

```
/*
*****
*****  控制板 BJ-QVSC01  *****
*****  液晶320*240 KCS057QV1AJ-G23*****
*****  取模软件ZIM022 及 8色取模软件*****
*****  Design by arroyer *****
*****  04/11/10 *****
*****
#include "absacc.h"
#include "stdio.h"
#include "math.h"

#include "graph.h" // 调用ASC_32[60*99] 库
#include "pict.h" // 调用取模好的图片数据

#define RED 0x04
#define BLACK 0x00

#define WCMD XBYTE[0x7e00] // 命令
#define WDAT XBYTE[0x7f00] // 数据

typedef struct typFNT_GB // 汉字字模数据结构
{
    signed char Index[2];
    unsigned char Msk[132];
};

struct typFNT_GB code Cdotlib1[]={
"伴",
/*-- 文字: 伴 --*/
/*-- 宋体24; 此字体下对应的点阵为: 宽x高=32x33 --*/
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x40,0x20,0x00,0x00,0x70,0x38,0x00,
0x00,0x60,0x30,0x00,0x00,0xc0,0x30,0x00,0x00,0xc8,0x30,0x40,0x01,0x84,0x30,0xe0,
0x01,0x87,0x30,0xc0,0x03,0x03,0x31,0x00,0x03,0x03,0x32,0x00,0x07,0x80,0x30,0x00,
0x07,0x00,0x30,0x20,0x0d,0x00,0x30,0x70,0x09,0x0f,0xff,0x80,0x11,0x00,0x30,0x00,
0x31,0x00,0x30,0x00,0x21,0x00,0x30,0x00,0x01,0x00,0x30,0x00,0x01,0x00,0x30,0x18,
0x01,0x7f,0xff,0xfc,0x01,0x00,0x30,0x00,0x01,0x00,0x30,0x00,0x01,0x00,0x30,0x00,
0x01,0x00,0x30,0x00,0x01,0x00,0x30,0x00,0x03,0x00,0x30,0x00,0x03,0x00,0x30,0x00,
0x03,0x00,0x30,0x00,0x03,0x00,0x30,0x00,0x03,0x00,0x30,0x00,0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,
"金",
/*-- 文字: 金 --*/
/*-- 宋体24; 此字体下对应的点阵为: 宽x高=32x33 --*/
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x03,0x00,0x00,0x00,0x03,0x80,0x00,
0x00,0x07,0x00,0x00,0x00,0x06,0x80,0x00,0x00,0x0e,0x40,0x00,0x00,0x0c,0x60,0x00,
0x00,0x18,0x30,0x00,0x00,0x30,0x18,0x00,0x00,0x70,0x0c,0x00,0x00,0xe0,0x07,0x00,
0x01,0x80,0x03,0xc0,0x03,0x00,0x05,0xf8,0x06,0x00,0x0e,0x7c,0x18,0x7f,0xf0,0x18,
0x20,0x01,0x00,0x00,0x00,0x01,0x00,0x00,0x00,0x01,0x00,0x40,0x00,0x01,0x00,0xc0,
0x07,0xff,0xff,0xe0,0x00,0x01,0x00,0x00,0x01,0x01,0x02,0x00,0x00,0xc1,0x07,0x80,
0x00,0x61,0x06,0x00,0x00,0x71,0x0c,0x00,0x00,0x31,0x08,0x00,0x00,0x31,0x18,0x00,
0x00,0x21,0x10,0x18,0x3f,0xff,0xff,0xfc,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,
"电",
/*-- 文字: 电 --*/
/*-- 宋体24; 此字体下对应的点阵为: 宽x高=32x33 --*/
0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x02,0x00,0x00,0x00,0x03,0x80,0x00,
0x00,0x03,0x00,0x00,0x00,0x03,0x00,0x00,0x00,0x03,0x00,0x00,0x00,0x03,0x00,0x00,
0x06,0x03,0x00,0xc0,0x07,0xff,0xff,0xc0,0x06,0x03,0x00,0xc0,0x06,0x03,0x00,0xc0,
0x06,0x03,0x00,0xc0,0x06,0x03,0x00,0xc0,0x06,0x03,0x00,0xc0,0x07,0xff,0xff,0xc0,
0x06,0x03,0x00,0xc0,0x06,0x03,0x00,0xc0,0x06,0x03,0x00,0xc0,0x06,0x03,0x00,0xc0,
0x06,0x03,0x00,0xc0,0x07,0xff,0xff,0xc0,0x06,0x03,0x00,0xc0,0x06,0x03,0x00,0x00,
0x00,0x03,0x00,0x10,0x00,0x03,0x00,0x08,0x00,0x03,0x00,0x08,0x00,0x03,0x00,0x08,
