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ILI9225B

a-Si TFT LCD Single Chip Driver with 176RGBx220 Resolution and 262K color

Application Notes

Version: Preliminary V0.7
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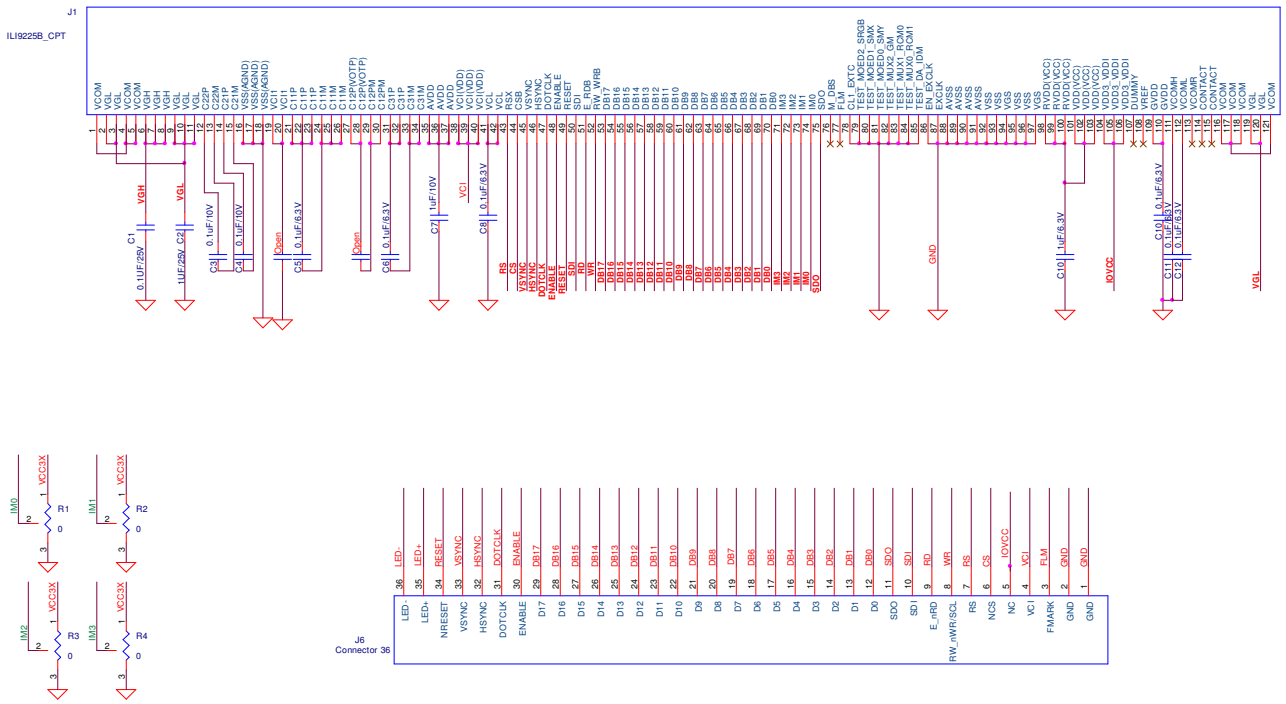
1. CPT 2.0 inch Panel

1.1 Application FPC Circuit



1.2 CPT 2.0 inch initial code

void ILI9225B_CPT20_Initial(void)

```
{
   // VCI=2.8V
   //************* Reset LCD Driver ****************//
      LCD_nRESET = 1;
         delayms(1);   // Delay 1ms
      LCD_nRESET = 0;
         delayms(10); // Delay 10ms                  // This delay time is necessary
      LCD_nRESET = 1;
         delayms(50); // Delay 50 ms
   //************* Start Initial Sequence **********//
      LCD_CtrlWrite_ILI9225B(0x0001, 0x011C);              // set SS and NL bit
      LCD_CtrlWrite_ILI9225B(0x0002, 0x0100);              // set 1 line inversion
      LCD_CtrlWrite_ILI9225B(0x0003, 0x1030);              // set GRAM write direction and BGR=1.
      LCD_CtrlWrite_ILI9225B(0x0008, 0x0808);              // set BP and FP
      LCD_CtrlWrite_ILI9225B(0x000C, 0x0000);      // RGB interface setting    R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for
      RGB16Bit
      LCD_CtrlWrite_ILI9225B(0x000F, 0x0801);     // Set frame rate
      LCD_CtrlWrite_ILI9225B(0x0020, 0x0000);          // Set GRAM Address
      LCD_CtrlWrite_ILI9225B(0x0021, 0x0000);          // Set GRAM Address
   //*************Power On sequence ****************//
      delayms(50);    // Delay 50ms
      LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);          // Set SAP,DSTB,STB
      LCD_CtrlWrite_ILI9225B(0x0011, 0x1038);          // Set APON,PON,AON,VCI1EN,VC
      delayms(50);    // Delay 50ms
      LCD_CtrlWrite_ILI9225B(0x0012, 0x1121);          // Internal reference voltage= Vci;
      LCD_CtrlWrite_ILI9225B(0x0013, 0x0066);          // Set GVDD
      LCD_CtrlWrite_ILI9225B(0x0014, 0x5F60);          // Set VCOMH/VCOML voltage
//----------------------- Set GRAM area --------------------------------//
      LCD_CtrlWrite_ILI9225B (0x30, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x31, 0x00DB);
      LCD_CtrlWrite_ILI9225B (0x32, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x33, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x34, 0x00DB);
      LCD_CtrlWrite_ILI9225B (0x35, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x36, 0x00AF);
      LCD_CtrlWrite_ILI9225B (0x37, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x38, 0x00DB);
      LCD_CtrlWrite_ILI9225B (0x39, 0x0000);
// ---------- Adjust the Gamma    Curve ----------//
      LCD_CtrlWrite_ILI9225B(0x0050, 0x0400);
      LCD_CtrlWrite_ILI9225B(0x0051, 0x060B);
      LCD_CtrlWrite_ILI9225B(0x0052, 0x0C0A);
      LCD_CtrlWrite_ILI9225B(0x0053, 0x0105);
      LCD_CtrlWrite_ILI9225B(0x0054, 0x0A0C);
      LCD_CtrlWrite_ILI9225B(0x0055, 0x0B06);
      LCD_CtrlWrite_ILI9225B(0x0056, 0x0004);
      LCD_CtrlWrite_ILI9225B(0x0057, 0x0501);
      LCD_CtrlWrite_ILI9225B(0x0058, 0x0E00);
      LCD_CtrlWrite_ILI9225B(0x0059, 0x000E);
      delayms(50);    // Delay 50ms
      LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}
```

void LCD_Enter Standby_ILI9225B(void)

