

```

1  #include "all103.h"
2
3  static int pwron = FALSE;
4  static int cardok= FALSE;
5
6  int idport = 0x2E0;
7
8  /*=====*/
9  void initio( void )
10 {
11     int i;
12
13     for( i = 0; i < 5; ++i )
14     {
15         setport( TTLID, i, 0xFF );      /* TTL high level on all pins */
16         setport( VOPENID, i, 0 );      /* no VOP */
17         setport( VHHEID, i, 0 );      /* no VHH */
18     }
19
20     for( i = 0; i < 2; ++i )
21     {
22         setport( VCCENID, i, 0 );      /* no VCC */
23         setport( VHHEID, i, 0 );      /* no VHH */
24     }
25
26     setport( OTHERENID, 0, 0 );      /* no specials */
27 }
28
29 /*=====*/
30 void initdacs( void )
31 {
32     setdac( VOPID, 0 );
33     setdac( VHHEID, 0 );
34     setdac( VCCID, 0 );
35 }
36
37 /*=====*/
38 int chkid( int count, int value )
39 {
40     int i;
41
42     setport( VCCID, 0, 0x00 );
43     setport( VCCID, 0, 0x01 );      /* B0 : reset code */
44
45     setport( VCCID, 0, 0x00 );
46     setport( VCCID, 0, 0x02 );      /* B1 : enable clock */
47
48     for( i = 0; i < count; ++i )
49     {
50         setport( VCCID, 0, 0x03 );      /* B0 : clock */
51         setport( VCCID, 0, 0x02 );
52     }
53
54     setport( VCCID, 0, 0x00 );
55
56     return( ( getport( CODEID, 0 ) & 0x0F ) != ( value & 0x0F ) );
57 }
58
59 /*=====*/
60 void set_io_adr( void )
61 {
62     int ioadrno = ( idport - 0x200 ) / 16; // 0-f: 200-2f0 io base of SAC-101
63     int i,ch;
64
65     textattr( ( CYAN << 4 ) + WHITE ); _window( 10,40, 23,79 );
66
67     for( i = 0; i < 8; ++i )
68     {
69         locate( 11+i, 42 ); cprintf( "%X. %3X", i, 0x200 + 16*i );
70         locate( 11+i, 60 ); cprintf( "%X. %3X", i+8, 0x200 + 16*(i+8) );
71     }
72

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73 locate( 19, 42 ); cprintf( "<CR> back to main menu." );
74
75 locate( 10,43 );
76 textattr( ( BLUE << 4 ) + WHITE ); cprintf( " CHANGE I/O BASE ADDRESS " );
77
78 while( TRUE )
79 {
80     textattr( ( CYAN << 4 ) + WHITE ); clrscrn( 20,41, 22,78 );
81
82     locate( 20,41 ); cprintf( "Current I/O base-addr.: %hX", idport );
83
84     locate( 21,42 );
85     if( cardok == TRUE )
86     {
87         textattr( ( CYAN << 4 ) + WHITE );
88         cprintf( "    --- Programmer exists ---    " );
89     }
90     else
91     {
92         textattr( ( RED << 4 ) + WHITE );
93         cprintf( "---- Programmer does not exist ----" );
94     }
95
96     textattr( ( CYAN << 4 ) + WHITE );
97
98     locate( 22,41 ); cprintf( "Select number ? " );
99
100    while( (ch=getch()) == '\0' )
101        getch();
102
103    if( ch==CR || ch==LF || ch==ESC )
104    {
105        clrscrn( 10,40, 23,79 );
106        break;
107    }
108
109    if( ( ch = toupper(ch) ) >= '0' && ch <= '9' )
110        ioadrno = ch - '0';
111    else if( ch >= 'A' && ch <= 'F' )
112        ioadrno = ch - 'A' + 10;
113
114    idport = 0x200 + 16 * ioadrno;
115
116    initio();
117
118    if( chkid( 31, 0x07 ) ||
119        chkid( 23, 0x02 ) ||
120        chkid( 3, 0x0b ) ||
121        chkid( 22, 0x09 ) ||
122        chkid( 11, 0x08 ) )
123        cardok = FALSE;
124    else
125        cardok = TRUE;
126 }
127 }
128
129 /*=====*/
130 void init_hw( void )
131 {
132     int ch;
133
134     if( pwrn == FALSE )
135     {
136         initclk();          /* check system clk */
137
138         initio();
139
140         if( chkid( 31, 0x07 ) ||
141             chkid( 23, 0x02 ) ||
142             chkid( 3, 0x0b ) ||
143             chkid( 22, 0x09 ) ||
144             chkid( 11, 0x08 ) )

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145     {
146         textattr( LIGHTRED ); clrscr( 0,0, 24,79 );
147
148         locate(10,0 ); cprintf( "Error identifying hardware!" );
149
150         locate(12,0 ); cprintf( "(May be a mismatch between DIPSW position on" );
151         locate(13,0 ); cprintf( "the IF card and I/O baseadr. in the software)" );
152         locate(14,0 ); cprintf( "Press <Q> to Quit or" );
153         locate(15,0 ); cprintf( "press <CR> to continue ..." );
154
155         for(;;)
156         {
157             while( ( ch = getch() ) == 0 )
158                 getch();
159
160             if( ch == 'q' || ch == 'Q' )
161                 exit(0);
162             if( ch == CR || ch == LF )
163             {
164                 pwron = TRUE;
165                 return;
166             }
167         }
168     }
169     else
170     {
171         pwron = TRUE;
172         cardok = TRUE;          /* card exist*/
173     }
174 }
175 }
176

```