

```

1  #ifdef _WIN32
2  #include <windows.h>
3  #define huge
4  #define delay(a)    Sleep(a)
5  #endif
6
7  #include <stdio.h>
8  #include <stdlib.h>
9  #include <ctype.h>
10 #include <conio.h>
11 #include <dos.h>
12 #include <dir.h>
13 #include <string.h>
14 #include <alloc.h>
15
16 typedef unsigned char  byte;
17 typedef unsigned short word;
18 typedef unsigned long  dword;
19
20 /******
21 /* ALL-03 Hardware I/O Configuration */
22 /******
23
24 #define TTLID          0xE0      /* 0xE0 .. 0xE4 select group for I/O */
25                                  /* 0xE0 : Pin 1- 8 */
26                                  /* 0xE1 : Pin 9-15 */
27                                  /* 0xE2 : Pin16-23 */
28                                  /* 0xE3 : Pin24-31 */
29                                  /* 0xE4 : Pin32-40 */
30
31 #define VOPIID          0xE5      /* 10.2V .. 25.50V @ 0.10V/step (max. 400mA) */
32 #define VOPDROP          6      /* 0.6V = 6 steps */
33
34 #define VHHID           0xE6      /* 5.1V .. 15.30V @ 0.06V/step (max. 400mA) */
35 #define VHHDROP          10      /* 0.6V = 10 steps */
36
37 #define VCCID           0xE7      /* 0.0V .. 10.24V @ 0.04V/step (max. 1000mA) */
38 #define VCCDROP          15      /* 0.6V = 15 steps */
39
40 #define VOPENID         0xE8      /* select group for VOP (via 22 Ohm) */
41                                  /* 0xE8 DATA.0-7 : 1,xx,xx,xx, 5,xx, 7,xx */
42                                  /* 0xE9 DATA.0-7 : 9,10,11,12,13,14,15,16 */
43                                  /* 0xEA DATA.0-7 : 17,18,19,20,21,22,23,24 */
44                                  /* 0xEB DATA.0-7 : 25,26,27,28,29,30,31,32 */
45                                  /* 0xEC DATA.0-7 : xx,xx,xx,36,xx,xx,xx,xx */
46
47 #define VCCENID          0xED      /* select group for VCC (directly) */
48                                  /* 0xED DATA.0-7 : 40,36,34,32,31,30,29,28 */
49                                  /* 0xEE DATA.0-7 : 27,26, 9, 7, 5, 1,xx,xx */
50
51 #define OTHERENID        0xEF      /* 0xEF.0 > A */
52 Function */
53                                  /* 0xEF.1 > 1:Pin7 =VOP(source-2.4V) */
54                                  Pin20=GND */
55                                  /* 0xEF.2 > 1:Pin25=VOP(source-2.4V) */
56                                  Pin11=GND */
57                                  /* 0xEF.3 > 1:Pin2 =OSC,Pin3 =!OSC */
58                                  Pin1 =GND */
59                                  /* 0xEF.4 > 1:Pin18=OSC,Pin19=!OSC */
60                                  Pin22=GND */
61                                  /* 0xEF.5 > 1:4MHz, 0:2MHz */
62                                  Pin28=GND */
63                                  /* 0xEF.6 > B */
64                                  Pin40=GND */
65                                  /* 0xEF.7 > C */
66                                  Pin30=GND */
67
68 Pin29=GND */
69
70 #define VHHENID          0xF0      /* select group for VHH (via 22 Ohm) */
71                                  /* 0xF0 DATA.0-7 : xx,xx,xx,xx,xx,xx,xx,xx */
72                                  /* 0xF1 DATA.0-7 : 9,10,11,12,13,14,15,16 */
73                                  /* 0xF2 DATA.0-7 : 17,18,19,20,21,22,23,24 */

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64                                     /* 0xF3 DATA.0-7 : 25,26,27,28,29,30,31,32 */
65                                     /* 0xF4 DATA.0-7 : xx,xx,xx,xx,xx,xx,xx,xx */
66
67 #define VHHENCID      0xF5      /* select group for VHH (directly) */
68                                     /* 0xF5 DATA.0-7 : xx,xx,xx,32,31,30,29,28 */
69                                     /* 0xF6 DATA.0-7 : xx,xx,xx,xx,xx,xx,xx,xx */