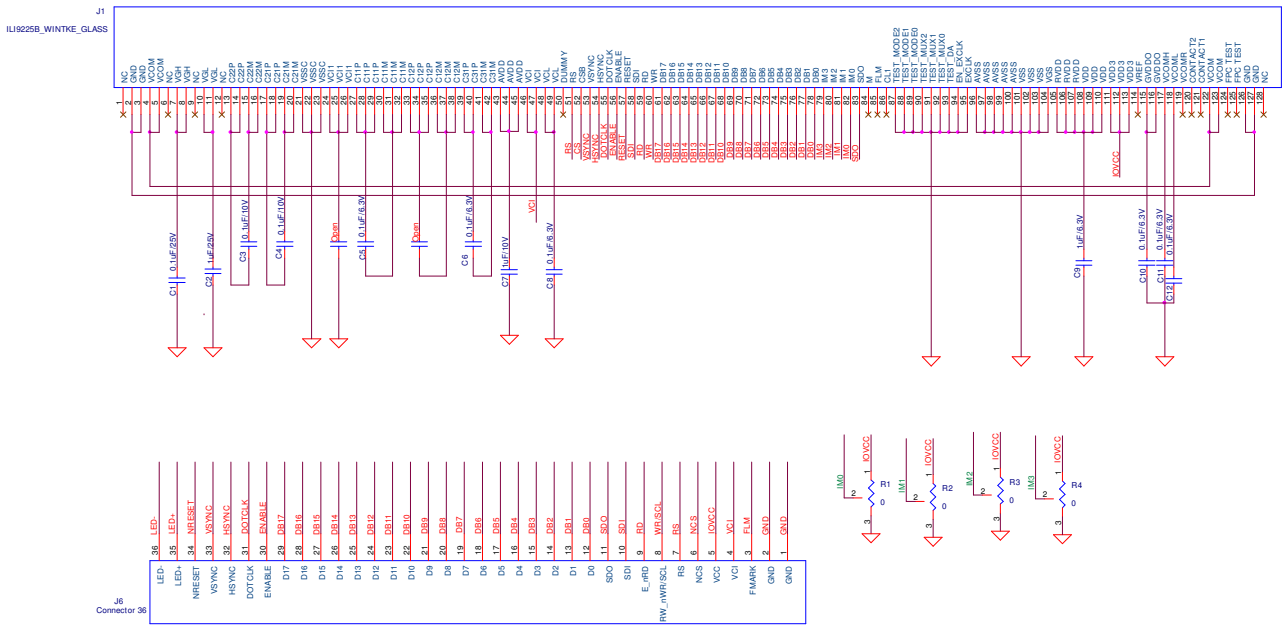
```
{
   LCD_CtrlWrite_ILI9225B(0x0007, 0x0000);        // Set D1=0, D0=1
   delayms(50);
   LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01);          // Enter Standby mode
}
```

void LCD_Exit Standby _ILI9225B(void)

```
{
 LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);          // Exit Sleep/ Standby mode
 delayms(50)
 LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);          // Set D1=0, D0=1
}
```

2. WTK 1.8 2.0 2.2 inch Panel

2.1 Application FPC Circuit



2.2 WTK 1.8,2.0,2.2 inch Initial Code

void ILI9225B_Wintek_Initial(void)

```
{
   // VCI=2.8V
   //************* Reset LCD Driver ****************//
      LCD_nRESET = 1;
         delayms(1);   // Delay 1ms
      LCD_nRESET = 0;
         delayms(10); // Delay 10ms                  // This delay time is necessary
      LCD_nRESET = 1;
         delayms(50); // Delay 50 ms
   //************* Start Initial Sequence **********//
      LCD_CtrlWrite_ILI9225B(0x0001, 0x011C);              // set SS and NL bit
      LCD_CtrlWrite_ILI9225B(0x0002, 0x0100);              // set 1 line inversion
      LCD_CtrlWrite_ILI9225B(0x0003, 0x1030);              // set GRAM write direction and BGR=1.
      LCD_CtrlWrite_ILI9225B(0x0008, 0x0808);              // set BP and FP
      LCD_CtrlWrite_ILI9225B(0x000C, 0x0000);      // RGB interface setting    R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for
      RGB16Bit
      LCD_CtrlWrite_ILI9225B(0x000F, 0x0801);     // Set frame rate
      LCD_CtrlWrite_ILI9225B(0x0020, 0x0000);          // Set GRAM Address
      LCD_CtrlWrite_ILI9225B(0x0021, 0x0000);          // Set GRAM Address
   //*************Power On sequence ****************//
      delayms(50);    // Delay 50ms
      LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);          // Set SAP,DSTB,STB
      LCD_CtrlWrite_ILI9225B(0x0011, 0x1038);          // Set APON,PON,AON,VCI1EN,VC
      delayms(50);    // Delay 50ms
      LCD_CtrlWrite_ILI9225B(0x0012, 0x6121);          // Internal reference voltage= Vci;
      LCD_CtrlWrite_ILI9225B(0x0013, 0x0062);          // Set GVDD
      LCD_CtrlWrite_ILI9225B(0x0014, 0x5b60);          // Set VCOMH/VCOML voltage
//---------------------- Set GRAM area --------------------------------//
      LCD_CtrlWrite_ILI9225B (0x30, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x31, 0x00DB);
      LCD_CtrlWrite_ILI9225B (0x32, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x33, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x34, 0x00DB);
      LCD_CtrlWrite_ILI9225B (0x35, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x36, 0x00AF);
      LCD_CtrlWrite_ILI9225B (0x37, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x38, 0x00DB);
      LCD_CtrlWrite_ILI9225B (0x39, 0x0000);
// ---------- Adjust the Gamma    Curve ----------//
      LCD_CtrlWrite_ILI9225B(0x0050, 0x0000);
      LCD_CtrlWrite_ILI9225B(0x0051, 0x000B);
      LCD_CtrlWrite_ILI9225B(0x0052, 0x0a01);
      LCD_CtrlWrite_ILI9225B(0x0053, 0x010c);
      LCD_CtrlWrite_ILI9225B(0x0054, 0x010a);
      LCD_CtrlWrite_ILI9225B(0x0055, 0x0B00);
      LCD_CtrlWrite_ILI9225B(0x0056, 0x0000);
      LCD_CtrlWrite_ILI9225B(0x0057, 0x0c01);
      LCD_CtrlWrite_ILI9225B(0x0058, 0x0E00);
      LCD_CtrlWrite_ILI9225B(0x0059, 0x000E);
      delayms(50);    // Delay 50ms
      LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}
```

