/\*

u8g\_arduino\_port\_d\_wr.c

Universal 8bit Graphics Library

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Assumes PORTD for 8 bit data transfer.

EN is assumed to be a low active write signal (WR)

ILI9325D\_320x240 from iteadstudio.com

RS=19, WR=18, CS=17, RST=16

u8g\_Init8Bit(u8g, dev, d0, d1, d2, d3, d4, d5, d6, d7, en, cs1, cs2, di, rw, reset)

u8g\_Init8Bit(u8g, dev, 8, 9, 10, 11, 4, 5, 6, 7, 18, 14, 15, 17, 16, U8G\_PIN\_NONE)

Update for ATOMIC operation done (01 Jun 2013)

U8G\_ATOMIC\_OR(ptr, val)

U8G\_ATOMIC\_AND(ptr, val)

U8G\_ATOMIC\_START();

U8G\_ATOMIC\_END();

\*/

#include "u8g.h"

#if defined(ARDUINO) && defined(PORTD)

#if ARDUINO < 100

#include <WProgram.h>

#else

#include <Arduino.h>

#endif

static void u8g\_com\_arduino\_port\_d\_8bit\_wr(u8g\_t \*u8g, uint8\_t val)

{

PORTD = val;

/\* WR cycle time must be 1 micro second, digitalWrite is slow enough to do this \*/

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_EN, LOW);

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_EN, HIGH);

}

uint8\_t u8g\_com\_arduino\_port\_d\_wr\_fn(u8g\_t \*u8g, uint8\_t msg, uint8\_t arg\_val, void \*arg\_ptr)

{

switch(msg)

{

case U8G\_COM\_MSG\_INIT:

#ifdef UCSR0B

UCSR0B = 0; // disable USART 0

#endif

U8G\_ATOMIC\_START();

DDRD = 0x0ff;

PORTD = 0x0ff;

U8G\_ATOMIC\_END();

/\* setup the RW pin as output and force it to low \*/

if ( u8g->pin\_list[U8G\_PI\_RW] != U8G\_PIN\_NONE )

{

pinMode(u8g->pin\_list[U8G\_PI\_RW], OUTPUT);

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_RW, HIGH);

}

/\* set all pins (except RW pin) \*/

u8g\_com\_arduino\_assign\_pin\_output\_high(u8g);

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_EN, HIGH);

break;

case U8G\_COM\_MSG\_STOP:

break;

case U8G\_COM\_MSG\_CHIP\_SELECT:

if ( arg\_val == 0 )

{

/\* disable \*/

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_CS1, HIGH);

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_CS2, HIGH);

}

else if ( arg\_val == 1 )

{

/\* enable \*/

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_CS1, LOW);

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_CS2, HIGH);

}

else if ( arg\_val == 2 )

{

/\* enable \*/

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_CS1, HIGH);

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_CS2, LOW);

}

else

{

/\* enable \*/

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_CS1, LOW);

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_CS2, LOW);

}

break;

case U8G\_COM\_MSG\_WRITE\_BYTE:

u8g\_com\_arduino\_port\_d\_8bit\_wr(u8g, arg\_val);

break;

case U8G\_COM\_MSG\_WRITE\_SEQ:

{

register uint8\_t \*ptr = arg\_ptr;

while( arg\_val > 0 )

{

u8g\_com\_arduino\_port\_d\_8bit\_wr(u8g, \*ptr++);

arg\_val--;

}

}

break;

case U8G\_COM\_MSG\_WRITE\_SEQ\_P:

{

register uint8\_t \*ptr = arg\_ptr;

while( arg\_val > 0 )

{

u8g\_com\_arduino\_port\_d\_8bit\_wr(u8g, u8g\_pgm\_read(ptr));

ptr++;

arg\_val--;

}

}

break;

case U8G\_COM\_MSG\_ADDRESS: /\* define cmd (arg\_val = 0) or data mode (arg\_val = 1) \*/

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_DI, arg\_val);

break;

case U8G\_COM\_MSG\_RESET:

if ( u8g->pin\_list[U8G\_PI\_RESET] != U8G\_PIN\_NONE )

u8g\_com\_arduino\_digital\_write(u8g, U8G\_PI\_RESET, arg\_val);

break;

}

return 1;

}

#else

uint8\_t u8g\_com\_arduino\_port\_d\_wr\_fn(u8g\_t \*u8g, uint8\_t msg, uint8\_t arg\_val, void \*arg\_ptr)

{

return 1;

}

#endif /\* ARDUINO && PORTD \*/