70
71 #define USERBITS      0xF7      /* BUSY / GOOD LED */
72                                     /* 0xF7.3 > 1:'GOOD' LED on */
73
74 #define CODEID        0xF8      /* read programmer ID (4 LSBs only)*/
75
76 /* ASCII key code define */
77 #define BEL           '\x07'
78 #define BS            '\x08'
79 #define CR            '\x0d'
80 #define LF            '\x0a'
81 #define ESC           '\x1b'
82
83 #define TRUE          1
84 #define FALSE         0
85
86 #define VIDEO         0x10      /* INT 10H */
87
88 #ifdef ZEN_TIMER
89
90 extern void initclk(void);
91 extern void dly1u(void);
92 extern void dly10u(void);
93 extern void dly20u(void);
94 extern void dly50u(void);
95 extern void dly100u(void);
96 extern void dly200u(void);
97 extern void dly500u(void);
98 extern void dly1m(void);
99 extern void dly2m(void);
100 extern void dly5m(void);
101 extern void dly10m(void);
102 extern void dly20m(void);
103 extern void dly50m(void);
104
105 extern word FACT1U, FACT10U, FACT20U, FACT50U;
106 extern word FACT100U, FACT200U, FACT500U;
107 extern word FACT1M, FACT2M, FACT5M;
108 extern word FACT10M, FACT20M, FACT50M;
109
110 #else
111
112 #include "timer.h"
113 #define dly1u()        us_delay(1)
114 #define dly10u()       us_delay(10)
115 #define dly20u()       us_delay(20)
116 #define dly50u()       us_delay(50)
117 #define dly100u()      us_delay(100)
118 #define dly200u()      us_delay(200)
119 #define dly500u()      us_delay(500)
120 #define dly1m()        us_delay(1000)
121 #define dly2m()        us_delay(2000)
122 #define dly5m()        us_delay(5000)
123 #define dly10m()       us_delay(10000)
124 #define dly20m()       us_delay(20000)
125 #define dly50m()       {us_delay(25000); us_delay(25000);}
126
127 #endif
128
129 #define waitms(time)    delay(time)      /* time delay 1 ms resolution */
130
131 #ifdef _WIN32
132 extern void outp( word portaddr, byte value );
133 extern byte inp( word portaddr );
134 #endif
135

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136 #define locate(y,x)      gotoxy((x)+1,(y)+1)
137 extern void clscrn ( int y1, int x1, int y2, int x2 );
138 extern int  dbl;
139 extern void _window ( int y1, int x1, int y2, int x2 );
140 extern void frame( int y1, int x1, int y2, int x2 );
141 extern int  getline( char *s, int lim );
142 extern void errbeep( void );
143 extern void bindsp2( int data );
144
145 extern void setport( int id, int off, int data );
146 extern int  getport( int id, int off );
147 extern void setdac ( int which, int data );
148 extern void setdac_raw ( int which, int data );
149 extern int  setpin ( int pin, int voltage, int state );
150 extern int  getpin ( int pin );
151 extern void setother( int bit, int state );
152
153 extern int VCC, VHH, VOP;
154
155 extern int idport;
156
157 extern void init_hw( void );
158 extern void initio( void );
159 extern void initdacs( void );
160 extern void set_io_adr( void );
161
162 extern word Chks;
163 extern dword read_bin( char *filename, dword addr );
164 extern dword read_intel( char *filename, dword addr );
165 extern dword read_motorola( char *filename, dword addr );
166
167 extern char path[260], oldpath[260];
168 extern int  xgets( char *str );
169 extern int  load_file( void );
170 extern void save_file( void );
171
172 extern long BufStart;
173 extern long BufEnd;
174 extern long bufsize;
175 extern unsigned char huge *buffer;
176 extern char buffile[80];
177
178 extern int mfrno, devno;
179 extern void ReadConfig( void );
180 extern void WriteConfig( void );
181
182 void dos_shell( char *cmd );
183 void edit_buffer( void );
184 void disp_buffer( void );
185

```