void LCD_Enter Standby_ILI9225B(void)

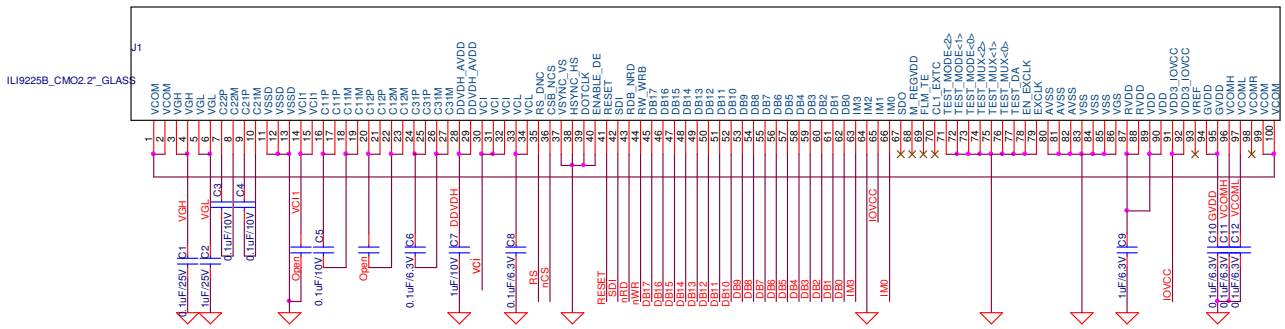
```
{
   LCD_CtrlWrite_ILI9225B(0x0007, 0x0000);        // Set D1=0, D0=1
   delayms(50);
   LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01);          //     // Enter Standby mode
}
```

void LCD_Exit Standby _ILI9225B(void)

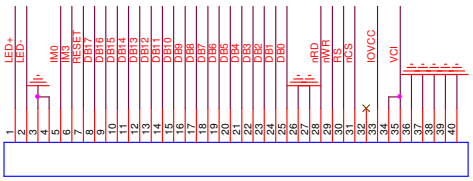
```
{
 LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);          // Exit Sleep/ Standby mode
 delayms(50)
 LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);          // Set D1=0, D0=1
}
```

3. CMO 2.2 inch Panel

3.1 Application FPC Circuit



IM3	IM0	Configured Functions
0	0	16-bit, i-80 interface
0	1	8-bit, i-80 interface
1	0	18-bit, i-80 interface
1	1	9-bit, i-80 interface



3.2 CM0 2.2 inch Panel Initial Code

```
void ILI9225B_CMO22_Initial(void)
{
   // VCI=2.8V
   //************* Reset LCD Driver ****************//
      LCD_nRESET = 1;
        delayms(1);   // Delay 1ms
      LCD_nRESET = 0;
        delayms(10); // Delay 10ms                  // This delay time is necessary
      LCD_nRESET = 1;
        delayms(50); // Delay 50 ms
   //************* Start Initial Sequence **********//
      LCD_CtrlWrite_ILI9225B(0x0001, 0x011C);             // set SS and NL bit
      LCD_CtrlWrite_ILI9225B(0x0002, 0x0100);             // set 1 line inversion
      LCD_CtrlWrite_ILI9225B(0x0003, 0x1030);             // set GRAM write direction and BGR=1.
      LCD_CtrlWrite_ILI9225B(0x0008, 0x0808);             // set BP and FP
      LCD_CtrlWrite_ILI9225B(0x000C, 0x0000);      // RGB interface setting    R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for
      RGB16Bit
      LCD_CtrlWrite_ILI9225B(0x000F, 0x0801);     // Set frame rate
      LCD_CtrlWrite_ILI9225B(0x0020, 0x0000);         // Set GRAM Address
      LCD_CtrlWrite_ILI9225B(0x0021, 0x0000);         // Set GRAM Address
   //*************Power On sequence ****************//
      delayms(50);    // Delay 50ms
      LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);          // Set SAP,DSTB,STB
      LCD_CtrlWrite_ILI9225B(0x0011, 0x103B);          // Set APON,PON,AON,VCI1EN,VC
      delayms(50);    // Delay 50ms
      LCD_CtrlWrite_ILI9225B(0x0012, 0x3121);          // Internal reference voltage= Vci;
      LCD_CtrlWrite_ILI9225B(0x0013, 0x0066);          // Set GVDD
      LCD_CtrlWrite_ILI9225B(0x0014, 0x3660);          // Set VCOMH/VCOML voltage
//---------------------- Set GRAM area --------------------------------//
      LCD_CtrlWrite_ILI9225B (0x30, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x31, 0x00DB);
      LCD_CtrlWrite_ILI9225B (0x32, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x33, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x34, 0x00DB);
      LCD_CtrlWrite_ILI9225B (0x35, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x36, 0x00AF);
      LCD_CtrlWrite_ILI9225B (0x37, 0x0000);
      LCD_CtrlWrite_ILI9225B (0x38, 0x00DB);
      LCD_CtrlWrite_ILI9225B (0x39, 0x0000);
// ---------- Adjust the Gamma    Curve ----------//
      LCD_CtrlWrite_ILI9225B(0x0050, 0x0400);
      LCD_CtrlWrite_ILI9225B(0x0051, 0x080B);
      LCD_CtrlWrite_ILI9225B(0x0052, 0x0E0C);
      LCD_CtrlWrite_ILI9225B(0x0053, 0x0103);
      LCD_CtrlWrite_ILI9225B(0x0054, 0x0C0E);
      LCD_CtrlWrite_ILI9225B(0x0055, 0x0B08);
      LCD_CtrlWrite_ILI9225B(0x0056, 0x0004);
      LCD_CtrlWrite_ILI9225B(0x0057, 0x0301);
      LCD_CtrlWrite_ILI9225B(0x0058, 0x0E00);
      LCD_CtrlWrite_ILI9225B(0x0059, 0x000E);
      delayms(50);    // Delay 50ms
      LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}
```

