**#include** "LPC214x.h"

**#include** "image.h"

**#define** LCD\_D0 1<<24

**#define** LCD\_D1 1<<25

**#define** LCD\_D2 1<<26

**#define** LCD\_D3 1<<27

**#define** LCD\_D4 1<<28

**#define** LCD\_D5 1<<29

**#define** LCD\_D6 1<<30

**#define** LCD\_D7 1<<31

**#define** RS (1<<16)

**#define** RW (1<<17)

**#define** EN (1<<18)

**#define** CS1 (1<<19)

**#define** CS2 (1<<20)

**#define** TotalPage 8

**#define** FOSC 12000000

**void** **delay**(**int** k) ;

**void** **GLCD\_Data**(**int** Data);

**void** **GLCD\_Command**(**int** Command);

**void** **GLCD\_Init**();

**void** **GLCD\_ClearAll**();

**void** **GLCD\_String**(**const** **char** \*image) ;

**void** **delay**(**int** k)

{

**int** a,b;

**for**(a=0;a<=k;a++)

**for**(b=0;b<100;b++);

}

**int** **main**(**void**)

{

VPBDIV = 0X01;

delay(1000);

GLCD\_Init(); //\* Initialize GLCD

GLCD\_ClearAll(); //\* Clear all GLCD display

GLCD\_String(img); //\* Display image on GLCD display \*/

**while**(1);

}

**void** **GLCD\_Command**(**int** Command) //\* GLCD command function \*/

{

IOCLR1= (LCD\_D0|LCD\_D1|LCD\_D2|LCD\_D3|LCD\_D4|LCD\_D5|LCD\_D6|LCD\_D7); //\* These bits are set to '1', rest are zeros\*/

Command = Command<<24;

IOSET1 = Command; //\* Copy command on data pin \*/

IOCLR1 = RS; //\* Make RS LOW to select command register \*/

IOCLR1 = RW; //\* Make RW LOW to select write operation \*/

IOSET1 = EN; //\* Make HIGH to LOW transition on Enable pin \*/

delay(5);

IOCLR1 = EN;

}

**void** **GLCD\_Data**(**int** Data) //\* GLCD data function \*/

{

IOCLR1= (LCD\_D0|LCD\_D1|LCD\_D2|LCD\_D3|LCD\_D4|LCD\_D5|LCD\_D6|LCD\_D7);

Data = Data << 24;

IOSET1 = Data; //\* Copy data on data pin \*/

IOSET1 = RS; //\* Make RS HIGH to select data register \*/

IOCLR1 = RW; //\* Make RW LOW to select write operation \*/

IOSET1 = EN; //\* Make HIGH to LOW transition on Enable pin \*/

delay(5);

IOCLR1 = EN;

}

**void** **GLCD\_Init**() //\* GLCD initialize function \*/

{

PINSEL1 = 0x00000000;

IODIR1= (LCD\_D0|LCD\_D1|LCD\_D2|LCD\_D3|LCD\_D4|LCD\_D5|LCD\_D6|LCD\_D7|RS|RW|EN|CS1|CS2);

//\* Configure all pins as output\*/

IOSET1 = (CS1 | CS2); //\* Select both left & right half of display \*/

delay(20);

GLCD\_Command(0x3E); //\* Display OFF \*/

GLCD\_Command(0x40); //\* Set Y address (column=0) \*/

GLCD\_Command(0xB8); //\* Set x address (page=0) \*/

GLCD\_Command(0xC0); //\* Set z address (start line=0) \*/

GLCD\_Command(0x3F); //\* Display ON \*/

}

**void** **GLCD\_ClearAll**() //\* GLCD all display clear function \*/

{

**int** column,page;

**for** (page=0; page<8; page++) //\* Print 16 pages i.e. 8 page of each half of display \*/

{

IOSET1 = CS1; //\* If yes then change segment controller \*/

IOCLR1 = CS2;

GLCD\_Command(0x40); //\* Set Y address (column=0) \*/

GLCD\_Command((0xB8+page)); //\* Increment page address \*/

**for**(column=0;column<128;column++)

{

**if** (column == 64)

{

IOCLR1 = CS1; //\* If yes then change segment controller \*/

IOSET1 = CS2;

GLCD\_Command(0x40); //\* Set Y address (column=0) \*/

GLCD\_Command((0xB8+page)); //\* Increment page address \*/

}

GLCD\_Data(0); //\* Print 64 column of each page \*/

}

}

}

**void** **GLCD\_String**(**const** **char** \*image) //\* GLCD string write function \*/

{

**int** column,page;

**for** (page=0; page<8; page++) //\* Print 16 pages i.e. 8 page of each half of display \*/

{

IOSET1 = CS1; //\* If yes then change segment controller \*/

IOCLR1 = CS2;

GLCD\_Command(0x40); //\* Set Y address (column=0) \*/

GLCD\_Command((0xB8+page)); //\* Increment page address \*/

**for**(column=0;column<128;column++)

{

**if** (column == 64)

{

IOCLR1 = CS1; //\* If yes then change segment controller \*/

IOSET1 = CS2;

GLCD\_Command(0x40); //\* Set Y address (column=0) \*/

GLCD\_Command((0xB8+page)); //\* Increment page address \*/

}

GLCD\_Data(\*image++); //\* Print 64 column of each page \*/

}

}

}