0x00,0x03,0x00,0x1c,0x00,0x01,0xff,0xf8,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,
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"子",
/*-- 文字: 子 --*/
/*-- 宋体24; 此字体下对应的点阵为: 宽x高=32x33 --*/
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x40,
0x07, 0xFF, 0xFF, 0xE0, 0x00, 0x00, 0x01, 0xF0, 0x00, 0x00, 0x03, 0x80, 0x00, 0x00, 0x06, 0x00,
0x00, 0x00, 0x08, 0x00, 0x00, 0x00, 0x30, 0x00, 0x00, 0x01, 0xC0, 0x00, 0x00, 0x01, 0xC0, 0x00,
0x00, 0x01, 0x80, 0x00, 0x00, 0x01, 0x80, 0x10, 0x00, 0x01, 0x80, 0x38, 0x3F, 0xFF, 0xFF, 0xFC,
0x00, 0x01, 0x80, 0x00, 0x00, 0x01, 0x80, 0x00, 0x00, 0x01, 0x80, 0x00, 0x00, 0x01, 0x80, 0x00,
0x00, 0x01, 0x80, 0x00, 0x00, 0x01, 0x80, 0x00, 0x00, 0x01, 0x80, 0x00, 0x00, 0x01, 0x80, 0x00,
0x00, 0x01, 0x80, 0x00, 0x00, 0x01, 0x80, 0x00, 0x00, 0x01, 0x80, 0x00, 0x00, 0x01, 0x80, 0x00,
0x00, 0x1F, 0x80, 0x00, 0x00, 0x07, 0x80, 0x00, 0x00, 0x03, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00,
};

union
{
    uint k;
    uchar c[2];
}dc;

void Delay(uint t)
{
    do{ t--; }while(t!=0);
}
// 数据地址定位
void Locatexy(uchar Row, uchar Col)
{
    dc.k= (uint) (Row/8)+(uint) ((Col)*120);
    WCMD=0x00;  WDAT=dc.c[1]; //写低位地址
    WCMD=0x01;  WDAT=dc.c[0]; //写高位地址
    WCMD=0x02;
}
//清屏
void Cls(void)
{
    uint i;

    Locatexy(0, 0); //清屏地址0, 0开始
    for(i=0; i<320*240/8*3; i++)  WDAT=0x00; //cls
    WCMD=0x08; //开显示
}
//任意点调入图片子程序
void Put_image(uchar left, uchar top, uchar *tp)
{
    uchar x, y, i, j;

    x=*tp; tp++;
    y=*tp; tp++;

    for(i=0; i<y; i++)
    {
        dc.k= (uint) (left/8)+(uint) ((top+i)*120);

        WCMD=0x00;  WDAT=dc.c[1]; //写低位地址
        WCMD=0x01;  WDAT=dc.c[0]; //写高位地址
        WCMD=0x02; //写数据命令

        for(j=0; j<x; j++)
        {
            WCMD=*tp; tp++; //写图片数据

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    }

}

    WCMD=0x08;           //开显示
}
//单色取模的数据转变成8色RGB 数据
ulong Chang_cor(uchar dat,uchar Cor_b0,uchar Cor_q0)
{
    uchar i;
    uchar cor;
    ulong cordat;

    cordat=0;
    for(i=0;i<8;i++)
    {

        if((dat&0x80)!=0) { cor=Cor_b0; }
        else { cor=Cor_q0; }
        dat=dat<<1;
        cordat=cordat<<3; cordat=cordat+cor;
    }
    return cordat;
}

//调入汉字程序
void dprintf(uint left,uint top,uchar *ptr,uchar Cor_b0,uchar Cor_q0) //Cor_b0 前景色 Cor_q0 背
景色
{
    uchar c1,c2;
    uint uLen,uRow,uCol;
    uint k,j,h,temp;
    uchar x;
    ulong ldat;

    uRow =left;
    uCol =top;
    uLen=0;

    while ( (uchar)ptr[uLen] >= 0x10 ){uLen++;}; //探测字符串长度
    Locatexy(left,top);
    while(k<uLen)
    {
        c1 = ptr[k];
        c2 = ptr[k+1];
        if(c1 <=128) // ASCII
        {
            if (c1 >= 0x10)
            {