void LCD_Enter Standby_ILI9225B(void)

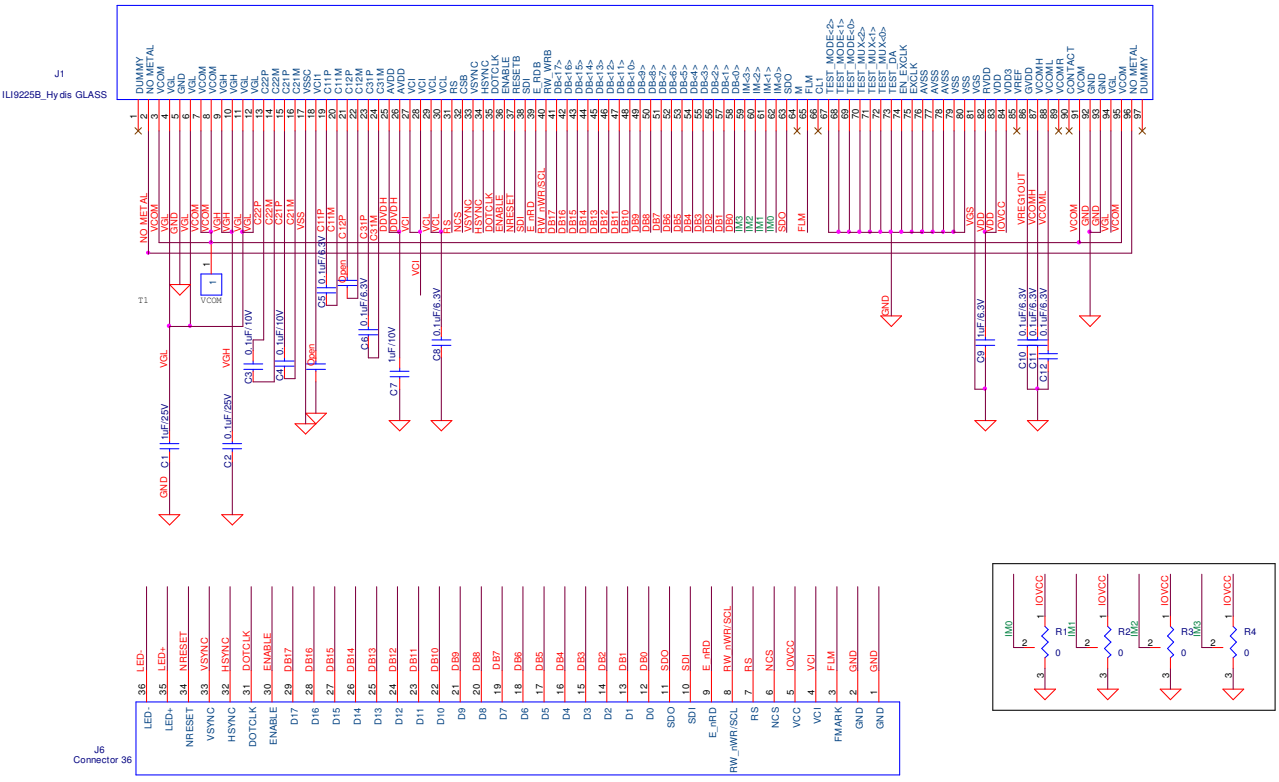
```
{
   LCD_CtrlWrite_ILI9225B(0x0007, 0x0000);        // Set D1=0, D0=1
   delayms(50);
   LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01);          //     // Enter Standby mode
}
```

void LCD_Exit Standby _ILI9225B(void)

```
{
 LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);          // Exit Sleep/ Standby mode
 delayms(50)
 LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);          // Set D1=0, D0=1
}
```

