Prototypes	void drawRoundRect(int16_t x0, int16_t y0, int16_t w, int16_t h,int16_t radius, uint16_t color);
Function Description	draw a red RoundRect
Input Parameters	x0,y0 is the coordinate of the RoundRect，w is the long of RoundRect，h is the wide of RoundRect, color is the color
Return	No

Example: /*draw a red roundrect */
drawRoundRect(20,20,100,80, 20,RGB(255,0,0));

Table 15.Function fillRoundRect

Function Name	drawRoundRect
Function Prototypes	void drawRoundRect(int16_t x0, int16_t y0, int16_t w, int16_t h,int16_t radius, uint16_t color);
Function Description	draw a red RoundRect
Input Parameters	x0,y0 is the coordinate of the RoundRect，w is the long of RoundRect，h is the wide of RoundRect, radius is rounded corners RADIUS, color is the color
Return	No

Example: /*fill a drawRoundRect with red*/
fillRoundRect(20,20,100,80,20, RGB(255,0,0));

Table 16.Function drawChar

Function Name	drawChar
Function Prototypes	void drawChar(int16_t x, int16_t y, unsigned char c,uint16_t color, uint16_t bg, uint8_t size);
Function Description	draw a Bitmap
Input Parameters	x0,y0 is the coordinate of the background，"c" represent a characters, t color is the characters color, t bg is the background color, t size define the characters size
Return	No

Example: /* a black characters write on a write paper*/
drawChar(10,10,'A', RGB(255,255,255), RGB(0,0,0),5) ;

Table 17.Function setstroke

Function Name	setstroke
Function Prototypes	void stroke(255,255,255);
Function Description	set a stroke
Input Parameters	Which in the "()" is the color of the stroke
Return	No

Table 18.Function setTextColor

Function Name	setTextColor
Function Prototypes	void setTextColor(uint16_t c, uint16_t bg);
Function Description	Set the text color
Input Parameters	c is the word's color, bg is the background's color
Return	No

Table 19.Function setTextSize

Function Name	setTextSize
Function Prototypes	void setTextSize (uint8_t s);
Function Description	Set the word size
Input Parameters	S is the size of the text
Return	No

Example: /*set a stroke, and a text color, a text size*/

TFTscreen.stroke(255,255,255);

TFTscreen.setTextColor(0xffff, 0xf000);

TFTscreen.setTextSize(2);

Table 20.Function text

Function Name	text
Function Prototypes	void text(const char * text, int16_t x, int16_t y);
Function Description	Output the text
Input Parameters	x, y is the coordinate of the text
Return	No

Example: /* output a string*/

Text ("abcd: \n ",0,0);

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