                for(j=0;j<33;j++)
                {
                    Locatexy(uRow,uCol+j);
                    x=( ASC_32[(c1-0x20)*99+j*3 ]);
                    ldat=Chang_cor(x,Cor_b0,Cor_q0);
                    WDAT=(uchar)(ldat>>16);
                    WDAT=(uchar)(ldat>>8);
                    WDAT=(uchar) ldat;

                    x=( ASC_32[(c1-0x20)*99+j*3+1 ]);
                    ldat=Chang_cor(x,Cor_b0,Cor_q0);
                    WDAT=(uchar)(ldat>>16);
                    WDAT=(uchar)(ldat>>8);
                    WDAT=(uchar) ldat;
                }
            }
        }
    }
}

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        x=( ASC_32[(c1-0x20)*99 +j*3+2 ]);
        ldat=Chang_cor(x, Cor_b0, Cor_q0);
        WDAT=(uchar) (ldat>>16);
        WDAT=(uchar) (ldat>>8);
        WDAT=(uchar) ldat;
    }
}
    uRow+=24; // 列数加1
}
else
{
    for(j=0;j<sizeof(Cdotlib1)/sizeof(Cdotlib1[0]);j++) // 查找定位
    {
        if((c1 == Cdotlib1[j].Index[0]) && (c2 == Cdotlib1[j].Index[1]))
            break;
    }

    for(h=0;h<33;h++)
    {
        Locatexy(uRow, uCol+h);
        for(temp=0;temp<4;temp++)
        {
            x=( Cdotlib1[j].Msk[temp + h*4]);
            ldat=Chang_cor(x, Cor_b0, Cor_q0);
            WDAT=(uchar) (ldat>>16);
            WDAT=(uchar) (ldat>>8);
            WDAT=(uchar) ldat;
        }
    }
    uRow +=32; // 光标右移一大格
    k++;
}

Locatexy(uRow, uCol);
k++;
}

WCMD=0x08; //开显示
}

```

//任意位置画点子程序

```

void Put_pixel(uint left,uint top,uchar color)
{
    ulong p;
    uchar x;
    uint y;
    uchar x0, x1, x2;
    uchar temp;
    p=(ulong) top*320+(ulong) left;
    x= p % 8;
    y= p / 8;
    y=y*3;

    WCMD=0x00; WDAT=(uchar) y;
    WCMD=0x01; WDAT=(uchar) (y>>8);
    WCMD=0x02; x0=WDAT;
    x1=WDAT;
}

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```
        x2=WDAT;
temp=color;
switch(x)
{
    case 0: temp=(temp<<5)&0xe0;   x0=x0|temp; break;
    case 1: temp=(temp<<2)&0x1c;   x0=x0|temp; break;
    case 2: temp=(temp>>1)&0x03;   x0=x0|temp; temp=color; temp=(temp<<7)&0x80; x1=x1|temp; break
;
    case 3: temp=(temp<<4)&0x70;   x1=x1|temp; break;
    case 4: temp=(temp<<1)&0x0e;   x1=x1|temp; break;
    case 5: temp=(temp>>2)&0x01;   x1=x1|temp; temp=color; temp=(temp<<6)&0xb0; x2=x2|temp; break
;
    case 6: temp=(temp<<3)&0x38;   x2=x2|temp; break;
    case 7: x2=x2|temp; break;
    default: break;
}
}

main()
{
    uchar i;

    Cls(); Delay(50000);           //清屏
    Put_image(0,0,&pict); Delay(50000); //显示一图片
    dprintf(20,10, "1234567890 伴金电子 ", RED, BLACK); //显示 "1234567890 伴金电子"
    for(i=0;i<320;i++) Put_pixel(0,20,RED); //画线
    while(1);
}
```