4. BOE- Hydis 2.2 inch Panel

4.1 Application FPC Circuit



4.2 Hydis 2.2 inch Panel Initial Code

void ILI9225B_Hydis22_Initial(void)

```
{
  // VCI=2.8V
  //************* Reset LCD Driver ****************//
    LCD_nRESET = 1;
      delayms(1);   // Delay 1ms
    LCD_nRESET = 0;
      delayms(10); // Delay 10ms                  // This delay time is necessary
    LCD_nRESET = 1;
      delayms(50); // Delay 50 ms
  //************* Start Initial Sequence **********//
    LCD_CtrlWrite_ILI9225B(0x0001, 0x011C);             // set SS and NL bit
    LCD_CtrlWrite_ILI9225B(0x0002, 0x0100);             // set 1 line inversion
    LCD_CtrlWrite_ILI9225B(0x0003, 0x1030);             // set GRAM write direction and BGR=1.
    LCD_CtrlWrite_ILI9225B(0x0008, 0x0808);             // set BP and FP
    LCD_CtrlWrite_ILI9225B(0x000C, 0x0000);      // RGB interface setting   R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for
    RGB16Bit
    LCD_CtrlWrite_ILI9225B(0x000F, 0x0801);     // Set frame rate
    LCD_CtrlWrite_ILI9225B(0x0020, 0x0000);         // Set GRAM Address
    LCD_CtrlWrite_ILI9225B(0x0021, 0x0000);         // Set GRAM Address
  //*************Power On sequence ****************//
    delayms(50);    // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);         // Set SAP,DSTB,STB
    LCD_CtrlWrite_ILI9225B(0x0011, 0x103B);         // Set APON,PON,AON,VCI1EN,VC
    delayms(50);    // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0012, 0x6121);         // Internal reference voltage= Vci;
    LCD_CtrlWrite_ILI9225B(0x0013, 0x006F);         // Set GVDD
    LCD_CtrlWrite_ILI9225B(0x0014, 0x495F);         // Set VCOMH/VCOML voltage
//---------------------- Set GRAM area --------------------------------//
    LCD_CtrlWrite_ILI9225B (0x30, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x31, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x32, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x33, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x34, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x35, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x36, 0x00AF);
    LCD_CtrlWrite_ILI9225B (0x37, 0x0000);
    LCD_CtrlWrite_ILI9225B (0x38, 0x00DB);
    LCD_CtrlWrite_ILI9225B (0x39, 0x0000);
// ---------- Adjust the Gamma   Curve ----------//
    LCD_CtrlWrite_ILI9225B(0x0050, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0051, 0x0808);
    LCD_CtrlWrite_ILI9225B(0x0052, 0x080A);
    LCD_CtrlWrite_ILI9225B(0x0053, 0x000A);
    LCD_CtrlWrite_ILI9225B(0x0054, 0x0A08);
    LCD_CtrlWrite_ILI9225B(0x0055, 0x0808);
    LCD_CtrlWrite_ILI9225B(0x0056, 0x0000);
    LCD_CtrlWrite_ILI9225B(0x0057, 0x0A00);
    LCD_CtrlWrite_ILI9225B(0x0058, 0x1007);
    LCD_CtrlWrite_ILI9225B(0x0059, 0x0710);
    delayms(50);    // Delay 50ms
    LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}
```

void LCD_Enter Standby_ILI9225B(void)

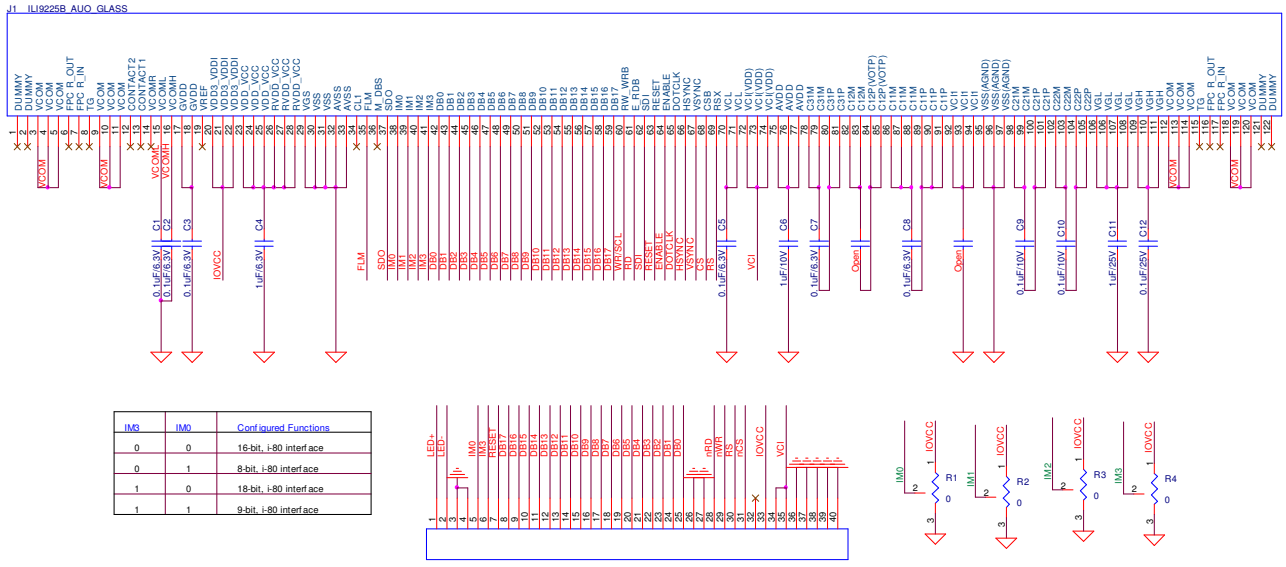
```
{
   LCD_CtrlWrite_ILI9225B(0x0007, 0x0000);        // Set D1=0, D0=1
   delayms(50);
   LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01);          //    // Enter Standby mode
}
```

void LCD_Exit Standby _ILI9225B(void)

```
{
 LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00);          // Exit Sleep/ Standby mode
 delayms(50)
 LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);          // Set D1=0, D0=1
}
```

5 AUO 2.2”&AUO2.0” Panel

5.1 AUO 2.2” & AUO2.0” Application FPC Circuit



IM3	IM0	Configured Functions
0	0	16-bit, i-80 interface
0	1	8-bit, i-80 interface
1	0	18-bit, i-80 interface
1	1	9-bit, i-80 interface

