This page is part of the mios_c_simulator_-_debugger

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```
/*
 *  ACSim_mios.h
 *  v 0.0.7
 *
 *  2006 April 06 Created by Michael Markert,
http://www.audiocommander.de
 *  mios simulator header for MIOS (c) by T. Klose,
http://www.midibox.org
 *
 */

/*
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 */


#ifndef _ACSIM_MIOS_H
#define _ACSIM_MIOS_H



#import <Stdio.h>
```

```
#import "ACSim_console.h"



#define __wparam
#define code const



// MIOS definitions
#define MIOS_MIDI_INTERFACE_COMMON    0x00
#define MIOS_MIDI_INTERFACE_TO_HOST   0x01

#define MIOS_MIDI_MERGER_DISABLED 0x00
#define MIOS_MIDI_MERGER_ENABLED  0x01
#define MIOS_MIDI_MERGER_MBLINK_EP    0x02
#define MIOS_MIDI_MERGER_MBLINK_FP    0x03

#define MIOS_ENC_SPEED_SLOW           0x00
#define MIOS_ENC_SPEED_NORMAL     0x01
#define MIOS_ENC_SPEED_FAST           0x02

#define MIOS_LCD_TYPE_CLCD            0x00
#define MIOS_LCD_TYPE_GLCD0           0x01
#define MIOS_LCD_TYPE_GLCD1           0x02
#define MIOS_LCD_TYPE_GLCD2           0x03
#define MIOS_LCD_TYPE_GLCD3           0x04
#define MIOS_LCD_TYPE_GLCD4           0x05
#define MIOS_LCD_TYPE_MLCD            0x06
#define MIOS_LCD_TYPE_GLCD_CUSTOM 0x07

#define MIOS_GLCD_FONT                0x28fc


// structures of the CFG and STAT bytes
typedef union {
    struct {
        unsigned ALL:8;
    };
    struct {
        unsigned LCD_TYPE:3;  // selects LCD type
        unsigned USE_GLCD:1;  // if 1, graphical LCD is connected
        unsigned MERGER:1;    // if 1, MIDI merger is enabled
        unsigned MBLINK:1;    // if 1, MIDIbox Link is enabled
        unsigned TO_HOST:1;   // if 1, MIDI interface will run with
38400 baud instead of 31250
        unsigned FRQ_20MHz:1; // if 1, it is assumed that the bux is
running with 20 MHz, else with 40 MHz
    };
} mios_box_cfg0_t;
```

```
typedef union {
    struct {
        unsigned ALL:8;
    };
    struct {
        unsigned BS_A:3;            // A2..A0 of BankStick
        unsigned BS_DIS_VERIFY:1;   // if 1, writes to the BankStick
will not be verified
        unsigned IIC_STRETCH_CLK:1; // if 1, IIC clock stretching
enabled
unsigned :1;
unsigned :1;
unsigned :1;
    };
} mios_box_cfg1_t;

typedef union {
    struct {
        unsigned ALL:8;
    };
    struct {
        unsigned BS_AVAILABLE:1;        // if 1, BankStick is available
        unsigned MBLINK_TUNNEL_PASS:1;  // if 1, a MBLinked event will
be tunnled
        unsigned SUSPEND_ALL:1;         // if 1, all system and user
tasks are suspended
        unsigned SUSPEND_USER:1;        // if 1, all user tasks are
suspended
        unsigned AUTOREPEAT:1;          // if 1, start the auto-repeat
handler
        unsigned MLCD_TRANSFER:1;       // if 1, a transfer to the MLCD
has been started
unsigned :1;
unsigned :1;
    };
} mios_box_stat_t;

// debug related structures
typedef union {
    struct {
        unsigned ALL:8;
    };
    struct {
        unsigned TIMER_ENABLED:1;
        unsigned free:7;
    };
} debug_user_timer_t;

// mios tables
extern const unsigned char MIOS_MPROC_EVENT_TABLE[2*128];
extern const unsigned char MIOS_ENC_PIN_TABLE[2*64];
```

```
#pragma mark pic18f typedefs
// "pic18f452.h" typedefs
typedef union {
    struct {
        unsigned RC0:1;
        unsigned RC1:1;
        unsigned RC2:1;
        unsigned RC3:1;
        unsigned RC4:1;
        unsigned RC5:1;
        unsigned RC6:1;
        unsigned RC7:1;
    };
    struct {
        unsigned T1OSO:1;
        unsigned T1OSI:1;
        unsigned :1;
        unsigned SCK:1;
        unsigned SDI:1;
        unsigned SDO:1;
        unsigned TX:1;
        unsigned RX:1;
    };
    struct {
        unsigned T1CKI:1;
        unsigned CCP2:1;
        unsigned CCP1:1;
        unsigned SCL:1;
        unsigned SDA:1;
        unsigned :1;
        unsigned CK:1;
        unsigned DT:1;
    };
} __PORTCbits_t;

typedef union {
    struct {
        unsigned RD0:1;
        unsigned RD1:1;
        unsigned RD2:1;
        unsigned RD3:1;
        unsigned RD4:1;
        unsigned RD5:1;
        unsigned RD6:1;
        unsigned RD7:1;
    };
    struct {
```

```
        unsigned AD0:1;
        unsigned AD1:1;
        unsigned AD2:1;
        unsigned AD3:1;
        unsigned AD4:1;
        unsigned AD5:1;
        unsigned AD6:1;
        unsigned AD7:1;
    };
} __PORTDbits_t;

typedef union {
    struct {
        unsigned RBIF:1;
        unsigned INT0F:1;
        unsigned T0IF:1;
        unsigned RBIE:1;
        unsigned INT0E:1;
        unsigned T0IE:1;
        unsigned PEIE:1;
        unsigned GIE:1;
    };
} __INTCONbits_t;



#pragma mark debug typedefs
// bankstick
typedef struct {
    unsigned char buffer[DEBUG_BANKSTICK_SIZE];
} debug_bankstick_t;



#pragma mark mios globals
// mios globals
extern mios_box_stat_t     MIOS_BOX_STAT;
// "pic18f452.h"
extern __PORTCbits_t       PORTCbits;
extern __PORTDbits_t       PORTDbits;
extern __INTCONbits_t      INTCONbits;
// HLP
extern unsigned char     MIOS_PARAMETER1;
extern unsigned char     MIOS_PARAMETER2;
extern unsigned char     MIOS_PARAMETER3;


#pragma mark debug globals
// export globals
extern debug_user_timer_t  debug_user_timer;
```

```
extern unsigned char     debug_ain_lastPin;
extern unsigned int          debug_ain_value[32];
extern unsigned char     debug_din_lastPin;
extern unsigned char     debug_din_value[32];
extern unsigned int          debug_enc_value[32];

extern unsigned char     debug_bankstick_ctrl;
extern debug_bankstick_t   debug_bankstick[DEBUG_BANKSTICK_NUM];

extern unsigned int          debug_MIDI_byteNum;
extern unsigned int          debug_IIC_byteNum;


#endif /* _ACSIM_MIOS_H */
```

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