5.2 AUO 2.0” Panel Initial Code

```
void ILI9225B_AUO20_Initial(void){
  // VCI=2.8V
  //************* Reset LCD Driver ****************//
  LCD_nRESET = 1;
    delayms(1);                                 // Delay 1ms
  LCD_nRESET = 0;
    delayms(10);                                // Delay 10ms // This delay time is necessary
  LCD_nRESET = 1;
    delayms(50);                                // Delay 50 ms
  //************* Start Initial Sequence **********//
  LCD_CtrlWrite_ILI9225B(0x0001, 0x011C); // set SS and NL bit
  LCD_CtrlWrite_ILI9225B(0x0002, 0x0100); // set 1 line inversion
  LCD_CtrlWrite_ILI9225B(0x0003, 0x1030); // set GRAM write direction and BGR=1.
  LCD_CtrlWrite_ILI9225B(0x0008, 0x0808); // set BP and FP
  LCD_CtrlWrite_ILI9225B(0x000C, 0x0000); // RGB interface setting R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for RGB16Bit
  LCD_CtrlWrite_ILI9225B(0x000F, 0x0B01); // Set frame rate
  LCD_CtrlWrite_ILI9225B(0x0020, 0x0000); // Set GRAM Address
  LCD_CtrlWrite_ILI9225B(0x0021, 0x0000); // Set GRAM Address
  //*************Power On sequence ****************//
    delayms(50);                                // Delay 50ms
  LCD_CtrlWrite_ILI9225B(0x0010, 0x0800); // Set SAP,DSTB,STB
  LCD_CtrlWrite_ILI9225B(0x0011, 0x1038); // Set APON,PON,AON,VCI1EN,VC
    delayms(50);                                // Delay 50ms
  LCD_CtrlWrite_ILI9225B(0x0012, 0x1121); // Internal reference voltage= Vci;
  LCD_CtrlWrite_ILI9225B(0x0013, 0x0063); // Set GVDD
  LCD_CtrlWrite_ILI9225B(0x0014, 0x3944); // Set VCOMH/VCOML voltage
  //------------- Set GRAM area ----------------//
  LCD_CtrlWrite_ILI9225B(0x0030, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0031, 0x00DB);
  LCD_CtrlWrite_ILI9225B(0x0032, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0033, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0034, 0x00DB);
  LCD_CtrlWrite_ILI9225B(0x0035, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0036, 0x00AF);
  LCD_CtrlWrite_ILI9225B(0x0037, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0038, 0x00DB);
  LCD_CtrlWrite_ILI9225B(0x0039, 0x0000);
  // ----------- Adjust the Gamma Curve ----------//
  LCD_CtrlWrite_ILI9225B(0x0050, 0x0003);
  LCD_CtrlWrite_ILI9225B(0x0051, 0x0900);
  LCD_CtrlWrite_ILI9225B(0x0052, 0x0d05);
  LCD_CtrlWrite_ILI9225B(0x0053, 0x0900);
  LCD_CtrlWrite_ILI9225B(0x0054, 0x0407);
  LCD_CtrlWrite_ILI9225B(0x0055, 0x0502);
  LCD_CtrlWrite_ILI9225B(0x0056, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0057, 0x0005);
  LCD_CtrlWrite_ILI9225B(0x0058, 0x1700);
  LCD_CtrlWrite_ILI9225B(0x0059, 0x001F);
    delayms(50);                                // Delay 50ms
  LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}
```

void LCD_Enter_Standby_ILI9225B(void)

```
{
  LCD_CtrlWrite_ILI9225B(0x0007, 0x0000); // Set D1=0, D0=1
    delayms(50);
  LCD_CtrlWrite_ILI9225B(0x0010, 0x0801); // Enter Standby mode
}
```

void LCD_Exit_Standby _ILI9225B(void)

```
{
  LCD_CtrlWrite_ILI9225B(0x0010, 0x0800); // Exit Sleep/ Standby mode
    delayms(50)
  LCD_CtrlWrite_ILI9225B(0x0007, 0x1017); // Set D1=0, D0=1
}
```

5.3 AUO 2.2” Panel Initial Code

void ILI9225B_AUO22_Initial(void)

```
{
   // VCI=2.8V
   //************* Reset LCD Driver ****************//
   LCD_nRESET = 1;
      delayms(1);                                  // Delay 1ms
   LCD_nRESET = 0;
      delayms(10);                                 // Delay 10ms // This delay time is necessary
   LCD_nRESET = 1;
      delayms(50);                                 // Delay 50 ms
   //************* Start Initial Sequence **********//
   LCD_CtrlWrite_ILI9225B(0x0001, 0x011C); // set SS and NL bit
   LCD_CtrlWrite_ILI9225B(0x0002, 0x0100); // set 1 line inversion
   LCD_CtrlWrite_ILI9225B(0x0003, 0x1030); // set GRAM write direction and BGR=1.
   LCD_CtrlWrite_ILI9225B(0x0008, 0x0808); // set BP and FP
   LCD_CtrlWrite_ILI9225B(0x000C, 0x0000); // RGB interface setting R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for RGB16Bit
   LCD_CtrlWrite_ILI9225B(0x000F, 0x0801); // Set frame rate
   LCD_CtrlWrite_ILI9225B(0x0020, 0x0000); // Set GRAM Address
   LCD_CtrlWrite_ILI9225B(0x0021, 0x0000); // Set GRAM Address
   //*************Power On sequence ****************//
      delayms(50);                                 // Delay 50ms
   LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Set SAP,DSTB,STB
   LCD_CtrlWrite_ILI9225B(0x0011, 0x1038); // Set APON,PON,AON,VCI1EN,VC
      delayms(50);                                 // Delay 50ms
   LCD_CtrlWrite_ILI9225B(0x0012, 0x2121); // Internal reference voltage= Vci;
   LCD_CtrlWrite_ILI9225B(0x0013, 0x007A); // Set GVDD
   LCD_CtrlWrite_ILI9225B(0x0014, 0x5260); // Set VCOMH/VCOML voltage
   //------------- Set GRAM area ----------------//
   LCD_CtrlWrite_ILI9225B(0x0030, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0031, 0x00DB);
   LCD_CtrlWrite_ILI9225B(0x0032, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0033, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0034, 0x00DB);
   LCD_CtrlWrite_ILI9225B(0x0035, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0036, 0x00AF);
   LCD_CtrlWrite_ILI9225B(0x0037, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0038, 0x00DB);
   LCD_CtrlWrite_ILI9225B(0x0039, 0x0000);
   // ---------- Adjust the Gamma Curve ----------//
   LCD_CtrlWrite_ILI9225B(0x0050, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0051, 0x0704);
   LCD_CtrlWrite_ILI9225B(0x0052, 0x0C08);
   LCD_CtrlWrite_ILI9225B(0x0053, 0x0502);
   LCD_CtrlWrite_ILI9225B(0x0054, 0x080C);
   LCD_CtrlWrite_ILI9225B(0x0055, 0x0407);
   LCD_CtrlWrite_ILI9225B(0x0056, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0057, 0x0205);
   LCD_CtrlWrite_ILI9225B(0x0058, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0059, 0x0000);
      delayms(50);                                 // Delay 50ms
   LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}
```

void LCD_Enter_Standby_ILI9225B(void)

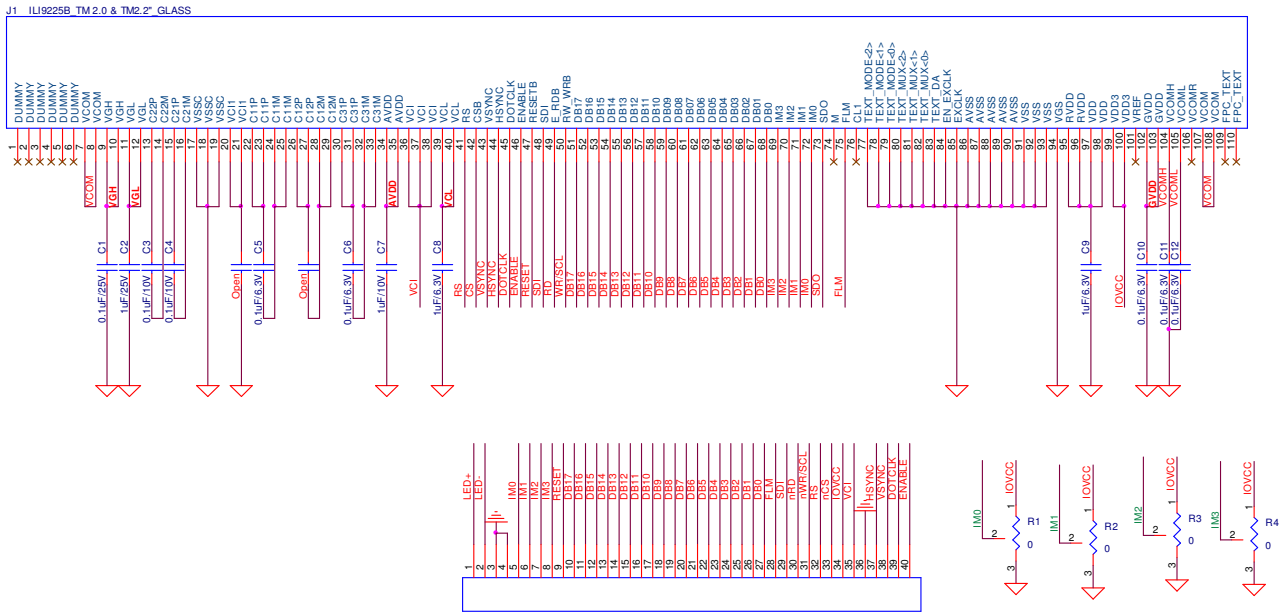
```
{
  LCD_CtrlWrite_ILI9225B(0x0007, 0x0000); // Set D1=0, D0=1
    delayms(50);
  LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01); // Enter Standby mode
}
```

void LCD_Exit_Standby _ILI9225B(void)

```
{
  LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Exit Sleep/ Standby mode
    delayms(50)
  LCD_CtrlWrite_ILI9225B(0x0007, 0x1017); // Set D1=0, D0=1
}
```

6 TM 2.0”& TM2.2” Panel

6.1 TM 2.0” & TM2.2” FPC Circuit



6.2 TM 2.0” Panel Initial Code

void ILI9225B_TM20_Initial(void)

```
{
   // VCI=2.8V
   //************* Reset LCD Driver ****************//
   LCD_nRESET = 1;
     delayms(1);                                  // Delay 1ms
   LCD_nRESET = 0;
     delayms(10);                                 // Delay 10ms // This delay time is necessary
   LCD_nRESET = 1;
     delayms(50);                                 // Delay 50 ms
   //************* Start Initial Sequence **********//
   LCD_CtrlWrite_ILI9225B(0x0001, 0x011C); // set SS and NL bit
   LCD_CtrlWrite_ILI9225B(0x0002, 0x0100); // set 1 line inversion
   LCD_CtrlWrite_ILI9225B(0x0003, 0x1030); // set GRAM write direction and BGR=1.
   LCD_CtrlWrite_ILI9225B(0x0008, 0x0808); // set BP and FP
   LCD_CtrlWrite_ILI9225B(0x000C, 0x0000); // RGB interface setting R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for RGB16Bit
   LCD_CtrlWrite_ILI9225B(0x000F, 0x0A01); // Set frame rate
   LCD_CtrlWrite_ILI9225B(0x0020, 0x0000); // Set GRAM Address
   LCD_CtrlWrite_ILI9225B(0x0021, 0x0000); // Set GRAM Address
   //*************Power On sequence ****************//
     delayms(50);                                 // Delay 50ms
   LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Set SAP,DSTB,STB
   LCD_CtrlWrite_ILI9225B(0x0011, 0x1038); // Set APON,PON,AON,VCI1EN,VC
     delayms(50);                                 // Delay 50ms
   LCD_CtrlWrite_ILI9225B(0x0012, 0x1121); // Internal reference voltage= Vci;
   LCD_CtrlWrite_ILI9225B(0x0013, 0x006C); // Set GVDD
   LCD_CtrlWrite_ILI9225B(0x0014, 0x676F); // Set VCOMH/VCOML voltage
   //------------- Set GRAM area ------------------//
   LCD_CtrlWrite_ILI9225B(0x0030, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0031, 0x00DB);
   LCD_CtrlWrite_ILI9225B(0x0032, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0033, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0034, 0x00DB);
   LCD_CtrlWrite_ILI9225B(0x0035, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0036, 0x00AF);
   LCD_CtrlWrite_ILI9225B(0x0037, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0038, 0x00DB);
   LCD_CtrlWrite_ILI9225B(0x0039, 0x0000);
   // ----------- Adjust the Gamma Curve ----------//
   LCD_CtrlWrite_ILI9225B(0x0050, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0051, 0x060A);
   LCD_CtrlWrite_ILI9225B(0x0052, 0x0D0A);
   LCD_CtrlWrite_ILI9225B(0x0053, 0x0303);
   LCD_CtrlWrite_ILI9225B(0x0054, 0x0A0D);
   LCD_CtrlWrite_ILI9225B(0x0055, 0x0A06);
   LCD_CtrlWrite_ILI9225B(0x0056, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0057, 0x0303);
   LCD_CtrlWrite_ILI9225B(0x0058, 0x0000);
   LCD_CtrlWrite_ILI9225B(0x0059, 0x0000);
     delayms(50);                                 // Delay 50ms
   LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}
```

void LCD_Enter_Standby_ILI9225B(void)

```
{
  LCD_CtrlWrite_ILI9225B(0x0007, 0x0000); // Set D1=0, D0=1
    delayms(50);
  LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01); // Enter Standby mode
}
```

void LCD_Exit_Standby _ILI9225B(void)

```
{
  LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Exit Sleep/ Standby mode
    delayms(50)
  LCD_CtrlWrite_ILI9225B(0x0007, 0x1017); // Set D1=0, D0=1
}
```

6.3 TM 2.2” Panel Initial Code

void ILI9225B_TM22_Initial(void)

```
{
  // VCI=2.8V
  //************* Reset LCD Driver ****************//
  LCD_nRESET = 1;
    delayms(1);                                 // Delay 1ms
  LCD_nRESET = 0;
    delayms(10);                                // Delay 10ms // This delay time is necessary
  LCD_nRESET = 1;
    delayms(50);                                // Delay 50 ms
  //************* Start Initial Sequence **********//
  LCD_CtrlWrite_ILI9225B(0x0001, 0x011C); // set SS and NL bit
  LCD_CtrlWrite_ILI9225B(0x0002, 0x0100); // set 1 line inversion
  LCD_CtrlWrite_ILI9225B(0x0003, 0x1030); // set GRAM write direction and BGR=1.
  LCD_CtrlWrite_ILI9225B(0x0008, 0x0808); // set BP and FP
  LCD_CtrlWrite_ILI9225B(0x000C, 0x0000); // RGB interface setting R0Ch=0x0110 for RGB 18Bit and R0Ch=0111for RGB16Bit
  LCD_CtrlWrite_ILI9225B(0x000F, 0x0801); // Set frame rate
  LCD_CtrlWrite_ILI9225B(0x0020, 0x0000); // Set GRAM Address
  LCD_CtrlWrite_ILI9225B(0x0021, 0x0000); // Set GRAM Address
  //*************Power On sequence ****************//
    delayms(50);                                // Delay 50ms
  LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Set SAP,DSTB,STB
  LCD_CtrlWrite_ILI9225B(0x0011, 0x1038); // Set APON,PON,AON,VCI1EN,VC
    delayms(50);                                // Delay 50ms
  LCD_CtrlWrite_ILI9225B(0x0012, 0x1121); // Internal reference voltage= Vci;
  LCD_CtrlWrite_ILI9225B(0x0013, 0x006E); // Set GVDD
  LCD_CtrlWrite_ILI9225B(0x0014, 0x6561); // Set VCOMH/VCOML voltage
  //------------- Set GRAM area ------------------//
  LCD_CtrlWrite_ILI9225B(0x0030, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0031, 0x00DB);
  LCD_CtrlWrite_ILI9225B(0x0032, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0033, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0034, 0x00DB);
  LCD_CtrlWrite_ILI9225B(0x0035, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0036, 0x00AF);
  LCD_CtrlWrite_ILI9225B(0x0037, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0038, 0x00DB);
  LCD_CtrlWrite_ILI9225B(0x0039, 0x0000);
  // ----------- Adjust the Gamma Curve ----------//
  LCD_CtrlWrite_ILI9225B(0x0050, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0051, 0x0705);
  LCD_CtrlWrite_ILI9225B(0x0052, 0x0E0A);
  LCD_CtrlWrite_ILI9225B(0x0053, 0x0300);
  LCD_CtrlWrite_ILI9225B(0x0054, 0x0A0E);
  LCD_CtrlWrite_ILI9225B(0x0055, 0x0507);
  LCD_CtrlWrite_ILI9225B(0x0056, 0x0000);
  LCD_CtrlWrite_ILI9225B(0x0057, 0x0003);
  LCD_CtrlWrite_ILI9225B(0x0058, 0x090A);
  LCD_CtrlWrite_ILI9225B(0x0059, 0x0A09);
    delayms(50);                                // Delay 50ms
  LCD_CtrlWrite_ILI9225B(0x0007, 0x1017);
}
```

void LCD_Enter_Standby_ILI9225B(void)

```
{
  LCD_CtrlWrite_ILI9225B(0x0007, 0x0000); // Set D1=0, D0=1
    delayms(50);
  LCD_CtrlWrite_ILI9225B(0x0010, 0x0A01); // Enter Standby mode
}
```

void LCD_Exit_Standby _ILI9225B(void)

```
{
  LCD_CtrlWrite_ILI9225B(0x0010, 0x0A00); // Exit Sleep/ Standby mode
    delayms(50)
  LCD_CtrlWrite_ILI9225B(0x0007, 0x1017); // Set D1=0, D0=1
}
```

Revision History

Version No.	Date	Page	Description
V0.1	2008/09/11		New Created
V0.2	2009/1/15		Add AUO 2.2”&2.0” FPC and AUO2.2” initial code
V0.3	2009/2/13		Revise FPC (0D12C) and Add AUO2.0” initial code
V0.4	2009/2/26		Revise CPT、CMO FPC
V0.5	2009/4/2		Revise enter standby mode function
V0.6	2009/7/13		Add TM 2.0” & 2.2” FPC and initial code
V0.7	2009/11/16		Modify TM 2.0” & 2.2” Sleep IN/OUT code